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TRANSACTIONS

OF THE

PATHOLOGICAL SOCIETY OF LONDON.

VOLUME EIGHTEENTH.

COMPRISING THE REPORT OF THE PROCEEDINGS FOR
THE SESSION 1866-67.

LONDON:

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THE present publication, being the Eighteenth Volume of Transactions, constitutes the Twenty-first published Annual Report of the Pathological Society's Proceedings.

The COUNCIL think it right to repeat, that the exhibitors are alone responsible for the descriptions given of the Specimens exhibited by them, the only change made in the Reports furnished by the authors being such verbal alterations as were absolutely necessary.

53, BERNER'S STREET, OXFORD STREET,
October, 1867.

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OF THE

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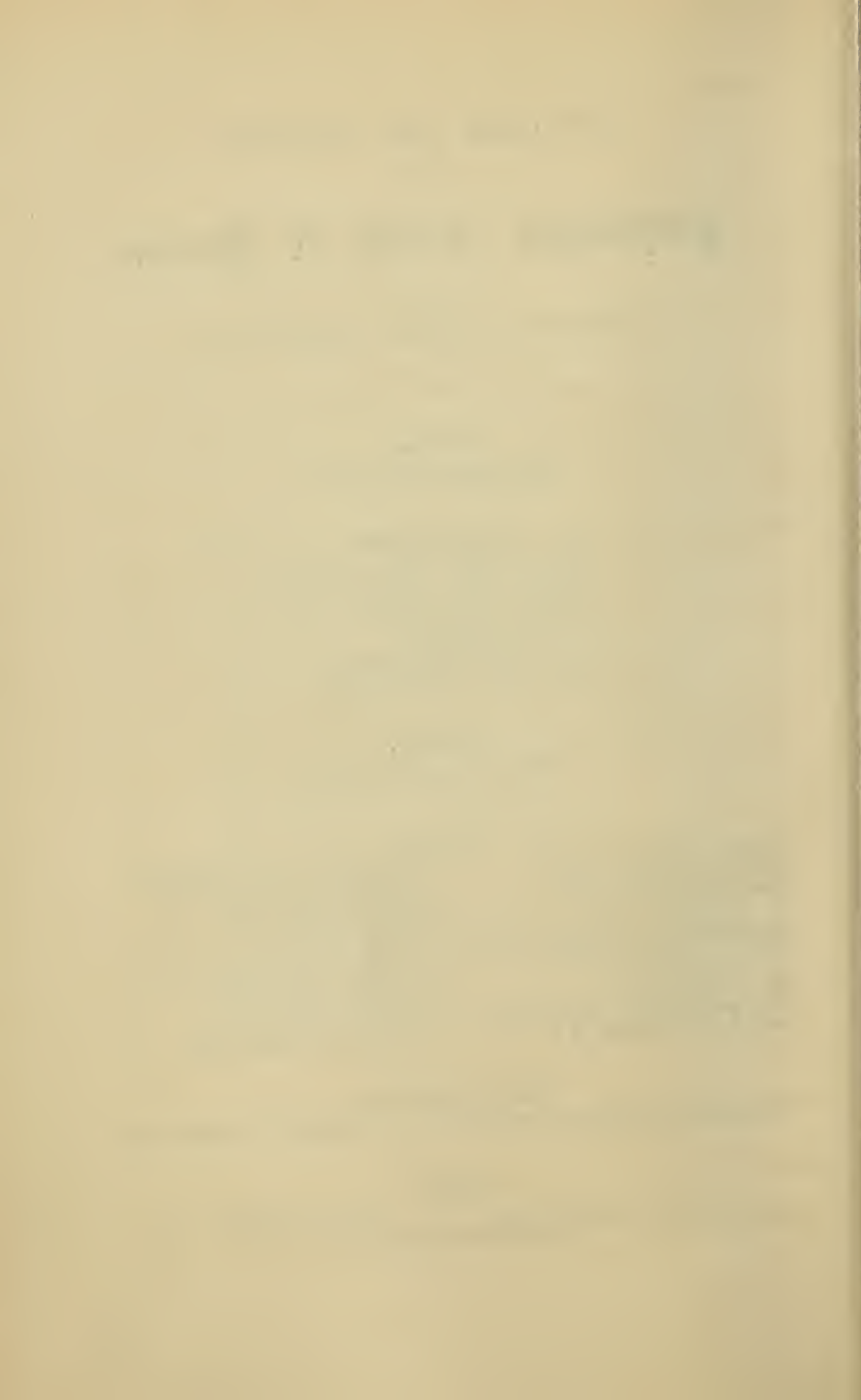
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* * * *Members are requested to indicate to the Secretaries corrections when necessary.*

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- | | |
|---|---|
| (C.) Present Members of Council | * Former Members of Council. |
| † Have paid Composition Fee for Annual Subscriptions. | ‡ Have paid Composition Fee for Transactions. |

GENERAL LIST OF MEMBERS.

Elected Session.

- 1853-59 Acland, Henry Wentworth, M.D., F.R.S., Physician to the Radcliffe Infirmary, Oxford.
* *Orig. Memb.* Adams, William, Esq., (V.P.), Surgeon to the Royal Orthopædic Hospital, 5, Henrietta-street, Cavendish-square.
1858-59 Adams, William, Esq., 37, Harrington-square.
‡ 1865-66 Adams, Arthur Bayley, Esq., St. Bees.
* 1847-48 Aikin, Charles A., Esq. 7, Clifton-place, Sussex-square, Hyde-park.
1857-58 Alison, S. Scott, M.D., Physician to the Hospital for Consumption, Brompton, 85, Park-street, Grosvenor-square.
1863-64 Allingham, William, Esq., Surgeon to the Farringdon Dispensary, 36, Finsbury-square.
1859-60 Andrew, Edwin, M.D., Windsor-house, Shrewsbury.
1862-63 Andrew, James, M.D., Assistant-Physician to St. Bartholomew's Hospital, 59, Russell-square.
1857-58 Anstie, Francis E., M.D., Assistant-Physician to the Westminster Hospital, 16, Wimpole-street.

Elected Session

- 1866-67 Arnott, Henry, Esq., Surgical Registrar, Middlesex Hospital, 8, St. Stephen's-crescent, Westbourne-park, W.
- 1851-52 Ashton, T. J., Esq., Consulting-Surgeon to the St. Marylebone Infirmary, 31, Cavendish-square.
- 1857-58 Avent, Nicholas, Esq., 18, Stamford-villas, Fulham-road.
- 1863-64 Bagshawe, Frederick, Esq., M.A., M.B. Cant., St. Leonard's-on-Sea.
- 1864-65 Baker, William Marrant, Esq., Warden of the College, St. Bartholomew's Hospital.
- 1856-57 Balding, Daniel Barley, Esq., Royston, Herts.
- *1849-50 Ballard, Thomas, M.D., 10, Southwick-place, Hyde-park.
- 1864-65 Bankart, James, Esq., M.B., Demonstrator of Anatomy, Guy's Hospital, Surgeon to the Metropolitan Free Hospital, 8, Finsbury-square.
- *1851-52 Barclay, A. Whyte, M.D., Physician to St. George's Hospital, 23A, Bruton-street, Berkeley-square.
- 1860-61 Barker, Edgar, Esq., Jun., 6, Upper Hyde-park-street.
- *1855-56 Barker, T. A., M.D. (late V.P.), Senior Physician to St. Thomas's Hospital, 27, Wimpole-street.
- 1852-53 Bartlett, William, Esq., Surgeon to the Kensington Dispensary, Ladbroke Lodge, Ladbroke-square, Notting-hill.
- 1862-63 Barratt, Joseph Gillman, M.D., 8, Cleveland-gardens, Bayswater.
- *1852-53 Barwell, Richard, Esq., Assistant-Surgeon to the Charing Cross Hospital, 32, George-street, Hanover-square.
- 1866-67 Basan, Horace, Esq., L.R.C.P. Ed., House-Surgeon to the St. Marylebone Dispensary, 77, Welbeck-street.
- 1857-58 Basham, William R., M.D., Senior Physician to the Westminster Hospital, 17, Chester-street, Belgrave-square.
- 1861-62 Bastian, H. Charlton, Esq., M.A., M.B., F.L.S., Assistant-Physician to St. Mary's Hospital, 81, Avenue-road, Regent's-park.
- *1851-52 Beale, Lionel S., M.B., F.R.S., Physician to King's College Hospital, 61, Grosvenor-street.
- 1855-56 Bealey, Adam, M.D., M.A., 27, Tavistock-square.
- 1852-53 Beck, Thomas Snow, M.D., F.R.S., 71, Portland-place.
- 1865-66 Beeby, Walter, M.D., Bromley, Kent.
- 1864-65 Beigel, Hermann, M.D., 3, Finsbury-square.
- *1849-50 Beith, Robert, M.D., Deputy Inspector-General of Jamaica Hospitals.
- 1862-63 Bell, James B., Esq., 30, Margaret-street, Cavendish-square.
- 1864-65 Bellamy, Edward, Esq., 22, Margaret-street.
- 1846-47 Bennet, James Henry, M.D., Weybridge, Surrey.
- **Orig. Memb.* Bennett, James Risdon, M.D. (formerly V.P.), Physician to St. Thomas's Hospital and to the City of London Hospital for Diseases of the Chest, 15, Finsbury-square.
- †1856-57 Bickersteth, Edward R., Esq., Surgeon to the Liverpool Royal Infirmary, 2, Rodney-street, Liverpool.
- 1855-56 Bird, W., Esq., Surgeon to the West London Hospital, 7, George-street, Hanover-square.

Elected Session

- *1849-50 Birkett, Edmund Lloyd, M.D., Physician to the City of London Hospital for Diseases of the Chest, 48, Russell-square.
- **Orig. Memb.* Birkett, John, Esq. (late V.P.), Surgeon to Guy's Hospital, 59, Green-street, Grosvenor-square.
- 1865-66 Bisshopp, James, Esq., 1, Lawn-place, South Lambeth.
- 1853-54 Black, Cornelius, M.D., Physician to the Chesterfield Dispensary, St. Mary's-gate, Chesterfield.
- 1849-50 Blagden, Robert, Esq., Stroud, Gloucestershire.
- 1863-64 Blanchet, Jean B., M.D., M.S., Montreal, Quebec, Canada.
- 1863-64 Bowen, Francis, M.D., 62, Upper Berkeley-street, Portman-square.
- 1861-62 Bower, Richard Norris, Esq., 14, Doughty-street, Mecklenburg-square.
- *1850-51 Bowman, William, Esq., F.R.S., Surgeon to the Royal Ophthalmic Hospital, 5, Clifford-street.
- 1862-63 Braine, Francis Woodhouse, Esq., 2, Hertford-street, May-fair.
- 1856-57 Briscoe, John, Esq., 12, Broad-street, Oxford.
- *†1850-51 Bristowe, John S., M.D. (C.) (late Hon. Secretary), Physician to St. Thomas's Hospital, 2, Queen-square, Westminster.
- 1859-60 Broadbent, William Henry, M.D. Lond., Assistant-Physician to St. Mary's Hospital, and to the London Fever Hospital, 23, Upper Seymour-street, Portman-square.
- *1851-52 Brodhurst, Bernard E., Esq., Assistant-Surgeon to St. George's Hospital, and to the Royal Orthopædic Hospital, 20, Grosvenor-street.
- 1863-64 Brodie, George Bernard, M.D., 56, Curzon-street, May-fair.
- *1846-47 Brooke, Charles, M.B., F.R.S. (late V.P.), Surgeon to the Westminster Hospital, 16, Fitzroy-square.
- 1864-65 Brown, Augustus, M.D., 30, Belitha-villas, Barnsbury-park.
- 1866-67 Browne, Isaac, Esq., 14, Cambridge-street, Hyde Park-square.
- **Orig. Memb.* Browne, Joseph Hullett, M.D., Physician to the St. Pancras Royal General Dispensary, 55, Gordon-square.
- †1865-66 Bruce, Alexander, Esq., 8, Old Cavendish-street, Cavendish-square.
- *1855-56 Bryant, Thomas, Esq., Assistant-Surgeon to Guy's Hospital, 2, Finsbury square.
- *1854-55 Buchanan, George, M.D., Physician to the London Fever Hospital, and Assistant-Physician to the Hospital for Sick Children, 53, Harley-street, Cavendish-square.
- 1861-62 Buchanan, Albert, M.B. Lond., 382, Camden-road.
- *1858-59 Budd, George, M.D., F.R.S., Barnstaple, Devon.
- 1850-51 Bullock, Henry, Esq., 61, Cumberland-street, Bryanston-square.
- 1859-60 Burton, Alfred, Esq., 13, Dover-street, Piccadilly.
- 1852-53 Burton, John M., Esq., Lee-park-lodge, Lee, Kent.
- **Orig. Memb.* Busk, George, Esq., F.R.S. (late V.P.), Surgeon to the Seamen's Hospital-ship, "Dreadnought," 32, Harley-street, Cavendish-square.
- 1865-66 Butt, William Frederick, Esq.
- 1856-57 Buzzard, Thomas, M.D., 12, Green-street, Park-lane.
- 1856-57 Callender, G. W., Esq. (C.), Assistant-Surgeon to St. Bartholomew's Hospital, 47, Queen Anne-street, Cavendish-square.

Elected Session

- ‡1862-63 Campbell, Charles, M.D., Kingston, Jamaica. [Agent: Mr. H. K. Lewis, 136, Gower-street.]
- *†*Orig. Memb.* Camps, William, M.D., 84, Park street, Grosvenor-square.
- *1849-50 Canton, Edwin, Esq., Surgeon to the Charing Cross Hospital, 30, Montague-place, Russell-square.
- ‡1854-55 Carpenter, Alfred, M.D., High-street, Croydon.
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- 1863-64 Cay, Charles Vidler, Esq., Coldstream Guards' Hospital, Vincent-square, Westminster.
- 1863-64 Cayley, William, M.D., Lecturer on Pathological Anatomy at the Middlesex Hospital, 58, Welbeck-street, Cavendish-square.
- *1848-49 Chalk, William Oliver, Esq., 3, Nottingham-terrace, Regent's-park.
- 1866-67 Chater, Sydney, Esq., 18, St. Helen's-place, Bishopsgate-street.
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- ‡1858-59 Child, Gilbert W., M.D., Physician to the Radcliffe Infirmary, 61, St. Giles', Oxford.
- 1851-52 Childs, George Borlase, Esq., Surgeon to the City Police Force, 11, Finsbury-place South.
- 1854-55 Cholmeley, William, M.D., Physician to the Great Northern Hospital, 40, Russell-square.
- 1865-66 Church, William Selby, M.D., Assistant Physician to St. Bartholomew's Hospital, 41, Bryanston-street, Portman-square.
- 1860-61 Clapton, Edward, M.D., 4, St. Thomas's-street, Southwark.
- *1853-54 Clark, Andrew, M.D., Physician to the London Hospital, 23, Montague-place, Russell-square.
- 1864-65 Clarke, Jacob Lockhart, Esq., F.R.S., 60, Warwick-street, Pimlico.
- *1849-50 Clarke, John, Esq., L.R.P.C., Obstetrical Physician to St. George's Hospital, and Physician-Accoucheur to the General Lying-in-Hospital, 42, Hertford-street, May-fair.
- 1866-67 Clarke, William Fairlie, Esq., M.B. Oxon, 1, Curzon-street, May-fair.
- ‡1865-66 Coates, Charles, M.D., Physician to the Bath United General Hospital, 10, Circus, Bath.
- 1865-66 Cobbold, T. Spencer, M.D., F.R.S., Lecturer on Comparative Anatomy at the Middlesex Hospital, 84, Wimpole-street.
- **Orig. Memb.* Cock, Edward, Esq. (late V.P.), Surgeon to Guy's Hospital, Dean-street South, Tooley-street.
- 1857-58 Cockerton, Richard, Esq., Surgeon to the Kensington Dispensary, 12, Petersham-terrace, Gloucester-road, South Kensington.
- 1855-56 Cogle, John, M.D., M.A., Physician to the Royal Free Hospital, 63A, Brook-street, Hanover Square.
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- 1866-67 Coles, G. C., Esq., 2, Codrington-terrace, Kensington-park.
- 1858-59 Cooke, Robert Thomas, Esq., Surgeon to the Scarborough Dispensary, 15, St. Nicholas Cliff, Scarborough, Yorkshire.
- 1866-67 Cooke, T. C. Weeden, Esq., Surgeon to the Royal Free Hospital, and to the Cancer Hospital, 76, Upper Berkeley-street. W

Elected Session.

- 1866-67 Coombs, Rowland Hill, Esq., St. Bartholomew's Hospital.
- *1850-51 Cooper, William White, Esq., Consulting Ophthalmic Surgeon to St. Mary's Hospital, 19, Berkeley-square.
- **Orig. Memb.* Copland, James, M.D., F.R.S. (late President), Consulting Physician to the Royal Infirmary for Children, 5, Old Burlington-street.
- 1853-54 Cornish, William Robert, Esq.
- 1858-59 Coulson, Walter J., Esq., Surgeon to the Lock Hospital, 29, St. James's-place.
- **Orig. Memb.* Coulson, William, Esq. (late V.P.), Consulting Surgeon to St. Mary's Hospital, 1, Chester-terrace, Regent's-park.
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- 1855-56 Croft, John, Esq., Assistant-Surgeon to St. Thomas's Hospital, 73, Penton-place, Kennington-park-road.
- ‡1865-66 Cromarty, James Pattison, Esq., Civil Surgeon, Tavoy, Burmah. [Agents: Messrs. Fergusson and Co., 77, Clive-street, Calcutta, per United Service Co., 9, Waterloo-place, Pall-mall.]
- 1860-61 Crosby, Thomas Boor, Esq., 23, Finsbury-place.
- 1853-54 Cross, Robert, M.D., Physician to the Brewer's-court Dispensary, 20, New-street, Spring-gardens.
- 1864-65 Cruicknell, Henry, Esq., M.B., Physician to the Royal Infirmary for Diseases of the Chest, City-road, 58, Welbeck-street, Cavendish-square.
- 1857-58 Cumberbatch, Laurence T., M.D., 25, Cadogan-place, Sloane-street.
- 1854-55 Curgenven, J. Brendon, Esq., 11, Craven-hill-gardens, Bayswater.
- *1854-55 Curling, Thomas Blizard, Esq., F.R.S. (V.P.), Surgeon to the London Hospital, 39, Grosvenor-street.
- ‡1865-66 Curran, William, M.D., Assistant-Surgeon 88th Regiment (Connaught Rangers), Ramel Pindie, India. [Agent: Mr. H. K. Lewis, 136, Gower-street.]
- 1863-64 Dane, Thomas, Esq., 24, New Finchley-road.
- **Orig. Memb.* Davies, Herbert, M.D., Consulting Physician to the Infirmary for Asthma, &c., and Physician to the London Hospital, 23, Finsbury square.
- *1846-47 Davis, John Hall, M.D., Physician Accoucheur to the Middlesex Hospital, and to the Royal Maternity Charity, 24, Harley-street, Cavendish-square.
- ‡1859-60 Davis, Francis William, Esq., R.N., 11 and 12, Love-lane, Alderman-bury.
- **Orig. Memb.* Day, George E., M.D., F.R.S., Emeritus Professor of Medicine in the University of St. Andrew's, Furzewell House, Torquay.
- 1866-67 Day, William Henry, M.D., 10, Manchester-square.
- 1857-58 Delima, Teofilo, M.D., Caracas, South America.
- 1865-66 De Morgan, Campbell, Esq., F.R.S. (C.), Surgeon to the Middlesex Hospital, 51, Upper Seymour-street, Portman-square.

Elected Session

- 1862-63 Devereux, Daniel, Esq., Tewkesbury.
- 1861-62 Diamond, W. H., L.R.C.P. Edinb., Resident-Physician of the Lunatic Asylum, Brixton.
- 1855-56 Dick, H., M.D., 59, Wimpole-street, Cavendish-square.
- 1858-59 Dickinson, W. H., M.D. (C), Assistant-Physician to St. George's Hospital, and Assistant-Physician to the Hospital for Sick Children, 11, Chesterfield-street, May-fair.
- **Orig. Memb.* Dixon, James, Esq. (late V.P.), Surgeon to the Royal Ophthalmic Hospital, Moorfields, 2, Portman-square.
- †1865-66 Down, John Langdon H., M.D. Lond., Resident-Physician, Asylum for Idiots, Earlswood, Redhill, and Assistant-Physician to the London Hospital.
- 1865-66 Drewry, George Overend, M.D., Walsall, Stafford.
- 1864-65 Duckworth, Dyce, M.D., 70, Wimpole-street.
- 1863-64 Dudfield, Thomas Orme, M.D., 8, Upper Phillimore-place, Kensington.
- 1846-47 Dudgeon, Robert E., M.D., 53, Montagu-square.
- 1851-52 Duff, George, M.D., High-street, Elgin.
- 1865-66 Duffin, Alfred Baynard, M.D., Assistant-Physician to King's College Hospital, 18, Devonshire-street, Portland-place.
- 1860-61 Dunn, Robert William, Esq., 13, Surrey-street, Strand.
- 1864-65 Du Pasquier, Claudius Francis, Esq., Surgeon-Apothecary to the Queen, 62, Pall-mall.
- 1858-59 Durham, Arthur Edward, Esq., Assistant-Surgeon to Guy's Hospital, 30, Brook-street, Grosvenor-square.
- 1866-67 Eastes, George, Esq., M.B., 43, Trinity-square, Southwark.
- 1848-49 Eden, Thomas E., Esq., Surgeon-Dentist to the Farringdon General Dispensary, Cranfield Villa, Norwood, Surrey.
- 1854-55 Edwards, George N., M.D., Physician to St. Bartholomew's Hospital, 20, Finsbury-square.
- 1846-47 Ellis, Joseph, Esq., Sudbrook-park, Richmond, Surrey.
- *1846-47 Erichsen, John, Esq. (late V.P.), Surgeon to University College Hospital, 6, Cavendish-place, Cavendish-square.
- 1853-54 Evans, Conway, M.D. (C), Pathological Registrar and Assistant-Physician to King's College Hospital.
- ‡1858-59 Ewens, John, Esq., Milton-Abbas, Blandford, Dorset.
- 1864-65 Fagge, Charles Hilton, M.D., Assistant-Physician to Guy's Hospital, 12, Union-street, Southwark.
- 1861-62 Farquharson, Robert, M.D., Assistant-Surgeon, Coldstream Guards' Hospital, Vincent-square, Westminster.
- 1863-64 Fenwick, Samuel, M.D., Assistant-Physician to the City of London Hospital for Diseases of the Chest, 31, Harley-street.
- 1866-67 Ferguson, George, Esq., M.B. Lond., 21, Giltspur-street.
- *1847-48 Fergusson, Sir William, Bart., F.R.S. (late President), Surgeon to King's College Hospital, 16, George-street, Hanover-square.

Elected Session

- *1846-47 Fincham, George T., M.D., Physician to the Westminster Hospital, 13, Belgrave-road.
- 1853-54 Fisher, W. Webster, M.D., Downing Professor of Medicine, Cambridge.
- 1859-60 Fisher, Alexander, M.D., Assistant-Surgeon, R.N., Her Majesty's Ship "Dragon," Chatham.
- *1855-56 Flower, William H., Esq., F.R.S., Conservator of the Museum, Royal College of Surgeons, Lincoln's-inn Fields.
- *1851-52 Forbes, J. Gregory, Esq., Surgeon to the Metropolitan Convalescent Institution, 9, Devonport-street, Hyde-park.
- 1849-50 Foreman, Robert Clifton, M.D., Resident Physician to the Asylum for Imbecile Children of the Upper Classes, Church-hill House, Brighton.
- *†*Orig. Memb.* Forster, John Cooper, Esq., Assistant Surgeon to Guy's Hospital, Surgeon to the Royal Infirmary for Children, 10, St. Thomas's-street, Southwark.
- ‡1865-66 Foster, Balthazar Walter, M.D., Physician to the Queen's Hospital, Birmingham, 4, Old Square, Birmingham.
- 1866-67 Foster, John B., Esq., 13, Upper Wimpole-street.
- 1859-60 Foster, Michael, Jun., M.D., Teacher of Practical Physiology and Histology at University College.
- 1862-63 Fox, Wilson, M.D., Professor of Clinical Medicine in University College, and Assistant-Physician to University College Hospital, 22B, Cavendish-square.
- 1865-66 Fox, W. Tilbury, M.D., 43, Sackville-street.
- 1858-59 Francis, Charles Richard, M.B., Bengal Medical Establishment, Indian Army.
- 1853-54 Freeman, William Henry, Esq., 21, Spring-gardens.
- Orig. Memb.* Frere, J. C., Esq., Trinity College, Cambridge.
- 1863-64 Frodsham, John Mill, M.D., Physician to St. John's Hospital for Diseases of the Skin, 17, Victoria-square, Pimlico.
- *1846-47 Fuller, Henry W., M.D., Physician to St. George's Hospital, 13, Manchester-square.
- ‡1858-59 Gairdner, William Tennant, M.D., Professor of Medicine in the University of Glasgow, 21, Blythwood-square, Glasgow.
- 1855-56 Gamgee, Joseph Sampson, Esq., Surgeon to the Queen's Hospital, Birmingham, 20, Broad-street, Birmingham.
- 1855-56 Gamgee, J. Esq., Albert Veterinary College, Queen's-road, Bayswater.
- 1850-51 Garrett, Mark Brown, Esq., 4, Collet-place, Commercial Road East.
- *1846-47 Garrod, Alfred Baring, M.D., F.R.S. (late V.P.), Physician to King's College Hospital, 11, Harley-street, Cavendish-square.
- 1858-59 Gascoyen, George Green, Esq., Surgeon to the Lock Hospital, and Assistant-Surgeon to, and Lecturer on Anatomy at, St. Mary's Hospital, 48, Queen-Anne-street, Cavendish Square.
- 1855-56 Gaskoin, George, Esq., 3, Westbourne-park, Paddington.
- **Orig. Memb.* Gay, John, Esq., Senior Surgeon to the Great Northern Hospital, King's-cross, 10, Finsbury-place South.
- *1854-55 Gibb, Sir George Duncan, Bart., M.D., L.L.D., Assistant-Physician to the Westminster Hospital, 1, Bryanston-street, Portman-square.

Elected Session.

- 1853-54 Gibbon, Septimus, M.D., 13, Finsbury-square.
- †1857-58 Godfrey, Benjamin, M.D., Carlton-house, Enfield.
- *1854-55 Goodfellow, Stephen Jennings, M.D., Physician to the Middlesex Hospital, 5, Savile-row, Burlington-gardens.
- 1857-58 Gowlland, Peter Y., Esq., Surgeon to St. Mark's Hospital, 34, Finsbury-square.
- 1846-47 Gream, George T., M.D. (C.), 2, Upper Brook-street, Grosvenor-square.
- 1866-67 Green, Thomas H., M.D., University College Hospital.
- 1856-57 Greenhalgh, Robert, M.D., Physician-Accoucheur to St. Bartholomew's Hospital, 77, Grosvenor-street.
- †1854-55 Greenhill, William Alexander, M.D., Carlisle-parade, Hastings.
- 1863-64 Greenhow, Edward Headlam, M.D. (C), Assistant-Physician to the Middlesex Hospital, 77, Upper Berkeley-street, Portman-square.
- 1860-61 Gueneau de Mussy, Henri, M.D., 4, Cavendish-place, Regent-street.
- 1863-64 Gull, William Withey, M.D., 26, Brook-street, Grosvenor-square.
- 1858-59 Gunn, Theophilus Miller, Esq., 40, York-place, Portman-square.
- 1851-52 Hacon, E. Dennis, Esq., Mare-street, Hackney.
- †1851-52 Halley, Alexander, M.D., 16, Harley-street, Cavendish-square.
- 1851-52 Hansard, Richard James, Esq.
- *1847-48 Hare, Charles John, M.D., 41, Brook-street, Grosvenor-square.
- *†1855-56 Harley, George, M.D., F.R.S., Assistant-Physician to University College Hospital, 25, Harley-street.
- 1862-63 Harling, Robert Dawson, M.D. Lond., 9, Upper Seymour-street, Portman-square.
- †1857-58 Hart, Ernest, Esq. (C.), Ophthalmic Surgeon to St. Mary's Hospital, 69, Wimpole-street.
- †1859-60 Hastings, Cecil William, M.B., 13, Queen Anne-street, Cavendish-square.
- **Orig. Memb.* Hawkins, Cæsar H., Esq., F.R.S. (formerly President), Consulting-Surgeon to St. George's Hospital, 26, Grosvenor-street.
- 1856-57 Hawksley, Thomas, M.D., Physician to the Margaret-street Dispensary for Consumption, 70, Brook-street, Hanover-square.
- 1856-57 Heath, Christopher, Esq. (C.), Assistant-Surgeon to University College Hospital, 9, Cavendish place, Cavendish-square.
- 1866-67 Heckford, Nathaniel, Esq., London Hospital, Broad-street Buildings.
- **Orig. Memb.* Hewett, Prescott G., Esq. (V.P.), late President), Surgeon to St. George's Hospital, 1, Chesterfield-street, May-fair.
- 1854-55 Hewitt, Graily, M.D. (C.), Obstetric Physician to University College Hospital, 36, Berkeley-square.
- 1863-64 Hickman, William, M.B., Surgeon to the Samaritan Hospital, and to the Western General Dispensary, 1, Dorset-square.
- 1863-64 Hicks, J. Wale, M.D., Lecturer on Morbid Anatomy at St. Thomas's Hospital, Chester-road, Highgate.
- 1859-60 Hill, Matthew Berkeley, M.B. Lond., Assistant-Surgeon to University College Hospital, and to the Lock Hospital, 14, Weymouth-street, Portland-place.
- 1866-67 Hill, Samuel, M.D., 22, Mecklenburgh-square.

Elected Session.

- 1854-55 Hillier, Thomas, M.D. (C.), Physician to the Skin Department of University College Hospital, Physician to the Hospital for Sick Children, 32, Queen Anne-street, Cavendish-square.
- **Orig. Memb.* Hillman, William Augustus, Esq., Senior-Assistant-Surgeon to the Westminster Hospital, 1, Argyll-street, Regent-street.
- *†*Orig. Memb.* Hilton, John, Esq., F.R.S. (late V.P.), Surgeon to Guy's Hospital, 10, New Broad-street, City.
- 1855-56 Hinton, J., Esq., Aural Surgeon to Guy's Hospital, 18, Savile-row.
- *1850-51 Hodgson, Joseph, Esq., F.R.S., 60, Westbourne-terrace.
- *1852-53 Hogg, Jabez, Esq., Assistant-Surgeon to the Westminster Ophthalmic Hospital, 1, Bedford-square.
- 1846-47 Holman, H. Martin, M.D., Hurstpierpoint, Sussex.
- *1854-55 Holmes, Timothy, Esq. (HON. SECRETARY), Surgeon-in-Chief to the Metropolitan Police, Assistant-Surgeon to St. George's Hospital, and Surgeon to the Hospital for Sick Children, 31, Clarges-street, Piccadilly.
- *1849-50 Holt, Barnard Wight, Esq., Senior-Surgeon to the Westminster Hospital, 14, Savile Row.
- **Orig. Memb.* Holthouse, Carsten, Esq., Surgeon to, and Lecturer on Surgery at, the Westminster Hospital, 2, Storey's-gate, St. James's-park.
- 1863-64 Hood, Wharton P., M.D., 65, Upper Berkeley-street, Portman-square.
- 1853-54 Hood, William Charles, M.D., Visiting Physician in Lunacy to the Court of Chancery, Croydon Lodge, Surrey.
- 1864-65 Hooper, John Harward, Esq., M.B., Tenby, South Wales.
- 1850-51 Hore, Henry A., Esq., Surgeon to the Bristol Royal Infirmary, 31, Park-street, Bristol.
- 1865-66 Howard, Edward, M.D., Redhill, Surrey.
- †1855-56 Hudson, John, M.D., 11, Cork-street.
- *1854-55 Hulke, John Whitaker, Esq., F.R.S., Assistant-Surgeon to the Middlesex Hospital, and to the Royal London Ophthalmic Hospital, 10, Old Burlington-street.
- 1854-55 Hulme, Edward Charles, Esq., Surgeon to the Great Northern Hospital and to the Central London Ophthalmic Hospital, 38, Gower-street, Bedford-square.
- 1852-53 Humby, Edwin, Esq., 83, Hamilton-terrace, St. John's-wood.
- 1865-66 Hunter, Charles, Esq., 30, Wilton-place, Belgrave-square.
- *1852-53 Hutchinson, Jonathan, Esq., Surgeon to the London Hospital, and Assistant-Surgeon to the Royal London Ophthalmic Hospital, Moorfields, 4, Finsbury-circus.
- †1860-61 Ingram, Charles, M.D.
- 1865-66 Jackson, J. Hughlings, M.D., Assistant-Physician to the London Hospital, Physician to the National Hospital for the Paralysed and Epileptic, 28, Bedford-place, Russell-square.
- 1859-60 Jackson, Thomas Carr, Esq., Surgeon to the Great Northern Hospital, 3, Weymouth-street, Portland-place.
- ‡1853-54 Jardine, John Lec, Esq., Capel, near Dorking, Surrey.

Elected Session.

- 1846-47 Jay, Edward, Esq., 112, Park-street, Grosvenor-square.
- **Orig. Memb.* Jenner, William, M.D., F.R.S. (late V.P.), Physician to the University College Hospital, 18, Harley-street.
- 1861-62 Jephson, John Holmes, M.D., Physician to the Great Northern Hospital, 7, Gloucester-terrace.
- 1865-66 Jessop, Thomas Richard, Esq., 31, Park-square, Leeds.
- 1854-55 Johnson, Athol A. W., Esq., 20, Regency-square, Brighton.
- 1854-55 Johnson, Edward, M.D., 19, Cavendish-place, Cavendish-square.
- **Orig. Memb.* Johnson, George, M.D. (late V.P.), Physician to King's College Hospital, 11, Savile-row.
- *†*Orig. Memb.* Jones, Henry Bence, M.D., F.R.S. (formerly V.P.), 31, Brook-street, Grosvenor-square.
- *1853-54 Jones, Sydney, M.B., Assistant-Surgeon to St. Thomas's Hospital, 15, St. Thomas's-street, Southwark.
- 1861-62 Jones, Thomas, Esq., St. George's Hospital.
- 1858-59 Jones, William Price, M.D., Surbiton, Kingston.
- 1859-60 Jones, Walter, Esq., College-yard, Worcester.
- 1866-67 Kelly, Charles, Esq., M.B., 6, Carey-street, Lincoln's-inn.
- 1866-67 Kempthorne, Henry Law, Esq., M.B., Bethlem Hospital.
- 1846-47 Kent, Thomas J., Esq., 60, St. James's-street.
- 1852-53 Kershaw, W. Wayland, M.D., Kingston-on-Thames.
- 1859-60 Kiallmark, Henry Walter, Esq., 66, Prince's-square, Bayswater.
- 1851-52 Kingdon, J. Abernethy, Esq., Surgeon to the City Dispensary, and to the City of London Truss Society, 2, New Bank-buildings.
- ‡1856-57 Kingsley, Henry, M.D., Physician to the Stratford Infirmary, Stratford-on-Avon, Warwickshire.
- 1854-55 Kirby, Edmund A., M.D., 26, Gordon-square.
- ‡1865-66 Lanchester, Henry Thomas, M.D., 53, High-street, Croydon.
- *1850-51 Langmore, John C., M.B., 12, Sussex-gardens, Hyde-park.
- 1865-66 Langton, John, Esq., Assistant-Surgeon to St. Bartholomew's Hospital.
- *1849-50 Latham, Peter Mere, M.D. (formerly President), late Physician to St. Bartholomew's Hospital, 36, Grosvenor-street.
- 1856-57 Laurence, John Z., Esq., Surgeon to the St. Marylebone General Dispensary, 30, Devonshire-street, Portland-place.
- 1853-54 Lawrence, Henry John Hughes, Esq., Assistant-Surgeon Grenadier Guards' Hospital, Rochester-row, Westminster.
- 1858-59 Lawson, George, Esq., Assistant-Surgeon to the Middlesex Hospital, and to the Royal London Ophthalmic Hospital, Moorfields, 12, Harley-street, Cavendish-square.
- 1864-65 Leach, Harry, Esq., H.M.S. "Dreadnought."
- 1857-58 Leared, Arthur, M.D., 12, Old Burlington-street.
- *1851-52 Lee, Henry, Esq., Surgeon to St. George's Hospital, 9, Savile-row.
- 1866-67 Lees, Joseph, M.D., 107, Penton-place, Kennington-park-road.

Elected Session

- 1852-53 Leggatt, Alfred, Esq. (C.), 13, William-street, Lowndes-square.
 1864-65 Leighton, Edmund Thomas, M.B., 4, Henrietta-street, Cavendish-square.
 1861-62 Lichtenberg, George, M.D., 47, Finsbury-square.
 1848-49 Little, William John, M.D. (formerly V.P.), 34, Brook-street, Grosvenor-square.
 †1862-63 Little, Louis S., Esq., Assistant-Surgeon to the London Hospital, 34, Brook-street, Grosvenor-square.
 1863-64 Liveing, Robert, M.D., Assistant-Physician to the Middlesex Hospital, 17, Granville-place, Portman-square.
 ‡1860-61 Lund, George, M.D., 3, Park-villas East, Richmond, Surrey.
- 1858-59 Mackay, Allan Douglas, M.B., Stony-Stratford, Bucks.
 1863-64 Mackenzie, Morell, M.D., Assistant-Physician to the London Hospital, 13, Weymouth-street, Portland-place.
 1865-66 MacLaurin, H. N., M.D., Greenwich Hospital.
 1857-58 Marcet, William, M.D., F.R.S., 48, Harley-street, Cavendish-square.
 *1851-52 Markham, William O., M.D., Physician to St. Mary's Hospital, 8, Harley-street, Cavendish-square.
 *1846-47 Marshall, John, Esq., F.R.S., Surgeon to University College Hospital, 10, Savile-row.
 ‡1860-61 Martin, John, Esq., Keydell, near Horndean, Hants.
 1856-57 Martin, Robert, M.D., Physician to St. Bartholomew's Hospital.
 1852-53 Martyn, S., M.D., Senior Physician to the Bristol General Hospital, 26, Park-street, Bristol.
 1858-59 Martyn, William, M.D., 6, Trevor-terrace, Rutland-gate, Brompton.
 1860-61 Mason, Francis, Esq., Assistant-Surgeon to the Westminster Hospital, 10, Conduit-street, Regent-street.
 1866-67 Mason, Philip Brookes, Esq., Burton-on-Trent.
 †1858-59 Maunder, C. F., Esq., Assistant-Surgeon to the London Hospital, 29, New Broad-street.
 ‡1851-52 May, George, Jun., M.B., Surgeon to the Royal Berkshire Hospital, Reading.
 1857-58 Meller, Charles James, Esq., Vice-Consul, Madagascar.
 1859-60 Messer, John Cockburn, M.D., Assistant-Surgeon, R.N., Her Majesty's ship, "Edinburgh," Queensferry, N.B.
 1865-66 Mickley, Arthur George, M.A., M.B. Cant., Bethlem Hospital.
 †1858-59 Montefiore, Nathaniel, Esq., 36, Hyde-park-gardens.
 †1865-66 Moore, Charles Hewitt, Esq., Surgeon to the Middlesex and St. Luke's Hospitals, 102, Piccadilly.
 1861-62 Morehead, Charles, M.D., 34, Melville-street, Edinburgh.
 *1846-47 Morgan, John, Esq., 3, Sussex-place, Hyde-park-gardens.
 1859-60 Moxon, Walter, M.D., Assistant-Physician to Guy's Hospital, 6, Finsbury-circus.
 *1854-55 Murchison, Charles, M.D., F.R.S. (HON. SECRETARY), Physician to, and Lecturer on the Practice of Medicine at, the Middlesex Hospital, and Senior Physician to the London Fever Hospital, 79, Wimpole-street.
 Mussy, *see* Gueneau de Mussy.

Elected Session.

- 1864-65 Myers, Arthur B. R., Esq., Coldstream Guards' Hospital, Vincent-square, Westminster.
- 1864-65 Newman, William, M.D., Stamford, Lincolnshire.
- 1865-66 Nicoll, Charles R., Resident Medical Officer to the Charter House, 17, Charter House-square.
- 1863-64 Norton, Arthur T., Esq., Assistant-Surgeon to St. Mary's Hospital, 30, Upper Berkeley-street.
- 1864-65 Noverre, Arthur, Esq., 25, South-street, Park-lane.
- *1856-57 Nunn, Thomas William, Esq., Surgeon to the Middlesex Hospital, 8, Stratford-place, Oxford-street.
- ‡1858-59 Nunneley, Thomas, Esq., Senior Surgeon to the Leeds Eye and Ear Infirmary, Leeds.
- *1850-51 Obré, Henry, Esq., Surgeon to the St. Marylebone Eye and Ear Institution, 1, Melcombe-place, Dorset-square.
- *1850-51 Ogle, John W., M.D. (V.P.) (late Honorary Secretary), Physician to St. George's Hospital, 13, Upper Brook-street, Grosvenor-square.
- ‡1855-56 Oldfield, Edmund, Esq., Boscomb Lodge, Finchley-road.
- 1859-60 Orange, William, Esq., Broadmoor, Berkshire.
- 1857-58 Ord, William Miller, M.B., Lecturer on Comparative Anatomy at St. Thomas's Hospital, Brixton-hill.
- 1863-64 Orme, E., Esq., 81, Avenue-road, Regent's-park.
- 1864-65 Owles, James Allden, M.D., 204 Burlington Street, Liverpool.
- ‡1859-60 Paget, Edward H., Esq., Friar-lane, Leicester.
- 1863-64 Palfrey, James, M.D., Assistant-Obstetric-Physician to the London Hospital, 25, Finsbury-place.
- 1853-54 Parkinson, George, Esq., 16, Brook-street, Grosvenor-square.
- 1853-54 Part, James, M.D., 89, Camden-road, Camden-town.
- **Orig. Memb.* Partridge, Richard, Esq., F.R.S. (formerly V.P.), Surgeon to King's College Hospital, 17, New-street, Spring-gardens.
- 1865-66 Pavy, Frederick William, M.D., F.R.S., Assistant-Physician to Guy's Hospital, 35, Grosvenor-street.
- **Orig. Memb.* Peacock, Thomas Beville, M.D. (V.P., late President), Physician to St. Thomas's Hospital, and Physician to the City of London Hospital for Diseases of the Chest, 26, Finsbury-circus.
- 1862-63 Pearson, David R., M.D., 23, Upper Phillimore-place, Kensington.
- 1866-67 Phillips, John Jones, Esq., M.B., 43, Trinity-square. S.E.
- 1863-64 Pick, Thomas Pickering, Esq., Demonstrator of Anatomy at St. George's Hospital, 9, Bolton-row, May-fair.
- 1863-64 Playfair, W. S., M.D., Assistant-Physician for the Diseases of Women and Children, King's College Hospital, 5, Curzon-street, May-fair.
- 1860-61 Pocock, William, Esq., 1, St. John's-villas, Brixton-road.
- **Orig. Memb.* Poland, Alfred, Esq., Surgeon to Guy's Hospital.

Elect d Session.

- *1846-47 Pollock, George D., Esq. (late V.P. and Hon. Sec.), Surgeon to St. George's Hospital, 27, Grosvenor-street.
- *1850-51 Pollock, James Edward, M.D., Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, 52, Upper Brook-street.
- 1861-62 Pollock, Arthur Julius, M.D., Assistant-Physician to Charing-Cross Hospital, 21, Montague-place, Russell-square.
- 1858-59 Potter, Henry, Esq., 56, Maddox-street, Hanover-square.
- 1854-55 Potts, William, Esq., 12, North Audley-street, Grosvenor-square.
- 1865-66 Powell, R. Douglas, Esq., M.B., Hospital for Consumption, Brompton.
- 1865-66 Power, Henry, Esq., M.B., Assistant-Surgeon to the Westminster Hospital, 43, Upper Seymour-street, Portman-square.
- 1856-57 Priestley, William Overend, M.D., Physician for the Diseases of Women and Children to King's College Hospital, Consulting Physician-Accoucheur to the St. Marylebone Infirmary, 17, Hertford-street, May-fair.
- *†1848-49 Purnell, John James, Esq., Surgeon to the Royal General Dispensary, Woodlands, Streatham-hill.
- *1850-51 Pyle, John, Esq., 59, Oxford-terrace, Hyde.park.
- **Orig. Memb.* Quain, Richard, M.D. (TREASURER, formerly Hon. Secretary), Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, 67, Harley-street, Cavendish-square.
- 1859-60 Radcliffe, Charles Bland, M.D., Physician to the Westminster Hospital, 25, Cavendish-square.
- **Orig. Memb.* Ramsbotham, Francis H., M.D.
- 1856-57 Ramskill, J. Spence, M.D., Physician to the London Hospital, Physician to the National Hospital for the Paralysed and Epileptic, 5, St. Helen's-place, Bishopsgate-street.
- *1847-48 Randall, John, M.D., Medical Officer, St. Marylebone Infirmary, 14, Portman-street, Portman-square.
- 1856-57 Ranke, Henry, M.D., Munich.
- 1864-65 Rasch, Adolphus, M.D., 7, South-street, Finsbury-square.
- *1846-47 Ray, Edward, Esq., Dulwich.
- 1858-59 Reed, Frederick George, M.D., 46, Hertford-street, May-fair.
- 1866-67 Reeves, Henry Albert, Esq., 3, Hardwick-place, Harrington-square.
- 1866-67 Rendle, James Davy, M.D., The Queen's Prison, Brixton-hill.
- 1854-55 Reynolds, J. Russell, M.D., Physician to University College Hospital, 38, Grosvenor-street.
- **Orig. Memb.* Ridge, Joseph, M.D., 39, Dorset-square.
- 1865-66 Rivington, Walter, Esq., M.S., Lond., Assistant-Surgeon to the London-Hospital, 22, Finsbury-square.
- 1863-64 Roberts, Arthur, Esq., 37, Kensington-square.
- †1865-66 Roberts, David Lloyd, M.D., Surgeon in Ordinary to St. Mary's Hospital, Manchester, 23, St. John's-street, Manchester.
- 1855-56 Roberts, John Henry, Esq., 10, Finchley-road, St. John's-wood.
- 1863-64 Robinson, Charles, Esq., F.R.C.P. Edinb., 11, Montagu-street, Portman-square.

Elected Session.

- 1856-57 Robinson, Thomas, M.D., 64, Lamb's Conduit-street.
- 1859-60 Robinson, Frederick, M.D., Battalion Surgeon, Scots Fusileer Guards' Hospital, 48, Charlwood-street, Belgrave Road.
- Orig. Memb.* Roe, George Hamilton, M.D., Senior Physician to the Hospital for Consumption and Diseases of the Chest, Brompton, 124, Park-street, Grosvenor-square.
- 1865-66 Rogers, George Henry, Esq., 14, Old Burlington-street.
- 1858-59 Rolleston, George, M.D., F.R.S., 5, Broad-street, Oxford.
- 1851-52 Rooke, H. T., M.D. (C.), Surgeon to the Seamen's Hospital-ship, "Dreadnought."
- 1858-59 Rose, Henry Cooper, M.D., Surgeon to the Hampstead Dispensary, High-street, Hampstead.
- 1858-59 Rouse, James, Esq., Assistant-Surgeon to the Royal Ophthalmic Hospital, and Demonstrator of Operative Surgery at St. George's Hospital, 2, Wilton-street, Grosvenor-place.
- *1852-53 Salter, Henry Hyde, M.D., F.R.S., Physician to the Charing Cross Hospital, 14, Harley-street, Cavendish-square.
- *1853-54 Salter, Samuel James A., M.B., F.R.S., Surgeon-Dentist to Guy's Hospital, 17, New Broad-street, City.
- 1852-53 Sanderson, Hugh James, M.D., Physician to the Hospital for Women, 26, Upper Berkeley-street.
- 1854-55 Sanderson, John Burdon, M.D., F.R.S. (C.), Assistant-Physician to the Middlesex Hospital, and Physician to the Hospital for Consumption, Brompton, 49, Queen Anne-street, Cavendish-square.
- ‡1866-67 Sankey, W. H. Octavius, M.D., Sandywell-park, Cheltenham.
- 1857-58 Schulhof, Maurice, M.D., Physician to the Royal General Dispensary, Bartholomew-close, 14, Brook-street.
- 1853-54 Scott, John, Esq., Surgeon to the Hospital for Women, Soho-square, 49, Harley-street, Cavendish-square.
- ‡1858-59 Scratchley, George, M.D., B.L.S., Member of the University of France, New Orleans, Louisiana, U.S. [A. Scratchley, Esq., 7, Waterloo-place.]
- *‡1846-47 Seaton, Edward C., M.D., Rochester-house, Surbiton.
- 1856-57 Sedgwick, William, Esq., Surgeon to the Marylebone Provident Dispensary, 12, Park-place, Upper Baker-street
- *1852-53 Semple, Robert Hunter, M.D., Physician to the Northern Dispensary, 8, Torrington-square.
- **Orig. Memb.* Shaw, Alexander, Esq. (late V.P.), Surgeon to the Middlesex Hospital, 40, Abbey-road West, Kilburn.
- 1856-57 Shillitoe, Buxton, Esq., Surgeon to the Great Northern Hospital, and to the Lock Hospital, 34, Finsbury-circus.
- *1855-56 Sibley, Septimus W., Esq., 12, New Burlington-street.
- *1848-49 Sibson, Francis, M.D., F.R.S. (V.P.), Physician to St. Mary's Hospital, 40, Brook-street, Grosvenor-square.
- *1847-48 Sieveking, Edward H., M.D. (late V.P.), Physician to St. Mary's Hospital, 17, Manchester-square.

Elected Session.

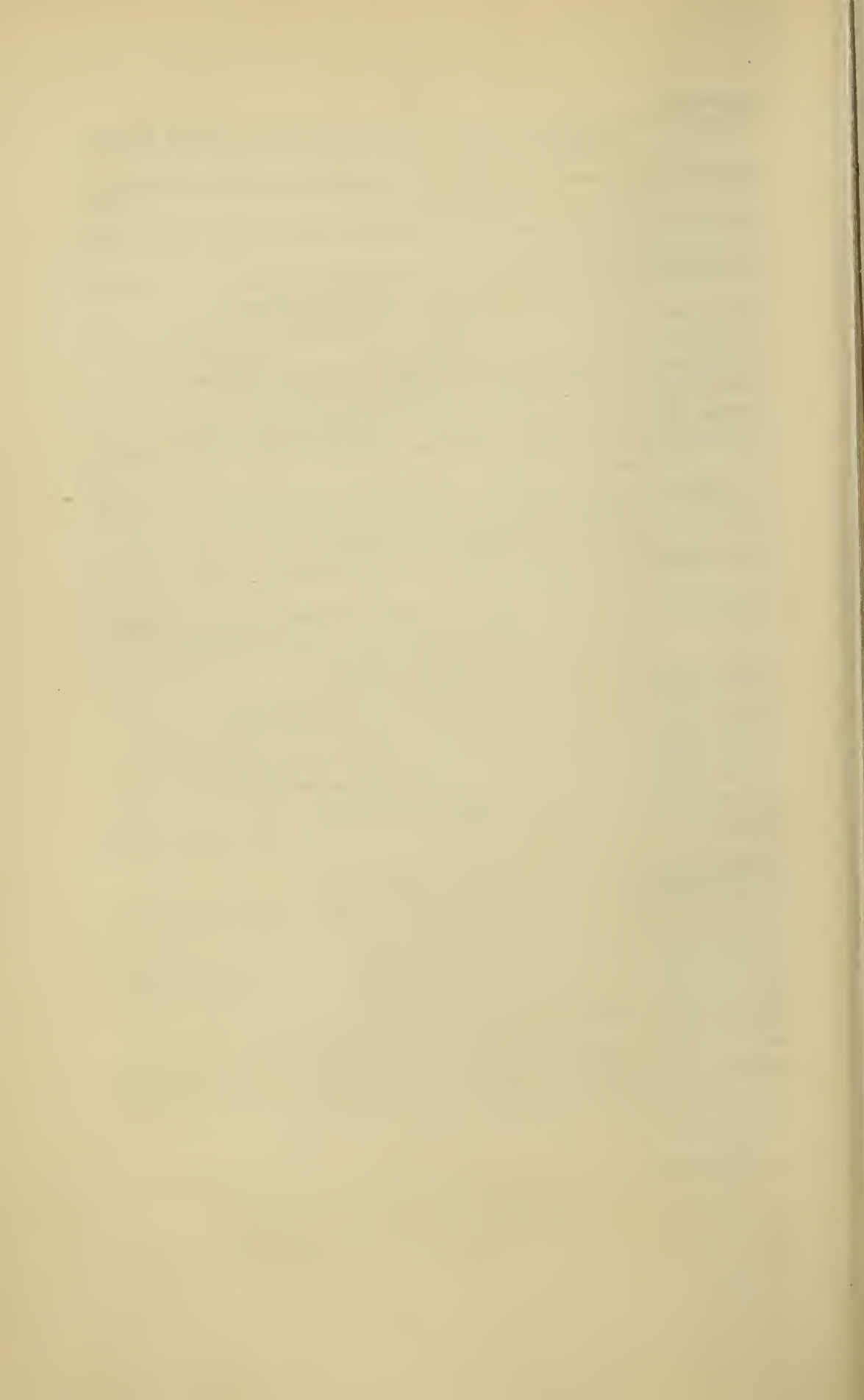
- **Orig. Memb.* Simon, John, Esq., F.R.S. (PRESIDENT), Surgeon to St. Thomas's Hospital, 8, Richmond-terrace, Whitehall.
- 1866-67 Sims, Francis Manley Boldeo, 14, York-place, Portman-square.
- 1864-65 Sims, J. Marion, M.D., Paris.
- **Orig. Memb.* Smith, Ebenezer Pye, Esq., Mare-street, Hackney.
- 1863-64 Smith, Henry, Esq., Assistant-Surgeon to King's College Hospital, 84, Wimpole-street, Cavendish-square.
- 1865-66 Smith, Heywood, Esq., M.B. Oxf., 42, Park-street, Grosvenor-square.
- 1865-66 Smith, Philip Henry Pye, M.D., Demonstrator of Anatomy at Guy's Hospital, 8, Bridge-street, Southwark.
- 1846-47 Smith, Protheroe, M.D., Physician to the Hospital for Women, 42, Park-street, Grosvenor-square.
- 1855-56 Smith, Spencer, Esq., Surgeon to St. Mary's Hospital, 9, Queen Anne-street, Cavendish-square.
- 1856-57 Smith, Thomas, Esq. (C.), Assistant-Surgeon to St. Bartholomew's Hospital, 7, Montague-street, Russell-square.
- 1865-66 Smith, William, Esq., 10, Finsbury-place South.
- 1851-52 Smith, W. Tyler, M.D., Physician-Accoucheur to St. Mary's Hospital, 21, Upper Grosvenor-street.
- *1847-48 Solly, Samuel, Esq., F.R.S., Surgeon to St. Thomas's Hospital, 6, Savile-row.
- 1865-66 Spooner, Charles, Esq., Professor and Principal in the Royal Veterinary College, Great College-street, Camden Town.
- 1865-66 Squarey, Charles, Esq., Resident Medical Officer, University College Hospital.
- 1854-55 Squire, William, Esq., 6, Orchard-street, Portman-square.
- 1860-61 Squire, Alexander Balmanno, Esq., 9, Weymouth-street, Portland-place.
- 1854-55 Stewart, William Edward, Esq., Surgeon to St. Marylebone Provident Dispensary, 12, Weymouth-street, Portland-place.
- 1862-63 Stone, William Domett, M.D., 42, Lincoln's-inn-fields.
- †1853-54 Streatfeild, J. F., Esq., Assistant-Surgeon to the Royal London Ophthalmic Hospital, Moorfields, and Ophthalmic Surgeon to University College Hospital, 15, Upper Brook-street.
- 1862-63 Sturges, Octavius, M.B., Cant., 85, Wimpole-street.
- 1863-64 Sutton, Henry G., M.B., Assistant-Physician to the London Hospital, 30, Finsbury-square.
- ‡1866-67 Swain, William Paul, Esq., 20, Ker-street, Devonport.
- 1858-59 Swete, Benjamin L., Esq., Surgeon to the British Orphan Asylum, Clapham-rise, 7, Park-road, Stockwell.
- ‡1856-57 Symonds, Frederick, Esq., Surgeon to the Radcliffe Infirmary, 32, Beaumont-street, Oxford.
- Orig. Memb.* Tamplin, R. W., Esq., Surgeon to the Royal Orthopædic Hospital, 33, Old Burlington-street.
- ‡1855-56 Tapp, W. Denning, Esq., Hillside-house, Hatherley-road, Cheltenham.
- 1863-64 Tatham, John, M.D., 1, Wilton-place, Knightsbridge.

Elected Session

- 1851-52 Taylor, Robert, Esq., Surgeon to the Central London Ophthalmic Hospital, 21, Edwards-street, Portman-square.
- 1860-61 Teevan, William Frederic, Esq., Surgeon to the West London Hospital, 10, Portman-square.
- *1852-53 Thompson, Sir Henry, Knt. (late Honorary Secretary) (C.), Surgeon to University College Hospital, 35, Wimpole-street, Cavendish-square.
- ‡1861-62 Thompson, Joseph, Esq., Surgeon to the Nottingham General Hospital, Oxford-street, Nottingham.
- 1865-66 Thorowgood, J. C., M.D., 61, Welbeck-street.
- 1866-67 Thudichum, John L. W., M.D., Lecturer on Pathological Chemistry at St. Thomas's Hospital, 3, Pembroke-road, Kensington.
- 1856-57 Tomes, J., Esq., F.R.S. (C.), Surgeon-Dentist to the Middlesex Hospital, 37, Cavendish-square.
- 1864-65 Tonge, Morris, M.D., Lecturer on Physiology at the Charing Cross Hospital, 5, Bolton-row, May-fair.
- 1866-67 Trimen, Henry, Esq., M.B. Lond., 71, Guildford-street, Russell-square.
- 1851-52 Trotter, John W., Esq. (C), Assistant-Surgeon, Coldstream Guards' Hospital, Vincent-square, Westminster.
- 1859-60 Truman, Edwin Thomas, Esq., Surgeon-Dentist in Ordinary to Her Majesty's Household, 23, Old Burlington-street.
- 1857-58 Tudor, John, Esq., Dorchester, Dorset.
- 1852-53 Tulloch, James S., M.D., 1, Pembridge-place, Bayswater.
- 1863-64 Turner, James Smith, Esq., 30, Margaret-street, Cavendish-square.
- 1857-58 Turtle, Frederick, Esq., Lamberhurst, Surrey.
- 1854-55 Vasey, Charles, Esq., Surgeon-Dentist to St. George's Hospital, 5, Cavendish-place, Cavendish-square.
- 1866-67 Venning, Edgecombe, Esq., Assistant-Surgeon, 1st Life Guards.
- 1865-66 Vernon, Bowater John, Esq., St. Bartholomew's Hospital.
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- 1866-67 Wyatt, John, Esq., Surgeon-Major, Coldstream-Guards' Hospital, Vincent-square, Westminster.



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ERRATA IN VOL. XVII.

Page 163, line 20; *insert* semicolon after “dilated” and *omit* it after
“termination.”

.. line 24 *for* “inches,” *read* “lines.”

REPORT.

SESSION, 1866-67.

I.—DISEASES ETC., OF THE NERVOUS SYSTEM.

1. *Urea in cerebral fluid of a patient who died of typhus complicated with dysentery, parotid bubo, albuminuria and convulsions.*

William D., aged 23, was admitted into the Middlesex Hospital, under the care of Dr. Murchison, on October 26th, 1866, with the phenomena of typhus fever of a severe form, including a copious petechial eruption. The tongue was dry and brown, the face dusky, the conjunctivæ injected, the hearing very obtuse, and there was much delirium and restlessness, especially at night, with evidence of pulmonary congestion. From the first, however, there were certain peculiarities in the case. The patient was very emaciated; the abdomen was greatly distended and tympanitic, and evidently tender; and at the same time the bowels were relaxed five or six times in the course of the day, and the stools were light and powdery. On inquiry from the friends it was further ascertained that the patient had been taken ill about six days before admission with diarrhœa, and that, up to admission, the prominent symptoms had been diarrhœa and delirium. So far the case more resembled enteric fever. For several months, before the attack the patient had been ailing from the effects of an abscess in the right arm.

The patient was treated with mineral acids, astringents, and small doses of opium, and took also milk, beef-tea, brandy, &c. On November 3rd, or the fifteenth day, there was a marked improvement in the symptoms, and the eruption was fading. For some days the improvement continued, and on November 5th the pulse had fallen to 104, and the temperature to 99·8° Fahr.; but the diarrhœa and tympanitis continued.

On November 6th the patient was worse again; the pulse had risen to 140, and the temperature to 103.2° . An inflammatory swelling was observed over the left parotid, and the urine, which had been examined daily since admission, for the first time contained a trace of albumen. The swelling in the face and the quantity of albumen in the urine continued to increase. On November 7th frequent convulsive movements of the head and face set in, and there was difficulty in swallowing, so that the patient had to be nourished by the rectum. The diarrhœa and tympanitis were still present. The convulsive movements continued until the patient's death in the evening of November 8th, or the twentieth day of his illness.

On *post-mortem* examination, the blood was found to be dark and fluid, the kidneys were large, smooth and congested, and the tubes were gorged with granular epithelium. The brain itself was normal, but there was a large quantity of clear serum in the lateral ventricles and also at the base of the brain, and beneath the arachnoid over the hemispheres. This fluid was examined for urea, and a large quantity, now exhibited, was obtained from it in the form of nitrate, covering, with a tolerably thick layer, the bottom of a watch-glass. There were numerous small sub-pleural ecchymoses, and much hypostatic congestion and œdema of both lungs. The liver was congested, and the spleen large and soft. The peritoneal surface of the descending colon was coated with flakes of recent lymph, and on opening this portion of the bowel the mucous membrane was found to be in a mass of ulceration, the ulcers at many places almost perforating the entire coats of the gut. The ulceration greatly diminished towards the ileo-colic valve, and the cœcum was entirely free. There was again slight ulceration at the lower end of the ileum, but Peyer's patches and the solitary glands were perfectly healthy.

DR. CAYLEY, 20th of November, 1866.

2. *Urea in cerebral fluid and congested kidneys from a case of typhus complicated with albuminuria and pulmonary congestion, but where there were no convulsions.*

John F., aged 27, was admitted into the Middlesex Hospital under my care, on December 3rd, 1866, suffering from an attack of typhus fever of eight days' duration. The eruption was well marked, and from the first the urine was found to contain a small quantity of albu-

men, and there were all the signs of extreme pulmonary congestion, the respirations being 56 and very embarrassed.

On December 7th the patient became violently delirious; on the 8th this delirium was followed by stupor, picking of the bed-clothes, and involuntary evacuations, which continued until death, on December 11th, or the seventeenth day of his illness. Death was not preceded by convulsions. It is worthy of notice that the temperature, which on the twelfth day was as high as 104° , fell between the fourteenth and fifteenth days to 98.2° , but gradually rose again until the evening before death, when it was again 104° .

On *post-mortem* examination the veins on the surface of the brain were full of dark blood, and there was upwards of an ounce of clear serum at the base of the brain, and a small quantity in the lateral ventricles. In this fluid Dr. Cayley found a considerable quantity of urea. The blood was dark and fluid. There was extreme hypostatic congestion of both lungs, some portions sinking in water; the right weighing thirty ounces, and the left thirty-eight ounces and a-half. Both kidneys were large and congested; the left weighed eight ounces, and the right seven ounces and a-half; but there was no evidence of old disease. The spleen weighed nine ounces and a-half. The intestinal glands were healthy.

Remarks.—The case of W. D. (page 1), brought before the Society by Dr. Cayley, and which was under my care in the Middlesex Hospital, illustrated the uræmic origin of the convulsions which occasionally occur in the course of typhus. From numerous observations, some of which have been submitted to the Pathological Society (see vol. xv., p. 135, and vol. xvii., p. 171), I have long been of opinion that this is their real pathology. I am inclined to go even further than this, and to suggest that the cerebral symptoms of ordinary cases of typhus, and, indeed, of the “typhoid state” generally in all diseases may result from the non-elimination of the products of increased metamorphosis of tissue. For instance, in the case of typhus now recorded, and in several others, urea has been found in the cerebral fluid, although there had been no convulsions.

Dr. MURCHISON, 4th of December, 1866.

3. *Tubercular meningitis and otorrhœa, with small fibro-cellular growths from the dura mater.*

John C., aged 5 years, was admitted into St. Mary's Hospital under the care of Dr. Alderson, November 9th, 1866. It was ascertained from the mother that the child had had scarlet fever two years ago, which was followed by a purulent discharge from the left ear. The otorrhœa continued till two months before admission, when the discharge ceased and the child's general health began to fail. Three weeks ago, when trying to speak to his mother, he was unable to articulate. He became insensible that night and remained in much the same condition till he was brought to the Hospital.

On admission the child was almost comatose; head not unusually hot; pupils both contracted; pulse 84, feeble and compressible; respirations deep, 32 per minute; breath sounds normal. Bowels confined for two days; a purgative was administered, and a blister applied to the back of the neck.

November 12th.—Quite comatose; pupils widely dilated; pulse imperceptible at wrist; respirations slow and labouring; face and surface generally, dusky. Died at half-past eight, P.M.

At the *post-mortem* examination both pupils were seen to be widely dilated and equal. The membrana tympani on the left side was destroyed, and thick purulent matter was found in the tympanic cavity and at the bottom of the meatus. No necrosis of bone. Projecting from the inner surface of the dura mater in the left parietal region were fifty or sixty small, and more or less pendulous, growths, varying in size between a pin's head and a mustard seed, having a semi-translucent appearance and histological characters differing from that of tubercle. The growths were made up of a number of small cells or nuclei thickly distributed through a basis of interlacing fibres. The fibres were much more abundant than they are in ordinary grey granulations. Some of the nuclei were in a state of fatty degeneration. The brain completely filled the cranial cavity, and when the dura mater was removed the convolutions were found to be compressed and matted together, with a total absence of sub-arachnoid fluid. Some little opaque spots of tubercle were found in the pia mater over the left hemisphere about the size of pins' heads, and many others of a smaller size and more translucent were seen on closer inspection. Yellow lymph-like matter was also seen on this side, extending upwards along the great vein and its branches, proceeding from the

Sylvian fissure. Only a very few tubercles and no lymph was seen on right hemisphere. On removing the brain from the skull much yellow lymph-like matter was seen at the base, binding down the optic commissure, extending into the Sylvian fissures (principally the left), and backwards as far as the cerebral peduncles. The sides of the Sylvian fissures were closely adherent. Spots of tubercle not very obvious at base. Lateral ventricles not distended, though containing about four drachms of clear serosity. No diminution of consistence of fornix or walls of ventricles. Arachnoid and pia mater almost universally adherent to grey matter, so that latter was torn on stripping off membranes. Spots of tubercle abundant in pia mater dipping down between convolutions. Several of the frontal and parietal convolutions on the left side were found to be of a yellowish colour and of increased consistence for a certain depth.

Both lungs were filled with miliary tubercles, which were most abundant in upper lobes. Lower lobe of right lung considerably congested. Heart healthy; blood on right side fluid. No tubercle in liver, spleen, or kidneys, which appeared healthy.

Remarks.—The occurrence of growths, similar to those above described, from the inner surface of the dura mater seems to be extremely rare. Their presence on the same side of the head as that on which a chronic inflammation of the ear had existed, and also the great preponderance of the meningeal inflammation on the same side, are interesting coincidences which may have been brought about by other than chance relationship. Dr. H. CHARLTON BASTIAN, 4th of December, 1866.

4. *Case of inflammatory effusion into the ventricles of the brain with extensive destruction of brain-substance in a child.*

Sarah P., aged four months, was brought among Dr. Dickinson's out-patients to the Childrens' Hospital, October 2nd, 1866. There was a history of convulsions when the child was seven weeks old.

The child is somewhat emaciated and has been in present state of 'fit' an hour and a-half. There is general tonic spasm—legs extended, resisting flexion; wrists rigidly flexed; head thrown back; cervical muscles rigid and prominent. Fontanelles open, not prominent. Pupils equal; no squinting; left angle of mouth drawn down. Bowels confined; the child is restless; no screaming; pulse cannot be taken with accuracy.

October 5th.—Tonic spasm as before. The child moans and is apparently blind; some cough; the left angle of mouth still depressed; there is no difference between the two sides of the body.

October 9th.—Much emaciated; respirations irregular and vary in depth. Fontanelles depressed; pupils equal and rather small; apparent blindness; rigidity as before.

October 12th.—Has been in a succession of fits since last report; the fits are not quite so severe. Limbs generally not so rigid; head not thrown back.

October 19th.—Respirations continue irregular; sighing; constant hacking cough; pulse very small, &c. Has had many fits since last report. Fontanelles still depressed; bowels open.

October 26th.—Child drowsy. Fontanelles markedly retracted; slight overlapping of the sutures; the fits less in number and severity; the abdomen soft and tympanitic. The child died October 27th.

Post-mortem examination October 31st.—On removing the calvaria and dura mater a considerable quantity of serous fluid escaped, mostly clear, but the latter part turbid; no flakes of lymph; arachnoid slightly opaque. The cerebral hemispheres were seen to be collapsed towards the base of the skull, like flaccid bags containing fluid. Convulsions flattened; no inflammatory redness of membranes, and no lymph on the surface.

On cutting into the hemispheres, each of them, with the exception of a small patch of the anterior lobe, was found to be converted into a capacious bag, the wall of which was not thicker than one-eighth of an inch. A portion of the wall of the left hemisphere was passed round for inspection. These bags were apparently the remains of distended ventricles, the lining membrane of which, and indeed the whole substance of the hemisphere to the grey matter, had been destroyed; the walls being formed by the pia mater with a thin layer of grey matter attached. The convulsions projected inwards as prominent folds, the whole of the inner surface being softened and flocculent (as seen in specimen); the flocculi consisted of vessels with granular matter attached. No trace of lining membrane.

The fluid contained in these cysts, which did not communicate, was turbid but not purulent; it seemed to be mainly serous, containing debris and perhaps a small amount of pus.

Plexus choroides much congested; that of the left ventricle converted into a firm mass by coagulation of blood within its vessels.

There was no inflammation or disease of the membranes at the base of the brain or Sylvian fissures. Of the brain substance remaining,

the corpora striata and optic thalami were softer than natural, this, perhaps, being partly due to the time that had elapsed since death.

Remarks.—The peculiarity worthy of remark in this case was the association of a large amount of fluid within the brain, and also in the arachnoid cavity, with not only an absence of expansion of the sutures, but an actual narrowing of them and depression of the fontanelles.

The most probable explanation of the phenomena seems to be the following, viz.:—that the fluid within the brain was produced by a rapid softening down of the brain-substance on each side by inflammatory action, into a serous fluid containing its cellular debris, and that the fluid external to the brain in the arachnoid cavity was mechanically effused, to replace the diminished bulk of the collapsed brain; the depressed fontanelles and contracted sutures having the same signification. As to the source of the inflammatory softening I have no opinion.

Dr. R. DOUGLAS POWELL, 4th of December, 1866.

5. *Abscess of the cerebellum in connection with caries of the meatus externus, and small sebaceous tumours between the tympanum and mastoid cells.*

Henry S., aged 19, was admitted into the London Fever Hospital under my care on May 28th, 1866, having suffered for four days from intense headache. For a day or two before he had noticed a discharge from the left ear, which had ceased when the headache came on. There was no vomiting, but the pulse was 96; the tongue was moist and white, and the bowels were confined. The skin was not very hot.

A purgative was administered; four leeches were applied behind the left ear; the ear was syringed out from time to time with warm water, and a poultice applied over it.

On May 30th the patient was much worse. He was very restless and delirious, although he answered when spoken to. The pain in the head was still very severe and more general. There was no discharge from either ear. The tongue was dry and red down the centre. The bowels were opened by medicine. The pulse was only 84 and the temperature of the skin felt natural. The head was shaved and a blister applied to the scalp. In the evening of the same day the patient was sitting up in bed and said he wished to go to sleep; he lay down in bed and in a few minutes was dead.

On examining the body, there was found in the left lobe of the cere-

bellum, an abscess, the size of a walnut, containing about half an ounce of dirty-greenish, extremely fetid pus. This abscess approached the surface at one point and the corresponding portion of the dura mater was detached from the petrous bone over a space about an inch square. Between the dura mater and the bone there was pus similar to that found in the cerebellum, and in the detached dura mater there was a small perforation, large enough to admit a probe. The pia mater and brain-substance were not unusually injected; but the convolutions of the brain were flattened, and each lateral ventricle contained from six to eight drachms of clear serum. No trace of tubercle could be detected in the membranes of the brain; but old tubercle was found in the bronchial glands, and there was a small cretaceous nodule in one of the lungs.

Remarks.—This and the other case submitted to the Society, are two out of a large number of similar cases that have come under my notice during the last ten years. Not a year passes that several cases of the sort are not sent to the Fever Hospital as examples of fever. In many of these cases the patients have suffered for many years from a slight discharge from one ear, with more or less deafness; but the general health has been good until all at once severe cerebral symptoms came on, which too often after a few days have terminated fatally. Attention to this subject was called by the late Mr. Toynbee, who collected and published a large number of cases in which chronic affections of the ear induced acute and fatal diseases of the brain or its membranes.* One of Mr. Toynbee's cases resembled in most particulars that now submitted to the Society. (See *Med. Times and Gaz.* March 31st, 1855, p. 307.) According to my experience, these cases are so common, that a patient who has a chronic discharge from the ear independent of eczema, and is slightly deaf, however good his general health may be, is at any time liable to the sudden advent of inflammation of the brain or its membranes, and can scarcely be regarded as a safe life for assurance. Not long ago an elderly woman was admitted under my care in the Middlesex Hospital, who had repeated attacks of convulsions followed by left hemiplegia and severe pain in the right side of the head. These symptoms passed off at the end of twelve days on the escape of a large quantity of fetid pus from the right ear. These affections, however, of the internal ear are dan-

* *Med. Chir. Trans.* vol. xxxiv., and *Med. Times and Gaz.*, 1855, vols. i. and ii.

gerous in other ways than by implicating the brain and its membranes. In more than one instance I have known them prove fatal by inducing general pyæmia, and in one instance I have known permanent paralysis of the portio dura induced by the inflammation of the internal ear which followed scarlet fever. A large proportion of these diseases of the internal ear date from an attack of one of the exanthemata, and particularly scarlet fever and small pox. I have repeatedly known them developed during convalescence from typhus and enteric fevers, A scrofulous constitution is the great predisposing cause; and in persons of this constitution the diseases of different parts of the internal ear may be excited by exposure to cold and other causes, independently of any specific fever. In the case now recorded the disease of the tympanum appeared to be due to the extension inwards of a growth in the external meatus.

Dr. MURCHISON, 1st of January, 1867.

Report on the morbid appearances presented by the petrous bone in the above case.—Near to the entrance of the meatus, in its superior wall, there is a small orifice about the size of a pin's head, and half way towards the membrana tympani, a second, a little larger. Both these openings lead into the horizontal passage connecting the mastoid cells with the tympanum. The plate of bone forming the roof and posterior border of this passage is rough and worm-eaten, and just at the superior border of the lateral sinus, presents an orifice three lines long by one and a-half broad; this orifice being exactly opposite to the most external of the two orifices in the meatus. The posterior crus of the incus, and the surface by which it articulates with the malleus, are wanting, having apparently been lost by caries; otherwise the tympanum exhibits no appearance of disease that is distinguishable after some months of maceration in spirit. The membrane has disappeared; but the handle of the malleus is entire.

The passage leading from the tympanum to the mastoid cells is enlarged and contains a dark semi-solid mass, about the size of a horse-bean; this mass consists of two portions, one of which is composed merely of shrivelled cells and granular and fibrous matter; the other (which lies in immediate contact with the interior of the two orifices in the external meatus) is a white rounded growth nearly the size of a pea, and presents the characters of a sebaceous tumour, consisting of dense laminae of cells.

This case appears to confirm the views of the late Mr. Toynbee respecting the anatomical relations of affections of the ear and brain, inas-

much as the disease which induced the abscess in the cerebellum appears to have had its origin in the external meatus. So far as can be judged in the absence of any report of the condition of the ear at an early period of the disease, it appears probable that the sebaceous tumour was developed in the meatus and passing inwards through the carious bone set up the irritation which led to the abscess.

MR. J. HINTON, 15th of January, 1867.

6. *Abscess beneath the dura mater in connection with caries of the petrous bone.*

William A., aged 8, was admitted into the London Fever Hospital under my care, on September 3rd, 1866, with restlessness and general pyrexia, and much painful enlargement of the glands on the left side of the neck. The tongue was coated with a white fur, but was red at the tip and edges, and its papillæ were large. The fauces were red, but the tonsils were not swollen, and there was neither rash nor desquamation. The mother had seen no rash before the boy was admitted, and was not aware of his having been exposed to the poison of scarlet fever; she stated also that he had not had scarlet fever on any former occasion, but that as long as she could remember he had suffered from a discharge from the left ear.

A few days after admission, the swelling subsided, and the boy seemed better; but a day or two afterwards, the swelling began to increase again, and formed a large brawny mass, extending down the left side of the neck, and at the lower part stretching over to the right side. The tongue became clean and red, with large papillæ, very like the tongue of scarlet fever; the patient was, at the same time, very restless, feverish, and irritable. Difficulty of swallowing came on at last, and on September 15th, the boy died.

After death the larynx and trachea were found to be in a normal state; but the soft tissues in the whole of the left side of the neck were infiltrated with dense crude yellow exudation, softening at many places into pus, and in connection above with a portion of bare bone, one inch and a-half square, at the base of the cranium, about an inch behind the mastoid process. Inside the cranium there was an abscess, situated behind the left petrous bone, between the dura mater and the bone; it was about one inch and a-half in diameter, its walls were thick, and its contents consisted of dirty brownish pus. There was no perforation of

the dura mater ; and neither the cerebrum nor the cerebellum was implicated in the disease. Dr. MURCHISON, 1st of January, 1867.

Report of appearances found in the petrous bone, from the above case.—The dura mater covering the posterior surface of the petrous bone was separated from the bone and thickened ; the whole of the bone around the tympanic cavity was infiltrated with fluid, and in a condition approaching caries ; the inferior surface was in the same state, but to a less extent. The tympanum and mastoid cells were nearly filled with a dark-coloured pultaceous mass, consisting in part of shrivelled cells. The ossicula were *in situ*. The central part of the membrana tympani was destroyed to about a fourth of its extent. The labyrinth was natural. Mr. J. HINTON, 15th January, 1867.

7. *Right hemiplegia, with loss of speech.*

Dr. William Ogle exhibited the left cerebral hemisphere of a man who had recently died in St. George's Hospital, and gave the following account of it.

J. B., aged 45, was a wine-cooper ; twenty-five years before his death he had an attack of rheumatic fever and endocarditis : with this exception he had no serious illness until October last. On the 15th of last month he was at work, when he suddenly felt a pain in the left side of his head, and fell down without losing consciousness ; on trying to get up, he found he was unable to move his right side, and unable to call for assistance. On the 18th, he was admitted into St. George's under Dr. Page, and remained there till he died, on December 20th.

On admission, he was found to present the physical signs of aortic and mitral disease, with the sharp pulse of aortic regurgitation. There was complete paralysis, with lax muscles of the right limbs, and incomplete paralysis of the right facial muscles. Sensibility was unimpaired.

He was at first unable to protrude his tongue ; but after a few days this symptom passed away, and he moved his tongue with perfect freedom ; there was also at first, considerable difficulty in deglutition, but this also passed off almost entirely in a short time.

He was unable at first to say more than "yes" and "no," and though he recovered his speech in a very slight degree, his vocabulary throughout was limited to a few words, and these chiefly monosyllables. His

general intellect seemed unaffected; he understood all that was said to him; made intelligible signs in answer to questions; could read so as to amuse himself, and wrote down, with his left hand, any words suggested to him with sufficient distinctness, though somewhat misspelt, and with some tendency to repeat letters, for instance he wrote "Testetement" for "Testament." I am, however, not certain that this was more than the result of deficient education. He died two months after admission, from œdema of the lungs.

Post-mortem examination.—Lungs œdematous. Aortic and mitral valves extensively diseased. Blocks of fibrine in the spleen. Dura mater adherent to skull-cap. Much semi-gelatinous fluid in sub-arachnoid space. The surface of the brain was healthy, excepting at one limited spot: this was the posterior part of the third or inferior frontal convolution on the left side. Here there was softening, reaching from the highest point of the third convolution backwards and downwards to the fissure of Sylvius. The softened part was not actually the most posterior portion of the convolution, but there was a small unsoftened strip between it and the transverse frontal convolution; the softened part was about three-quarters of an inch in depth, and about as much in breadth; it was almost diffuent, and under the microscope, was found to be rich in the dark granular bodies usual in softened brain.

On cutting into the brain another small patch of softening was seen in the centre of the left hemisphere, external to, and rather above, the corpus striatum, and extending to the posterior termination of the fissure of Sylvius. All the rest of the brain-substance was apparently healthy.

The left middle cerebral artery was free in its chief trunk; but one of its secondary branches was plugged at a bifurcation with a hard, shotty, piece of fibrine, which filled it so completely that, when water was injected into the vessel, it could not pass, though considerable force was used.

The sequence of events in this case is perfectly clear; first, rheumatic fever of long date, attacking the heart and leaving diseased valves; then coagulation of fibrine on the roughened surfaces, and consequent embolism of branches of the splenic and left middle cerebral arteries; immediate suspension of the functional activity and gradual softening of parts of the brain, dependent on the latter.

The interest of the case consists mainly in its bearing on the question of the existence in the hemispheres of a special organ of speech. The

case harmonizes with the statement of Dax, of Montpellier, that loss of speech depends upon disease of the left hemisphere; and also with the more precise statement of Broca who has attempted to locate the faculty of articulate speech in the posterior third of the inferior left frontal convolution.

I have collected, from my own observations and from the register books of St. George's Hospital, twenty cases in which there was either entire loss of speech, or such impairment of that faculty as to constitute a notable symptom. In eighteen of these cases, there was also hemiplegia on the right side. In one, there was coexisting spine disease, and paralysis on both sides; but in this case, after death disease was found on the left side only of the brain. The remaining case at first seemed an exception, there was no actual paralysis, but a rigid condition of the left arm; the patient, however, died, and both carotids were found to be plugged with fibrine. The evidence then, of these cases, is strongly corroborative of Dax's statement.

How far do they corroborate Broca's theory? In seventeen of the twenty cases, there was a *post-mortem* examination. In the accounts kept of these in the Hospital Museum, the separate convolutions are not distinguished from each other, so that it is not always possible to be sure of the exact site of injury; but, notwithstanding this, the accounts are sufficiently precise to show that in no less than twelve out of the seventeen cases, the third frontal convolution on the left side must have been involved. In four of the cases, this is plain from such terms being used to describe the lesion as these, "the anterior two-thirds of the left hemisphere were broken down," "the anterior and middle lobes on the left side were softened," and so on. In eight others, the convolutions in question must have been involved, because the artery on which its nutrition depends, was plugged; this plugging existed in the middle cerebral in seven cases; and in the internal carotid in another. The plugging of either of these vessels deprives the convolutions, in the neighbourhood of the fissure of Sylvius, including the third frontal, of all, or nearly all, their nourishment; for Dr. Todd has shown (*Med. Chir. Trans.*, xxvii., 321), that when the internal carotid is obstructed "the parts supplied by the middle cerebral are more apt to suffer than those which are nourished by other branches of the carotid," and Dr. Kirkes has also pointed out (*Med. Chir. Trans.* xxxv.) that the deficiency of anastomosis between the middle cerebral and the other divisions of the circle of Willis "explains why the portion of brain supplied by the branches of an obstructed middle

cerebral artery are deprived of all nourishment, except the little they may receive from the minute inosculation provided by the ultimate divisions of the arterial branches of the circle of Willis."

In twelve, then, of the seventeen cases, it is certain that the third frontal convolutions was involved in the lesion. In the remaining five, there is not the same certainty, but still a considerable probability that either this part itself was involved, or its connections with the parts below. In four of them, there was extensive injury to the left hemisphere; in the fifth, plugging of the basilar artery and doubtful softening of both hemispheres.

The result is, on the whole, favourable to Broca's view; there would seem to be very strong evidence that there exists a central organ of articulate speech; and that this organ is, at any rate in the vast majority of men, in the left hemisphere, and in that part of the hemisphere which derives its nourishment from the middle cerebral artery.

Dr. WILLIAM OGLE, 15th of January, 1867.

8. *Case of cerebro-spinal arachnitis.*

Clara U., aged 38, a servant and unmarried, was admitted into the Middlesex Hospital under my care, on December 24th, 1866. Her father and mother had lived to an advanced age; and although she stated that two sisters had died of consumption, this subsequently turned out to be erroneous. She had never been very strong, but had been able to work until twelve months before admission. The catamenia had ceased for four or five years, and during this period she had slight leucorrhœa, and had suffered from attacks of frontal headache with nausea. About a year ago she began to complain of pain in her right arm between the shoulder and elbow, increased by movement, and so severe as to compel her to give up work. After six weeks the pain subsided, but never entirely left her. Her present illness commenced two months ago with pain in the loins and down the back of the legs, which was increased on rising up or on attempting to sit down, and was believed to be rheumatic. A fortnight before admission this pain increased so that she was compelled to lie on her back, and about the same time she became feverish, restless, talkative in her sleep, costive, and lost her appetite. A week before admission, an eruption of herpes appeared on both lips. She had not complained of headache and had not vomited. There had been no sign of paralysis,

either of voluntary power or of sensibility, and no feeling of numbness, tingling, or pricking, of the legs. No one else had been ill in the house where the patient had lived.

On admission the patient's chief complaint was of great pain in the loins, which was slightly increased by pressure over the muscles and also by movement, but there was no tenderness whatever on percussion over the spine. There was no pain or swelling in any of the joints, and she could move both legs freely. There was no headache and the mind appeared clear. The lips were crusted with black scabs from desiccating herpes. The tongue was moist with a thin white fur; the bowels had been opened by medicine. The temperature was 100.4° F., and the urine contained no albumen. The heart and lungs appeared normal.

During the night after admission she was very restless and delirious; and next day, although the delirium had ceased, the pupils were noted as very dilated. The delirium continued to recur at night, and except that the temperature fell to 99° on December 28th, little change occurred till December 29th, when she was evidently worse. She had had a very restless night, and at the time of visit was in a state of talkative delirium. The pupils were large and sluggish, but equal. She complained greatly of pain in the back of the neck. On examination, there appeared to be no tenderness over the spine or the muscles; but when she moved her head she put up both her hands to steady it. She still moved both legs freely, and, indeed, it was often a difficult matter to keep her in bed. The pulse was 144; the tongue was still moist, and there was still a tendency to constipation.

The motions were passed involuntarily on the 30th of December, and the urine was retained, requiring the use of the catheter.

On December 31st stupor was coming on, although the patient could be roused without difficulty. There was still retention of urine and involuntary motions; the tongue was moist; the pulse 108; respirations 36; temperature 98.4° Fahr.

The patient was quite unconscious on the 1st January, 1867. The pupils were smaller, but not contracted; the breathing was 40, and stertorous; there was floccitatio and also slight muscular rigidity of the right arm; the left hand was held up and kept moving about in the air; the urine still retained; pulse 104; temperature 97.2° . At eleven, P.M. she threw up both arms, stared and moaned, and within a quarter of an hour was dead.

The treatment adopted consisted in blisters to the spine (one of

which was followed by a slight and temporary trace of albumen in the urine), and the internal administration of iodide of potassium and carbonate of ammonia, of opiates to procure sleep, and latterly of stimulants.

On opening the head after death the pia mater over the hemispheres was found much injected, the convolutions flattened, and at the base there were fully two ounces of turbid serum with flakes of lymph. Each lateral ventricle contained three or four drachms of clear serum. The pons Varolii, the medulla oblongata and the upper part of the spinal cord were plastered over with a layer of opaque, yellow, puriform lymph, about two lines in thickness, and extending for nearly an inch on each side over the under surface of the cerebellum, but nowhere implicating the cerebrum. The whole patch measured about three inches from before backwards, and two inches and a-half from side to side, and had tolerably well-defined margins, that in front corresponding exactly with the anterior edge of the pons Varolii. The whole of the spinal cord to its lower end was coated with a similar exudation. This lay in what is called the cavity of the arachnoid, and was equally abundant in front and behind. On microscopical examination the exudation, both on the brain and cord, was found to contain numerous pus corpuscles. There was no disease of the brain or spinal cord. The heart, lungs, uterus and ovaries were normal. The spleen was not enlarged, nor was the blood unusually dark and fluid. The liver and kidneys were slightly congested.

Remarks.—This case is of interest from the great rarity of the lesion met with after death; for in this country, meningitis, independent of injury, is almost always tubercular. From the so-called “epidemic cerebro-spinal meningitis” of the Continent and America, it differed both anatomically and clinically. In the epidemic affection, the exudation had been found to be, for the most part, sub-arachnoid, and chiefly on the posterior surface of the cord. Heisch, however, had described cases of the Continental disease in which the cavity of the arachnoid had been found full of purulent fluid. Clinically, it differed from the symptoms which had been laid down as essential to the Continental affection in the following particulars:—1. In the invasion being gradual and not sudden; 2. In the absence of vomiting; 3. In the absence of severe headache; 4. In the absence of any spasmodic contraction of the muscles of the neck, causing retraction of the head; 5. In the absence of hyperæsthesia; 6. In the temperature being but slightly

elevated. The occurrence of herpes on the lips, however, was interesting, inasmuch as it had been described as a very common appearance in the epidemic meningitis of the Continent.

But, on the other hand, it may be well to refer to the particulars of a case which was some time ago under my care in the London Fever Hospital. A man, aged 60, was admitted on October 23rd, 1865, who presented all the so-called pathognomonic symptoms of epidemic cerebro-spinal meningitis, including severe headache, moaning, retraction of the head, rigidity of the arms, and vomiting. After death, about the tenth day of his illness, however, no appreciable lesion of the membranes of the brain or spinal cord could be discovered, and the cause of death was ascertained to have been uraemia from contracted kidneys, and recent pericarditis. It would appear then that for the purpose of diagnosis the symptoms of epidemic cerebro-spinal meningitis have been too rigidly defined.

There have always appeared to me good grounds for doubting the existence of "cerebro-spinal meningitis" as a distinct *epidemic specific disease*. At all events, there can be no doubt that the lesions of that affection have occurred at certain times as complications of such specific diseases, as typhus, yellow-fever, and probably also severe remittent fever. Under these circumstances, the symptoms and cause of the primary disease would of course be materially modified, just as they would be modified by the supervention of such local complications as parotid bubo or congestion of the lungs. To argue that the symptoms of cerebro-spinal meningitis are at complete variance with those of uncomplicated typhus is beside the question. Notwithstanding what has been written to the contrary, I am still inclined to regard *epidemics* of cerebro-spinal meningitis much in the same light that Professor Hebra, of Vienna, regards epidemics of miliary fever.* The cerebro-spinal lesions, like the miliary eruption, are secondary to more general disease; although, in the former case, the symptoms of the local affection are so violent and peculiar, as to materially modify, or even eclipse those of the primary affection. This primary disease may vary in different epidemics, and thus account for the widely different views entertained on many points relating to the etiology of "epidemic cerebro-spinal meningitis." Like other local diseases, however, it is probable that cerebro-spinal meningitis also

* Diseases of the Skin, *Syd. Soc. Transl.*, 1866, vol. i., p. 387.

occurs occasionally as a primary idiopathic affection independent of any blood-poison.

Dr. MURCHISON, 15th of January, 1867.

9. *Effusion of blood into pons Varolii, with obstruction by clot of basilar artery and some of its branches.*

H. T. M., a cab-driver, aged 41, was admitted into St. Thomas's under my care, on the 2nd of October, 1866. He had been suddenly attacked three days before, after an unusual amount of drowsiness, with loss of consciousness; which, disappearing in a short time, left behind it paralysis of the right side, and impairment of speech. When admitted, his right side was incompletely paralyzed, sensation appearing to be tolerably perfect. His face was drawn to the left; he protruded his tongue to the right; and the arm was much more powerless than the leg. His speech was imperfect; his intelligence was impaired; he was low spirited, and inclined to shed tears; and he passed his evacuations in bed. There was no evidence of disease in any of the organs of special sense. The heart-sounds were healthy; the pulse regular; the urine acid and natural. The tongue was furred.

He continued to mend from the time of admission up to the 17th; his speech gradually improved; and during the last four or five days of this time his evacuations were passed consciously. In all other respects, however, the change was slight. About the 17th or 18th, a slight change for the worse was observed; his speech began to get less distinct, his evacuations to be passed again into the bed; and his intelligence to deteriorate. By the evening of the 20th he had become quite comatose, and he continued comatose up to the time of his death. On the 23rd, it was noted that he breathed explosively; that his left pupil was dilated, his right of medium size, and both unacted on by light; that he was entirely unconscious, though occasionally making slight movements; and that his pulse was 72. He died early in the morning of the 25th.

At the *post-mortem* examination, the heart and kidneys, and all the other abdominal and thoracic viscera were found healthy. The sub-arachnoid tissue contained but little fluid; and the surface of the brain was more congested than natural; the congestion was particularly marked upon the under half of the posterior lobe of the right cerebral hemisphere. The basilar artery was distended with a firm, partly decolorized, adherent clot, which blocked up the artery completely, and

was connected at the one extremity with small clots, extending a short distance into the vertebral arteries, at the other extremity, with similar clots prolonged into the anterior branches of the basilar. The posterior cerebral artery of the right side, and several of its branches, were thus blocked up in a very great part of their extent.

On examining the substance of the brain, this was found to be, for the most part, healthy; but much of the substance of the right posterior cerebral lobe was softer than natural, and its medullary portion presented a pale saffron hue. In the left half of the pons Varolii was found a brick-red-coloured clot, surrounded by softened brain-substance, with which, indeed, its edges appeared to be continuous; in other words, there was there a diseased mass, of which the central part was evidently clot, the outer, inflamed cerebral matter. In the softened substance of the posterior lobe of the cerebrum, no abnormal elements were detected microscopically; but, in that bounding the clot, numerous compound granule-cells were detected.

It is not very clear to me what was the sequence of events in this case; I am inclined, however, to think that effusion of blood into the pons was the first event, and that which caused the symptoms for which the patient was admitted into the Hospital; and that all the other morbid changes observed within the head, and the aggravation of the patient's symptoms, were due to inflammatory processes spreading from the neighbourhood of the clot.

Dr. J. S. BRISTOWE, *5th of February, 1867.*

10. *Uric acid obtained from the brain in a case of renal disease.*

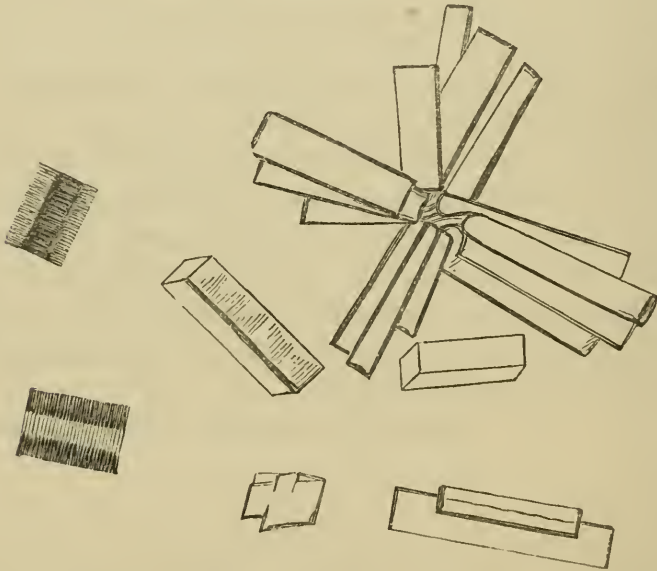
A young woman who was the subject of dropsy and albuminuria, supposed to have resulted from an attack of scarlatina, died in St. George's Hospital, after obstinate vomiting and convulsions, four years after the date of the febrile disease.

The kidneys weighed together fifteen ounces, and were characteristic specimens of the smooth, mottled kidney, which results from tubal nephritis. The tubes were universally distended with epithelium.

The brain was not altered in appearance, excepting that it was anæmic and watery. One hemisphere of the cerebrum was macerated in water with the object of examining for urea. A small quantity of clear watery extract was obtained after several manipulations which it

is not necessary to describe. This was acted upon by nitric acid. Effervescence took place, possibly in consequence of the decomposition of the urea, for no crystals of the nitrate could be seen. After a considerable time, however, it was found that the fluid had deposited upon the bottom and sides of the vessel a quantity of uric acid in most characteristic crystals. The experiment was not made with the precautions necessary in quantitative analysis, so that it is not possible to form any estimate of the quantity of uric acid which the brain contained. Two or three grains were obtained in the manner described. The crystals are represented in the woodcut. In a subsequent case of

WOODCUT 1.



uræmic poisoning I was able by the same process to procure a similar result; but in this case, which was one of granular kidney, the crystals were less characteristic.

Although urea has been often found in the brain in cases of uræmic poisoning, I am not aware that uric acid has been before noticed. The fact that uric acid has been detected in the blood, and in serum, in cases where its excretion is deficient, and the frequent deposition of urates under such circumstances in many parts of the body, might have suggested the probability of a similar deposit in the cerebral tissue. How far the presence of the acid in the brain may have contributed to cause the convulsive attack, which in each case proved fatal, remains to be seen.

DR DICKINSON, *5th of February, 1867.*

11. *Portions of pia mater from a case of tubercular meningitis.*

These specimens have been brought before the Society in order to demonstrate the nature and seat of the so-called miliary tubercle of the pia mater. Hitherto these have generally been regarded as the very types of this kind of tubercle formation, and as in every way similar to the grey granulations which are often so abundant on the serous membranes. My object is to show that the granulations of the pia mater differ from those of the serous membranes generally, not only as regards position, but also in the fact that they spring from the over-growth of a different histological element.

Most modern pathologists now admit that the grey granulations of the viscera and serous membranes are produced by a local over-growth and proliferation of connective tissue elements, and it has been known for some time that these grey granulations were occasionally formed in and on the walls of small blood-vessels, taking their origin in an excessive growth of the connective tissue cells of the external coat, or tunica adventitia, of such vessels. This was believed to be a site especially common in cases of tuberculæ of the pia mater. But the observations of Robin, His, and others, have shown that the vessels of the brain and pia mater are in some respects quite peculiar, inasmuch as they are enclosed and separated from adjacent parts by peri-vascular canals, which are bounded by a distinct, hyaline, sheath-like membrane. Such peri-vascular sheaths have already been figured in Plate i. of vol. xvii. of the *Transactions of the Society*, the specimens from which these illustrations were taken having been brought under the notice of the Society by Dr. Sankey, for the purpose of showing certain morbid conditions of the vessels in cases of general paralysis of the insane. The observations of Robin, His and myself, however, have now conclusively shown that the presence of the hyaline sheath, so far from being a morbid condition, is quite normal, and that it is to be met with around all the vessels of the pia mater as well as of the brain and spinal cord. Professor His has shown by the aid of injections, also, that they constitute, like the vessels which they surround, a continuous system of canals. He believes them to be lymphatics; and I have ascertained that the inner side of the hyaline sheath is more or less completely lined by a single layer of tessellated epithelium, the nuclei of which are easily recognizable, though the surrounding cells can only be made out with difficulty. These nuclei are quite distinct in situation and in nature from certain others, more sparingly distributed, which are situated on the outer surface of the peri-vascular sheaths.

The preparations I have brought forward show that almost every one of the granulations of the pia mater are apparently situated on the walls of the vessels when inspected by the naked eye, though by microscopic examination they can be easily ascertained to arise from an excessive accumulation of nuclear bodies outside the wall of the vessel, though within the peri-vascular sheath. In this way local bulgings of the sheath are produced, which either occupy the whole or a part of the circumference of the vessel, and produce the little specks known as tubercle granulations of the pia mater. In the situations where these bodies occur, the calibre of the enclosed vessel may be either unaltered or slightly diminished. There is no notable thickening of the wall of the vessel, and the nuclei which increase so much within the sheaths at intervals, so as to produce the local bulgings just described, are, I believe, of epithelial origin. After a long and careful investigation of this subject I have come to the conclusion that the nuclei, which are seen to exist in such great abundance within the peri-vascular sheaths in cases of tubercular meningitis, are similar in kind to bodies which may be seen frequently in very small numbers, though in the same situation, in persons dying from other causes, and such as were described and figured by Robin. These have the closest resemblance to the nuclei of the epithelium lining the inner side of the sheaths; they have no connections with the outer coat of the artery, and they exist alone, unmixed with fibres or tailed cells, such as would almost certainly have been met with had they taken their origin from the connective tissue of the artery. I have therefore come to the conclusion that these nuclei are descendants of the epithelial nuclei lining the peri-vascular sheath, and are not derived from the walls of the artery.

Thus, whilst the granulations of the serous membranes are situated only occasionally on the walls of the blood-vessels, and when so situated are produced by a proliferation of the connective tissue elements of the outer coat; the granulations of the pia mater are almost invariably in close connection with its vessels, and are produced by an accumulation of epithelial nuclei between the outer wall of the vessel and its investing sheath: these nuclei being originally derived by proliferation from those lining the hyaline peri-vascular sheath.*

Dr. H. CHARLTON BASTIAN, 19th of March, 1867.

* Since exhibiting these specimens to the Society, and after publication of a paper on the Pathology of Tubercular Meningitis, (*Edinb. Med. Journ.*, April, 1867,) I have had my attention called to a work by Dr. Rindfleisch, (*Lehrbuch der Pathologischen*

12. *Disease of the frontal lobes of the brain, especially the left, with hemiplegia of the right side and loss of speech, &c.*

The following notes were furnished by Dr. Thurnam.—“The wife of a labourer, aged 31. Had good health up to six months before admission into the Wilts County Asylum, excepting that after her second confinement, six years before, she had a fit, which, however, left no obvious ill results. About half a year before admission she had scarlatina, from the effects of which, as regards the mind, she never thoroughly recovered. She talked strangely, often laying in bed the whole day, and neglecting her household affairs. After a miscarriage, about ten weeks before, the mental symptoms had been aggravated, and, about six weeks after that, she had a series of fits, no doubt convulsive, which lasted the whole night. Paralytic symptoms now developed themselves, the saliva was noticed to collect in the mouth and the mode of speech was changed. She became obstinate and self-willed, exhibited various indecorums both in language and manner, and was at times violent and threatened to stab her mother, at whom she threw a knife.

“On admission, August 22nd, 1866, there was imperfectly developed hemiplegia of the right side, including the right side of the face. When protruded, the tongue was drawn slightly to the left. There was a constant dribbling of saliva, with which the mouth was generally full, and especially when about to speak. Tears flowed when addressed or when speaking, and independently, as appeared, of any particular painful emotion. The memory seemed clear; but the whole mental powers were evidently much impaired. At first she occupied herself with a little needlework. There was some heat of the scalp at the vertex and the sphincters acted imperfectly. There was œdema of the legs. A blister was applied to the nape, but without much advantage.

“About a month after admission the paralysis was somewhat suddenly

Gewebelehre, Leipzig, 1866,) in which he gives a figure (fig. 5) of one of the vessels of the pia mater, very similar to my own. His interpretation is, however, different, since he speaks of the swellings represented as being due to a proliferation of the tunica adventitia of the artery. I regret also, that I was not aware at the time of what Virchow had written on the subject (*Die Krankhaften Geschwülste* Zweit. Bd., 1864-5, Berlin, p. 629, and fig. 190); since he appears to have been fully aware that the tubercular granulations of the pia mater were situated within the peri-vascular canals of Professor His. We differ, however, inasmuch as he regards the nuclei as having an origin from the connective tissue of the outer coat of the artery, and I, as descendants from the epithelium lining the peri-vascular sheath.—H. C. B., *May*, 1867.

extended to the muscles of deglutition and to the tongue. Having been almost choked by her food she was from that time fed by means of the tube and funnel. She lost the power of speech, but continued to comprehend what was said to her, and was able to express herself in writing, though in a confused manner. After this she had several attacks of convulsions, the paralysis increased, and she became more and more helpless. Though in this pitiable state, and although unable to speak, she was aware of all that passed around her, and often laughed heartily at anything she saw which amused her.

“She died after a severe attack of convulsions, attended by partial ptosis of the right eye-lid, on March 23rd, 1867. She had been fed by the tube for six months, and had been unable to utter one word for nearly the same length of time; though, up to the day before her death, she showed by signs that she understood any simple thing which might be said to her.

“*Post-mortem examination* forty-three hours after death:—The thoracic and abdominal viscera were generally healthy, excepting that they were much congested with black blood. The heart weighed eight ounces avoirdupois, its right cavities were distended with black fibrinous coagula; the left ventricle was small and contracted. The kidneys weighed four ounces and a-quarter and four ounces and a-half. They were somewhat granular and hard, and near the surface of the left there was a serous cyst, full of a dirty grumous fluid of a livid brown colour.

“*Head*.—The arachnoid and pia mater were much congested, and there was a considerable amount of serum in the arachnoidal sac. The brain was large and weighed fifty ounces and a-half avoirdupois; cerebrum, forty-four ounces; cerebellum with pons Varolii and medulla oblongata, six ounces and a-half. The grey substance was apparently healthy; the white generally somewhat firmer than usual. The obviously diseased appearances were confined to the two frontal lobes, those in the left being much greater in extent than those in the right, in the proportion, probably, of three or four to one. So far as examined before being placed in spirit, throughout nearly the whole of the left lobe, that part of the white substance which adjoins the grey substance of the convolutions, was found to be affected by a peculiar toughness and hardening, and was of a yellowish or light buff-colour. This extended inwards for a variable distance, averaging three-quarters of an inch, or perhaps more, in depth. In the centre of the lobes the white substance was of the usual cream-colour and not firmer than in the middle

or posterior lobes. Though not noted in writing at the time it is believed that the lesion did not extend beyond the fissure of Rolando, and that it consequently was confined to the frontal lobes. It certainly, however, was not confined to the inferior left frontal convolution, the posterior third of which was the seat of the lesion in the cases of aphasia reported by M. Paul Broca. There was no obvious disease of the corpus striatum or optic thalamus of either side."

Dr. PEACOCK for Dr. THURNAM, 7th of May, 1867.

II.—DISEASES ETC., OF THE ORGANS OF RESPIRATION.

1. *Primary cancer of the larynx, involving the epiglottis.*

The specimen was from a man, aged 61, admitted into Westminster Hospital in April, 1866, who first complained of disease of his throat seven months before. His voice was good; and there was no dysphagia, although the throat was sore and painful. The laryngoscope revealed deep, foul, sloughy, ulceration at the back of the tongue on the right side, cutting through the right half of the epiglottis, and destroying all but a pencil-shaped process. The right side of the pharynx was also involved. The deep laryngeal structures and vocal cords were normal. Very shortly after the glands in the right parotid and sub-maxillary region began to enlarge; they became indurated and painful. During May, the ulceration in the throat became less, but it was replaced by visible swelling on the right side of the fauces, clearly in connection with the slowly enlarging glands of the neck, and some dysphagia was present. In June, he felt comfortable from the use of poultices externally, which eased the pain, and softened the glandular enlargements. A hard, wearing throat-cough set in, which seemed to shake him very much; this was accompanied with expectoration of mucus. There was not the least indication of pulmonary mischief. The ulceration now extended into the larynx; and especially involved the right glottic regulator (false cord); but the pencil-shaped process of the epiglottis remained about the same; and the general swelling within the throat was stationary. By the end of June, under nitric acid and cinchona internally, with soothing linctus, and lubricating, astringent gargles he so improved, as to become an out-patient; and

the external glandular swellings became less, and not so painful. A good part of the ulceration had healed, excepting a sore on the right side of the pharynx, which caused much dysphagia; this was kept in abeyance with nitrate of silver. He varied, on and off, until the beginning of September, when he was again admitted as an in-patient, with loud clangous cough and expectoration, which irritated and harassed him; and appeared to resist all treatment. The ulceration on the right side of the larynx was indolent, ashy looking, and very foul; he was weak and blanched; and the glands in the neck were about the same. He died quite suddenly from exhaustion, on September 21st. He had been a hard drinker at one time; had travelled over the entire globe; and, up to the time of his admission, was an inmate of Lambeth Workhouse, under Dr. Bullen, who first sent him to me and my colleague, Mr. Christopher Heath. We had no doubt as to the disease being carcinoma of the larynx; but he had a trial of mercurial and iodine treatment without any benefit on his first admission, in case there should have been any syphilitic taint.

At the *post-mortem* examination the lungs were healthy, and, indeed, every part of the body, excepting the larynx, which was much eaten away by ulceration on the right side, involving, chiefly the regulator of the glottis on that side, the right ary-tænoid cartilage, and right half of the epiglottis. The disease was clearly primary, and tracheotomy might have prolonged life for a time in alleviating the distressing cough which proceeded from the throat.

Dr. GIBB, *6th of November, 1866.*

Report on Dr. Gibb's specimen of "primary cancer of larynx."—The specimen consisted of the tongue, larynx, and pharynx. The right half of the epiglottis and the folds between the epiglottis and right ary-tænoid cartilage were destroyed by ulceration, which extended deeply into the base of the epiglottis, and outwards on to the wall of the pharynx, and, to some extent, involved the base of the tongue. The ulceration had a ragged surface, and the edges were thickened and somewhat nodulated; two small, whitish, nodules were visible beneath the mucous membrane in its vicinity.

On microscopical examination of thin sections made through the margin and base of the ulcer, the characters presented were those of well marked epithelioma. There was a coarse fibrous stroma, in the meshes of which were little masses composed of closely pressed

together, thick-walled, cells, which had the general characters of squamous epithelium.

Mr. J. W. HULKE,

Dr. W. CAYLEY, 19th of February, 1867.

2. *Foreign body (a lamina of bone from a sheep's head) impacted in the larynx; removed with the aid of the laryngoscope.*

John B., aged 50, a labourer, was brought to me on September the 29th, by Mr. John Cumming, suffering from aphonia, dyspnœa, and dysphagia. He stated that three days previously whilst taking some soup (made from sheep's head), he suddenly felt choked, and as if something had gone the wrong way; he tried to get it up with his fingers, but did not succeed; subsequently he vomited violently, and after bringing up large quantities of blood, fell insensible on the floor. After an interval of half-an-hour he recovered a little, and visited Mr. Cumming, who passed a bougie down the œsophagus. For two days the patient suffered a great deal of pain, especially in swallowing, and from so much dyspnœa that he was unable to lie down at night. On the third day, September 29th, he came under my notice, and on making a laryngoscopic examination, a piece of yellowish-white bone was distinctly seen, not only by myself, but by Mr. Cumming, in the larynx, apparently impacted between the vocal cords. With forceps opening in the antero-posterior direction, and with the aid of the laryngeal mirror, a small fragment of bone, about a quarter of an inch long, and an eighth of an inch broad, was removed. The slight hæmorrhage which occurred prevented any further laryngoscopic examination at the time; and it was believed that the entire bone was removed. The patient passed a good night, but the next day experienced a good deal of uneasiness; having, however, been cautioned that he would probably continue to feel some discomfort for a little time he did not apply to me until October the 2nd, when the symptoms were rather urgent. On examining him with the laryngoscope, the bone was found to present exactly the same appearance, as when first seen before the removal of the fragment on the 29th. The bone was seen to block up the anterior third of the laryngeal canal. After repeatedly unsuccessful attempts to remove the bone, which could be easily touched, but not moved at all, the dyspnœa being considerable, the patient was admitted into the Hospital for Diseases of the Throat; and tracheotomy was performed by Mr. Evans. On October the 5th, I demonstrated the bone with the

laryngoscope to Sir William Fergusson, Dr. Balthazar Foster, and other gentlemen. Mr. Mason also made a laryngoscopic examination.

Sir William Fergusson attempted with various kinds of forceps to remove the bone, but it was lodged so firmly in its place, that it could not be moved at all. He recommended that if, after a delay of a few days, the bone was still impacted, the thyroid cartilage should be divided, and the bone removed through the wound.

October 11th.—The patient had remained in about the same condition, the breathing, since the performance of the operation, having been easy; but the swallowing very difficult; the patient being able to take only liquids. On this day, I succeeded in passing a piece of rigid wire, shaped like most laryngeal instruments, but bent backwards at its extremity so as to make a kind of blunt hook, behind and below the bone, and in this manner brought up a thin lamina of bone about half an inch across in each direction. On the following day, a small piece of bone was seen projecting from the right ventricle. After passing an instrument below and slightly moving it, the patient coughed up a piece of bone about half an inch long and a quarter of an inch wide, and a piece of cartilage of about the same size. On putting the larger pieces together, they made, altogether, a lamina of bone, three quarters of an inch long, and half an inch wide. This had been impacted horizontally with its long diameter across the larynx in such a manner that about three-eighths of an inch had extended into the right ventricle, and rather less than a quarter of an inch of the bone into the left ventricle; in this way, the bone could not move to the smallest extent, either upwards or downwards. It will be seen, therefore, that the bone could only be removed by fracturing the portion in one of the ventricles; and that the portion in the right ventricle was separated from the main part by the operation on the 11th. On the 13th, the canula was removed, and on the 16th, the patient was discharged cured. The congestion disappeared after a few days, and when the patient called at the end of a month, he was in perfect health and his voice was quite normal.

DR. MORELL MACKENZIE, *20th of November, 1866.*

3. *A specimen of advanced ossification of larynx, trachea and bronchi from a man, aged 45.*

Bony deposits were found in irregular patches extending from the larynx to the minutest bronchial tubes. The tendency to ossification

seemed to have been general, as the costal cartilages were converted into bone, and throughout the arterial system were numerous plates and rings of calcareous matter. The patient had died with symptoms of exhaustion, and had for several years suffered from emphysematous breathing.

Mr. JESSOP, 20th of November, 1866.

4. *Cancer of the larynx, &c.*

This was a specimen of encephaloid infiltration of the larynx, thyroid body, and neighbouring structures, forming a tumour of the size of a large cocoa-nut, taken from a man aged 34.

The disease, which had commenced twelve months before his death, had first been observed by the means of the laryngoscope as a swelling on the right of the epiglottis. Sixteen weeks before his death tracheotomy was performed for the relief of impending suffocation.

Mr. JESSOP, 20th of November, 1866.

5. *Disseminated primary cancer of lungs.*

Thomas D., aged 50, admitted into Guy's Hospital under the care of Dr. Wilks, November 7th, 1866. He stated that for some years past he had in the winter had a slight cough, which was not enough, however, to keep him from work, although this was of a very laborious kind. Seven weeks ago he was first obliged to leave work, but for nearly a month previously he had felt unwell, suffering from shortness of breath and weakness.

The report of his condition on admission is as follows:—He was sitting in bed propped up with pillows, and was quite unable to lie down. He had some dyspnoea. The heart-sounds were perfectly normal. The chest was well-formed, and he was a fine, well-built man. On percussion, the anterior surface of the chest was fairly resonant on both sides; posteriorly each base was dull. The expiratory murmur was prolonged and loud at each apex, and slight sibilant râles were heard at these parts. Posteriorly at the bases sibilant and subcrepitant râles were audible, with slight bronchophony, especially on the left side. The legs were œdematous in a considerable degree. The urine was not albuminous; but loaded with urates and phosphates.

The case was regarded as one of capillary bronchitis, with more or

less pneumonia; he was ordered to have cupping-glasses applied between the scapulæ, and to take a mixture containing vin. antimonalis \mathfrak{m} x ex mist. pot. nitrat. t. d. The next day he felt considerably relieved, but his face was rather dusky and his pulse irregular. The medicine was changed on the 10th, and he was ordered a mixture of vin. ipecac., with tinct. and inf. serpentariæ. He died suddenly on the following day, after a very restless night.

The account of the *post-mortem* examination is taken from Dr. Moxon's report. The contents of the cranium were healthy, except that the membranes were a little thickened on the upper surface of the brain.

Each pleural cavity contained a large quantity of fluid, which was clear and transparent, but of a brownish colour. In the pleural membrane were a few minute plates. It was doubtful whether these were of a cancerous nature. The lungs were studded with small cancerous deposits, looking very like tubercles, but larger than the ordinary kind of tubercle. The two lungs were affected in exactly the same way, and to the same degree; the apices were nearly free, containing only a very few of these deposits. The lungs themselves felt bulky and firm, and resisted section more than lungs affected with pneumonic consolidation or miliary tubercle. The appearance of the cut surface was very peculiar. A few of the cancerous masses were as large as hemp-seeds, and looked quite white and like small tumours; but most of them were very much smaller, and these were closely set together, and not very distant from one another.

In the pericardium covering the right auricle were about six little tubercles (cancerous?), like those often found in general tuberculosis. In the membrane over the left auricle was a similar deposit. In the substance of the left ventricle were several very minute carcinomatous grains, and one of the size of a hemp-seed.

In the liver were about ten or eleven distinct cancerous nodules, most of which were very small; the largest was beneath the surface of the right lobe. The spleen contained a doubtful patch. The kidneys were quite free from deposit. No cancer could be discovered in any other part of the body except the organs mentioned.

Remarks.—This case is an example of what I believe to be a very rare form of disease, as I cannot ascertain that any specimen of a precisely similar kind has been exhibited to the Society. There can be very little doubt that the lungs were the primary seat of the cancer in

this instance, as the deposits elsewhere were very few in number, and quite insignificant in size. A point of interest is that in each lung the apex was much less thickly studded with cancerous nodules than any other part of the organ.

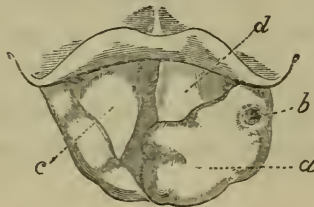
Dr. C. HILTON FAGGE, 4th of December, 1866.

6. *Ossified (expectorated) arytaenoid cartilage.*

R. P., aged 58, was sent to me by Mr. Buxton Shillitoe, on account of loss of voice. On making a laryngoscopic examination, the left arytaenoid cartilage was seen to be enormously thickened, and at one spot ulcerated. The history of the case was as follows:—The patient stated that he had never had either syphilis or phthisis; but that in January, 1865, he had fallen from a great height on his head; and that immediately after the accident the voice was noticed to be very weak, and was soon altogether lost. Six months afterwards he expectorated the cartilage which was now exhibited, and which was seen to be the left arytaenoid cartilage completely ossified.

The annexed woodcut illustrates the appearance of the larynx (as seen with the laryngoscope) after the expectoration of the left arytaenoid cartilage.

WOODCUT 2.



- a.* Left arytaenoid cartilage greatly swollen and inflamed.
- b.* Ulcer at the junction of arytaenoid cartilage and arytaeno-epiglottic fold, through which the arytaenoid cartilage was probably expectorated.
- c* and *d.* The swollen ventricular bands eclipsing the vocal cords.

Dr. MORELL MACKENZIE, 15th of January, 1867.

7. *Cauliflower excrescence of the larynx.*

The specimen, the larynx of a child, with a cauliflower growth, about the size of a cherry, illustrated the difficulty of diagnosis of laryngeal disease, where the laryngoscope cannot be used. A child, aged 3 years, had suffered for eighteen months from croupy cough and stridulous breathing, and had been treated actively by one practitioner with mercury, emetics, &c.; by another who regarded the case as one of spurious croup, with antispasmodics, &c. Mr. James Adams had urged the importance of tracheotomy, but the friends would not consent to it. The patient was found dead in the morning.

Dr. MORELL MACKENZIE for Mr. JAMES ADAMS, 15th of January, 1867.

8. *Tracheotomy. Pyæmia from ulceration caused by pressure of tube.*

A girl, $3\frac{1}{2}$ years of age, was admitted under my care at the Children's Hospital, October 16th, 1866, apparently in articulo mortis from diphtheria, with which she had been attacked two days before. Mr. Haward, the House Surgeon, at once performed tracheotomy, and breathing was re-established by artificial means. She went on well for three days, when the rash of scarlatina appeared, which it was supposed she had caught in the Hospital; this, however, did not immediately interfere with her progress, and the tube was removed, and kept out for a longer or shorter period every day; without it she still breathed with difficulty.

On the 25th, a swelling appeared on the left wrist; and she began to suffer from diarrhœa. On the 2nd of November, the swelling was found to fluctuate; it was opened, and was found to be connected with acute necrosis of the radius. She gradually sank and died five days later.

At the *post-mortem* examination, in addition to the suppuration connected with the radius, pyæmic deposits were found in both lungs. The circumference of the trachea for three quarters of an inch below the wound was deeply ulcerated by the pressure of the tube. The mucous membrane was destroyed, and the cartilages exposed; the edges of the ulceration being sharply limited, and corresponding exactly with the situation of the tube.

Remarks.—This case perhaps would deserve notice in consequence of the restoration of the child from apparent death to life by the prompt

operation, and the persevering use of artificial respiration; but it is reported rather to draw attention to the importance of adjusting the tube to the size of the trachea. A small tube, which was first inserted, was exchanged for a larger one, in consequence of the difficulty which attended respiration. With the large tube, breathing became easy, and the patient went on well until symptoms of pyæmia appeared. The *post-mortem* appearances suggested that the pyæmia had its origin in the extensive and deep ulceration produced by the pressure of a tube rather larger than the trachea could accommodate. Precautions, such as the frequent removal of the tube, were resorted to, as far as the state of the breathing would permit. It may be stated that the tube was introduced with little difficulty, both on its first insertion and subsequently. Possibly the intervention of the scarlatina caused a tendency to pyæmia, which would not otherwise have existed.

Dr. DICKINSON, *5th of February, 1867.*

9. *A fragment of necrosed rib found encapsuled in the lung, three years after the receipt of an injury to the chest.*

W. N., aged 56, a shoemaker, was knocked down by an omnibus about three years ago and had several of his ribs on the right side broken. Since then he has repeatedly suffered from cough and night-sweats, he has also lost flesh, and occasionally his sputa have been tinged with blood. In November last he caught cold and became gradually worse until February, when he was admitted into University College Hospital under Dr. Wilson Fox. He was at this time in great distress from difficulty of breathing, and was found to be suffering from severe capillary bronchitis, emphysema and heart disease. He died shortly after admission.

On *post-mortem* examination the right lung was found to be bound down to the parietes by firm adhesions over its whole surface. The parietal pleura was enormously thickened, especially posteriorly, from the third to the sixth rib, where it measured more than half-an-inch in thickness, and was of almost cartilaginous consistence. The lung itself was markedly emphysematous at its anterior border, but loaded with serosity posteriorly. The bronchi, the subjects of fusiform dilatation, were filled with mucus, their lining membrane being intensely congested.

At a depth of about half-an-inch from the surface of the lung, and

at a spot corresponding in position to about the middle of the fifth rib, was found a fragment of bone, lying in a cavity lined by a distinct membrane, the surface of which was, for the most part, smooth, but covered here and there with fine granulations. On microscopical examination these presented the ordinary corpuscular and fibrous structures common to such formations. The piece of bone measured one inch and three-quarters in length, and one inch and an-eighth in circumference; it was tubular, of irregular form, with a very rough surface, and presented all the characters of a sequestrum from one of the ribs.

On examination of the chest-walls it was found that the fifth rib, though evident enough in front, disappeared entirely from the inner surface posteriorly, in consequence of the close approximation of the fourth and sixth ribs, the narrow intervening space being completely occupied with thickened pleura. Externally the fifth rib could be easily traced throughout its entire length, but its surface was irregular and deeply puckered in the middle third. After the bones had been removed from the body and cleaned their condition was more clearly seen.

The third and fourth ribs showed traces of a former fracture in the anterior third; and more or less callus had been thrown out along the lower border of the latter rib as far back as the angle, a buttress of bone overhanging the subjacent rib.

The fifth rib was much altered in form, especially in the middle and the adjacent parts of the posterior third. A considerable mass of callus surrounded the orifice of a short canal, which passed obliquely backwards and outwards towards the depression on the external surface.

The sixth and seventh ribs presented more or less irregularity on their inner surface, due to deposits of callus, especially near the tubercles, where there was evidence of former fracture.

There can be little doubt that the portion of necrosed rib embedded in the lung came originally from the fifth rib, which evidently had sustained the most severe injuries; and from the appearance of this rib, it is most probable that the process was one of gradual necrosis and escape of the sequestrum through the cloaca observed on the inner surface of the bone, and not a sudden protrusion of a splinter at the time of the accident. It is, however, somewhat remarkable that the bone should have been arrested in its attempt to escape, and have remained encapsuled, and apparently innocuous, in the substance of the

lung. I have not been able to find any similar case on record, and as the history illustrates several important points I have ventured to detail it at length.

The preparation of the ribs and lung is in the Museum of University College.
 Mr. ALEXANDER BRUCE, *2nd of April*, 1867.

10. *Cancer of anterior and posterior mediastinum, and of left lung; effusion into the pleura with displacement of heart; encephaloid tumours of ovaries and mesenteric glands.*

M. R., aged 20, a servant girl of healthy aspect and well nourished, was admitted into St. Thomas's Hospital under the care of Dr. Bennett, on the 25th of May, 1866. She stated that about a month ago, she had an attack of so-called pleurisy, and that for some time she had had pain in the belly and a swelling which had lately increased in size. She presented slight febrile symptoms, her tongue being a little furred, and pulse quickened; but her general aspect was that of health. On examining the abdomen it was found enlarged, and a tumour of a pyriform shape occupied the centre, presenting so much the appearance and character of an impregnated uterus, that pregnancy was at once suspected. The catamenia had been absent for six months, and the breasts were full, but did not present the ordinary appearances of pregnancy. Dr. Barnes was requested to examine her in reference to the supposed existence of pregnancy; he was, however, unable to form a positive opinion. After the lapse of some weeks he again examined her, and came to the conclusion that she was not pregnant, and that the tumour was probably not ovarian. The patient's symptoms in the meantime took on more the character of a mild typhoid fever than of any other definite form of disease. In the early part of June signs of bronchial irritation manifested themselves, with quick breathing, cough, and slight mucous expectoration, occasionally tinged with blood. On the 15th June, these signs of mucous irritation had greatly subsided, and gave place to unmistakable signs of pressure, there being extensive dulness over the left chest, with harsh and bronchial breathing; to these were speedily added altered resonance over the left apex posteriorly, and to a less degree, under the corresponding clavicle, where it was distinctly tympanitic and of the cracked pot character. The heart's sounds at this time were loudly heard through the whole lung; the appetite continued pretty good, but the pulse was quick, and the rest a good deal

disturbed by the cough. On the 18th, there was dulness of both apices ; but the tympanitic cracked pot sound had disappeared. The respiration was everywhere more or less harsh, and in the apices, especially in the left, was very tubular. Here and there was also to be heard distinct pleuritic friction. A few days subsequently, evidence of glandular enlargement about the bottom of the neck was perceptible. On the 21st the heart was observed to be considerably displaced towards the epigastrium, its action rapid, and attended by a systolic bruit transmitted along the aorta. The decubitus was towards the left side; the breathing being difficult in any other position. On the 28th, her condition was apparently more comfortable, although the breathing had now become accompanied by a distinct tracheal stridor, and the signs of solidification of the left lung were more extended ; at each inspiration the sternal end of the left first rib was thrown forward so as to give the appearance of a pulsating tumour. On the 2nd July, there was some deformity of the left chest, the left supra-scapular region being rounded and prominent. It was not till the 5th July, that the breathing became forced and heaving, and manifestly very difficult, and on the 9th she died, having suffered several severe paroxysmal attacks of orthopnoea. All through the illness there was very little complaint of pain. The abdominal tumour remained apparently stationary in size.

The *post-mortem* examination revealed cancerous disease of the anterior and posterior mediastinum, of the left lung, and of the ovaries and mesenteric glands, with effusion into the pleura and displacement of the heart. There were a few old and firm adhesions at the back of the left lung, and flakes of recent lymph elsewhere. The whole anterior mediastinum was occupied by a large, irregular, encephaloid growth, which above and to the left of the pericardium involved the anterior portion and root of the left lung. In front, the cancerous mass was also continuous with large globular masses, like enlarged glands, in the posterior mediastinum, having a similar encephaloid aspect. There was also an enlarged, similarly diseased gland, close to the origin of the left carotid artery. The outer portion of the left lung was free from cancer, but compressed and airless. Towards the root, however, the cancerous deposit was continuous with the lung tissue, involving the bronchial tubes and the pulmonary vessels, which were pervious, but compressed, and their walls completely softened and infiltrated with cancer. The right lung was healthy and crepitant, excepting a small portion of the base which was compressed. The right bronchus was slightly encroached on by the cancer which had infiltrated its walls to some

extent. The pericardium contained a little serum. The heart was displaced, its base being pushed downwards and towards the right side, so that rather more than half of the organ was to the right of the median line. The valves were healthy; the right cavities contained some partially decolorized clot; the left auricle was encroached upon by the cancer, which formed a large, rounded tumour, causing a bulging of its posterior wall on the inside.

Pharynx and œsophagus healthy. Peritoneum healthy. Liver slightly congested. Spleen small, healthy. Pancreas congested. Stomach and intestines pushed forward and slightly distended with gas. Mucous coat of the stomach softened. Solitary glands of the ileum and colon very prominent, filled with a whitish substance. Mucous membrane of ascending colon congested. Mesenteric and lumbar glands formed a large mass of soft cancer, in some places semi-fluid. The kidneys were small, and their texture healthy. The bladder also was healthy.

The greater part of the pelvis was occupied by a large, oval tumour, occupying the median line in front of the uterus. This tumour, on removing the parts, was found to represent the left ovary, which had been converted into a mass of encephaloid cancer. Into the greater part of this tumour hæmorrhage had taken place, so that on section a large portion of the tumour appeared to be made up of decolorized fibrine. The fimbriated extremity of the left Fallopian tube was also involved in an irregular cancerous mass. The right ovary formed a tumour of the size of an orange infiltrated with cancer; the corresponding Fallopian tube was healthy. The uterus itself was healthy, and of the ordinary size of a multiparous uterus. Vagina healthy. The thyroid gland and suprarenal bodies were healthy. The body was not much emaciated, and there was no œdema.

Some of the cancer from the lumbar glands was examined microscopically, and the juice found to consist entirely of nuclei, mostly round, of the size and appearance of pus-corpuscles, but not acted on similarly by acetic acid; the more solid portion contained nucleated fibres, round and oval nuclei, and a few small fusiform corpuscles. The nuclei were rendered more distinct on the addition of acetic acid, and in some of them a nucleolus was visible.

Dr. JAMES RISDON BENNETT, *16th of April, 1867.*

III. DISEASES, ETC., OF THE ORGANS OF CIRCULATION.

1. *Destruction of the chordæ tendineæ of the mitral valve.*

The specimen was removed from a female aged 27, a patient of Dr. Peacock's at the Victoria Park Hospital, in September. It appeared that seven years before she had had a severe attack of rheumatic fever, and had ever afterwards suffered from difficulty of breathing and palpitation. Her last attack commenced seven weeks before her admission into the Hospital and about the same time after her confinement, and was characterized by great dyspnœa, rapid feeble pulse, and palpitation; during the time she was in the Hospital (only six days) there was a loud and somewhat creaky systolic murmur heard at the apex. The heart was of large size, weighing fifteen ounces and a-half avoirdupois; and displayed evidences of old pericarditis, in the form of white patches on the right auricle and ventricle and adhesions between the pulmonary artery and aorta. The aortic valves were somewhat thickened and opaque, but the chief seat of disease was in the mitral valve, the free fold of which was entirely loose in consequence of the destruction of several of the chordæ tendineæ. The valves were also thickened; and the aperture was considerably larger in proportion to the other apertures than it should be. The lining membrane of the left auricle was opaque; and in the situation in which the regurgitant current would fall, there was a considerable deposit of partially decolorized fibrine. There were also small concretions of fibrine about the loose ends of the chordæ tendineæ.

Dr. PEACOCK, 16th of October, 1866.

2. *Encephaloid cancer of the heart and scirrhus cancer of the thyroid gland.*

The patient was a married woman, aged 46, the mother of nineteen children, of whom seven were alive. Ten years ago she noticed a small swelling on the left side of the neck which remained small and caused her no inconvenience until July last, since which time it had grown rapidly. Two days before admission she had lost her voice. She was admitted under Mr. Cock, October 3rd.

On admission the tumour was found to occupy the left side of the neck, extending about one inch and a-half to the right of the middle line. The tumour was hard and not tender; it did not move during deglu-

tition. The larynx could not be made out. She could swallow pretty well. In the recumbent position she was pretty easy; but coughing and retching came on when she sat up; she had constant pain in the occipital region and vertex. During her stay in the Hospital her difficulty of swallowing increased much, but she was without pain. She always lay on the left side. She complained of pain over the heart, and when percussion was used there she could not endure it, and declared she should die if it was repeated. No physician saw her, and no account of the auscultatory phenomena exists. She died quietly on the morning of the 24th October.

Post-mortem examination was made five hours after death. The tumour was not adherent to the integuments.

The cranium and its contents offered nothing morbid. The pain at the vertex evidently proceeded from pressure on the ascending cervical plexus, which was pressed backwards and outwards by the growth. The sterno-mastoid was stretched over the tumour and was very thin. The tumour occupied the middle three-fifths of the neck, and its largest diameter was transverse. The larynx was pushed over to the right, and its left side was thrust in, so that the glottis appeared almost entirely closed. The tumour reached the submaxillary gland above, and the lower edge of this gland was slightly cancerous; below, it nearly reached the clavicle, but did not implicate any of the structures in the inferior triangle. The right lobe of the thyroid was quite natural; so was the isthmus, but the left lobe was almost wholly represented by two very hard scirrhous masses. The proper substance of the gland could be traced over these masses as a thin capsule for some part of their circumference on the right side. These scirrhous masses were the only hard parts in the tumour; the rest of it looked homogeneous and was of a fawn-colour, except a minute patch or two on the circumference which had the ordinary appearance of encephaloid cancer. The carotid artery and jugular vein passed vertically through the tumour, and were separated from each other about a quarter of an inch. The vein was within the tumour at about the depth of one-fourth of its diameter. Isolated glands were much enlarged with encephaloid cancer; there were two of these near the trachea in the lower part of the neck.

Chest.—The pericardium was irregular in outline and raised up by tumours within it; on opening it the heart was found softly connected to it over four-fifths of its surface by cancerous tumours of rounded figure, more or less coalescent, and united on one side to the

heart, on the other to the pericardium; of these three were of the size of a nectarine or larger, and were very soft.encephaloid. These masses extended on the pericardium by continuity of its surface, not implicating the parts beneath; but in the muscular substance of the right heart there were many cancerous masses, of a dark fawn colour, not clearly defined on their edges. The appendix of the auricle and the apex of the right ventricle were the parts chiefly affected.

Within the right heart the appearance was very extraordinary, many semi-globular excrescences jutting from the neighbourhood of the cancerous muscle in the auricle and ventricle; the appearance corresponded well with that described by Dr. Ormerod in vol. xxx. of the '*Med.-Chir. Transactions.*' These globular excrescences were continued amongst the muscular trabeculæ and columnæ carneæ, interlacing with them and being more or less adherent to them. The ordinary death clot was in the heart,—a tough, firm, white fibrine. Microscopic examination showed clearly that these globular masses, which were in most cases hollow within and filled with a dirty coloured brownish liquid, were none other than ante-mortem clots of prior date to the white fibrine that filled the ventricle. Acetic acid cleared them up and showed the nuclei of the fibrine (white blood-cells) just as in ordinary fibrine; but whilst this was true of such parts as were free from cancerous muscle, there was a different appearance of such portions of fibrine as were continuous with the cysts which were in close contact with the cancer on the walls. These were with difficulty separable from the cancer on which they lay, and when the microscope was used to examine the tumour and the clot where they were thus united, it was found very difficult to distinguish between the two; the cancer appeared to have grown into the clot and spread there, raising the question whether the cancer had extended into the stagnant blood as it would into any other tissue, or whether the imperfectly moving heart had been quiescent in the parts where the clots lay, so that clotting had proceeded for a longer time, and then the cancer had extended into the clot.

Externally to the pericardium where it rested on the diaphragm, there was a mass of cancer the size of a nectarine; the lungs had many masses of cancer scattered through them. These organs were anæmic, showing death by asthenia.

Abdominal viscera healthy.

Pelvic viscera also healthy, except the right ovary which had a mass of cancer of the size of a chestnut.

Amongst the forty-five cases of cancer of the heart tabulated by Dr.

Peacock in the last vol. of the *Transactions*, two were associated with cancer of the thyroid; but in them the cancer extended by contiguity from the upper end of the pericardium. This is the first case in which a cancer of the thyroid extended secondarily to the heart. For the rest, it is amongst the most common form of cardiac cancer in which the cancer of the heart is secondary to the disease of other organs and not invaded by continuity. Rather more than one fourth are females.

The case is further interesting because of the great quantity of very soft material which covered the heart, and yet that this had nowhere been torn during its action, as though the constant uniform action of the organ had determined the growth according to the directions of the motions during that action; so that by its conformity the heart suffered no violence. The death was due to the cancer of the heart. The patient was not emaciated as in death by dysphagia, and the state of the lungs and heart disproved suffocation.

The thyroid cancer was of the tuberous, not of the infiltrated kind; this is rare for primary cancer of the thyroid. The primary cancer was scirrhus, extending in the glands as encephaloid. Hence the cardiac cancer was probably tertiary, *i.e.*, secondary to the glandular, which was secondary to the thyroid.

Dr. Moxon, 6th of November, 1866.

Report on Dr. Moxon's case of cancer of the heart.—The parts presented for examination were the larynx and trachea, with a large tumour attached, corresponding to the left lobe of the thyroid body, the lungs and heart.

The tumour consists of a large soft mass attached to a round indurated body, one inch and a-quarter in diameter. These parts, though forming one mass, present distinctive characters with well defined limits. The hard nodule is in parts somewhat translucent, intersected by thick fibrous bands with intermediate softer portions. On microscopical examination the former are found to consist of coarse bands of white fibrous tissue closely dotted with fine granules and oil-globules (Fig. 3). The softer portions exhibit more or less perfectly the structure of the thyroid body. The gland-vesicles in many instances appear shrunken, and the epithelial contents present a greater variety in shape and size than normal (Fig. 4). No morbid growth was found in this part.

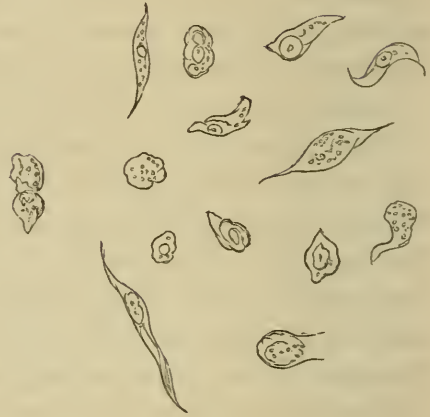
The soft portion of the tumour, which envelopes this hard part except on its inner side, consists of cells and an intercellular substance;

the former, which are nucleated, present a variety of forms varying

WOODCUT 3.



WOODCUT 4.



from round to spindle-shaped; the latter is distinctly fibrillated. The cellular element much predominates.

The tumours in the lungs and heart closely resemble the principal tumour in their characters.

We have not been able to satisfy ourselves as to the thyroid origin of the tumour, the scirrhus nodule appearing to consist of wasted and indurated thyroid tissue enveloped by the morbid growth. This latter, which presents distinct evidences of malignancy in the occurrence of infiltration and continuous and distant infection, we are disposed to regard, from a structural point of view, as a sarcoma rather than a true cancer.

Mr. J. W. HULKE,

Dr. CAYLEY, 4th of December, 1866.

3. *Aneurysm of the innominate, for which the carotid and subclavian arteries were tied.*

The specimen exhibited was from the patient on whom Mr. Fearn, of Derby, operated in 1836 and 1838. The patient was a woman aged 28, who presented a pulsating tumour immediately above the sternum which was evidently making considerable pressure upon the trachea, producing great dyspnœa. A loud bruit was present in the tumour and extended towards the carotid; the right radial pulse was much smaller than the left. Pressure on the right carotid artery diminished the tumour and relieved the dyspnœa; pressure on the subclavian

artery increased the dyspnœa. Mr. Fearn tied the right common carotid artery on the 30th August, 1836. The patient made a good recovery and was sent home on September 27th, when the tumour was diminished but still pulsated. The patient was able to walk out daily, her difficulty of breathing being entirely removed, and only returning slightly if she walked fast.—*Lancet*, 15th October, 1836.

The patient came under Mr. Fearn's care again in July, 1838, when she had a cough and suffered from dyspnœa, particularly on any exertion. When quiescent there was no appearance of tumour in the site of the former swelling, but by pressing the finger forcibly behind the sternum or the sternal end of the clavicle, a pulsation was felt, and on applying the stethoscope a double sound as of the heart was heard, and a slight bruit. The bruit was very distinct in the supra-clavicular space, and slightly so below the clavicle. The right radial pulse was still smaller than the left. Mr. Fearn tied the right subclavian artery beyond the scaleni on the 2nd of August, 1838. Ten days after she had no difficulty of breathing and scarcely any cough. There was no bruit either above the clavicle or elsewhere. The respirations were normal.—*Lancet*, 25th August, 1838.

The patient died on 27th November, 1838, of pleurisy, after ten days' illness. The innominate was found to be the seat of disease; it presented a globular tumour an inch and a-half in diameter, pressing upon the front and right lateral portion of the trachea, about an inch above the bifurcation, so as to lessen its diameter about one-third. This tumour, with the exception of a channel of the usual calibre of the innominate, was completely filled with a dense, organized, light-coloured fibrinous coagulum. The coats of the diseased artery had given way on their external and posterior wall. The right common carotid was permeable for about a third of an inch from its origin, and opposite the lower border of the cricoid cartilage there was an interruption to its continuity where the ligature had been applied in the first operation. The separated portions of the vessel, which were distant from each other about a quarter of an inch, were connected merely by cellular membrane; the upper portion of the vessel was impermeable to the point of bifurcation. The branches of the thyroid axis were considerably enlarged; the subclavian was obliterated at the outer margin of the scalenus anticus.—*Lancet*, 15th December, 1838.

The above report is extracted from Mr. Fearn's own account in the *Lancet*. The tumour consists of a sacculated aneurysm springing from the outer and back part of the innominate, close to its origin from the

aorta, and very slightly involving that vessel. The aperture of the aneurysmal sac has a diameter of exactly an inch in the side of the innominate, and above it a little more than half an inch of healthy artery intervenes between it and the bifurcation of the vessel. The sac appears to be divided into two portions, one projecting prominently by the side of the artery and the other pressing backwards against the trachea, the calibre of which it considerably narrows about half-an-inch above the bifurcation. The sac is filled to nearly the level of the orifice with a dense fibrinous coagulum, the structure of which is seen to be distinctly laminated at a point where, by the original incision opening the vessel, a small portion has been cut off. The superficial layer of the coagulum is smooth and glistening, and appears to be continuous with the lining membrane of the artery around the entire circumference of the orifice of the aneurysm except at the lower part, where it has been accidentally detached, carrying with it a small portion of the fibrinous clot.

The right subclavian artery is normal up to the point of ligature (beyond the scalenus) when it is obliterated, and the dense, obstructed ends of the vessel are then clearly seen. The branches of the subclavian are pervious and somewhat dilated. The right carotid is normal up to the point of ligature, and here the vessel is replaced by a fibrous cord. The section of the vessel, half-an-inch above this, shows it to be completely obstructed. The left carotid comes off close to the aneurysm and is healthy, and the left subclavian also is normal. The aorta is slightly dilated and extensively affected with atheroma in patches. (See Plate I.)

This must be considered a case of cured aneurysm, for not only is the sac completely filled with laminated fibrine, but the close connection, if not continuance, of its superficial layer with the inner coat of the artery would have guarded against any further change, and is in itself a remarkable pathological condition. The unfortunate expression, "the coats of the artery had given way" in the original description has led not unnaturally to the idea that the aneurysm had burst, and hence the case has been considered an unsuccessful one.

The specimen has been presented to the Museum of the College of Surgeons. Mr. CHRISTOPHER HEATH, 20th of November, 1866.

Report on the specimen of aneurysm of the innominate artery exhibited by Mr. Heath.—Having carefully examined the specimen of aneurysm of the innominate artery submitted to us for examination at the last

meeting of the Pathological Society, and having read the description of it furnished by Mr. Christopher Heath, we are of opinion that that description is substantially correct. The aneurysm is certainly an aneurysm of the innominate artery alone, although the portion of aorta from which the innominate springs, and indeed the arch of the aorta generally, is much diseased. The aneurysm has become converted into a solid tumour, by the deposition in it of laminated coagulum; and is evidently cured, so far as it is possible for an aneurysm to be cured, by such means. In confirmation of this statement we may adduce two further facts; one, that the surface of the mass of laminated clot, corresponding to the original orifice of the aneurysm, is perfectly smooth and polished, and continuous, apparently, with the lining membrane of the innominate artery: the other, that the tumour which had caused considerable difficulty of breathing, and must have made considerable progress towards perforating the trachea, had evidently been quiescent in this latter respect for some little time at least before death.

Dr. J. S. BRISTOWE,

Mr. WILLIAM ADAMS,

Mr. THOMAS BRYANT, *4th of December, 1866.*

4. *Aneurysm of a branch of the pulmonary artery in a vomica.*

This specimen was from a patient of Mr. Fearn, of Derby, and was removed in December, 1840, from a man who died of a sudden attack of hæmoptysis. He was 41 years of age, and had been ailing for three months, when, on the 12th December, he had a violent attack of hæmoptysis, which recurred several times during the following week. On December 25th, he had another attack and died from suffocation. —*Lancet*, 1841.

The *post-mortem* examination showed the lungs collapsed, slightly emphysematous at the bases, and the apices firmly adherent to the wall of the chest. Miliary tubercle was scattered through the upper lobes, and there were several cavities of the size of a walnut. In the left upper lobe was a cavity two inches in diameter, and into it was seen jutting, a distinctly defined aneurysmal sac, as large as a nutmeg, which had burst by a cleft-like opening. The parietes of the sac were thin, and it did not contain any fibrinous layers; a vessel, the size of a small crow-quill, leading from a considerable trunk of the pulmonary artery, was distinctly traceable into the sac.

Dr. Cotton has recorded two similar specimens which he has met with at the Brompton Hospital, in the *Medical Times and Gazette*, for 13th January and 20th October, 1866.

It was mentioned at the meeting to which this specimen was exhibited, by Dr. Peacock, that he possessed a very similar specimen, and by Dr. Wilson Fox, that Rokitansky also possessed one which he regarded as a great curiosity. It seems probable though few similar cases have been recorded, that dilatations of branches of the pulmonary artery within vomicæ may be more common than is generally supposed, and would be discovered if carefully sought for, particularly in cases of fatal hæmoptysis.*

* Mr. CHRISTOPHER HEATH, 20th of November, 1866.

5. *Aneurysm of the thoracic aorta bursting along the œsophagus into the cavity of the peritoneum ; sudden death by hæmorrhage.*

Several cases of aneurysm opening into the œsophagus may be already found recorded in the *Transactions* of the Society ; but from the unusual course that the blood took in the specimen before us, the case seemed worthy of the notice of the members.

The preparation was taken from the body of a man, aged 54, who was admitted into St. George's Hospital and there died. At the time of admission he was suffering from fistula in ano, for which the ordinary operation was performed. He had also symptoms of phthisis, but no particular stethoscopic examination was made. While apparently recovering from the effects of the operation, he was suddenly seized with faintness and a sense of suffocation, followed by a state of collapse, in which he expired in about half an hour.

At the *post-mortem* examination tubercles and vomicæ were found in the lungs. There was seen to be an immense dilatation of the ascending and descending part of the thoracic aorta, the coats of which vessel are extensively changed by atheroma. Beyond the origin of the great vessels, the sac, which at this part is very thin, has contracted adhesions to the œsophagus.

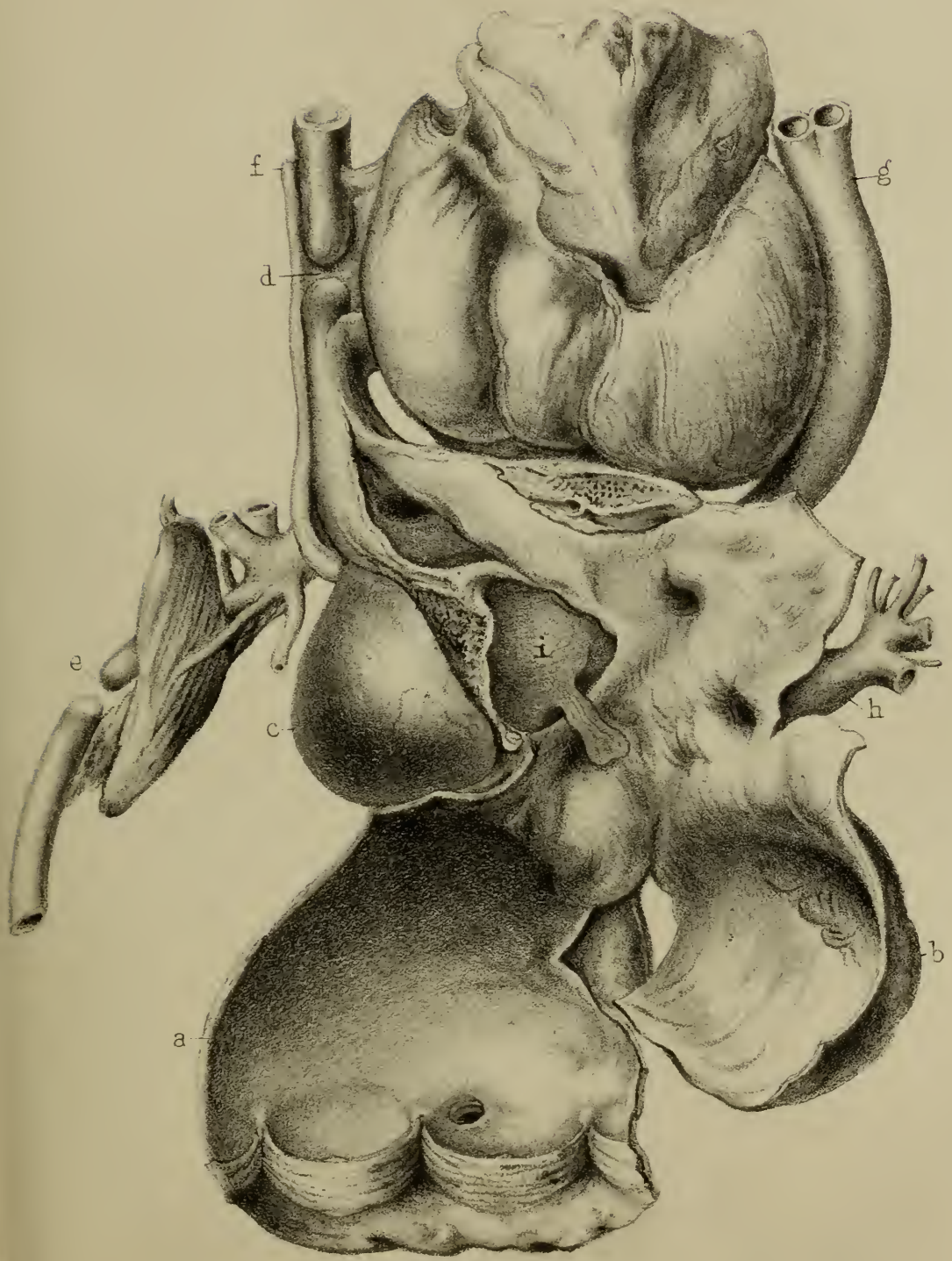
The coats have given way at this point and the blood has forced a channel for itself into the muscular wall of the œsophagus. It has passed downwards in the thickness of the muscular coat and has finally escaped into the peritoneal cavity by a rent into the serous membrane

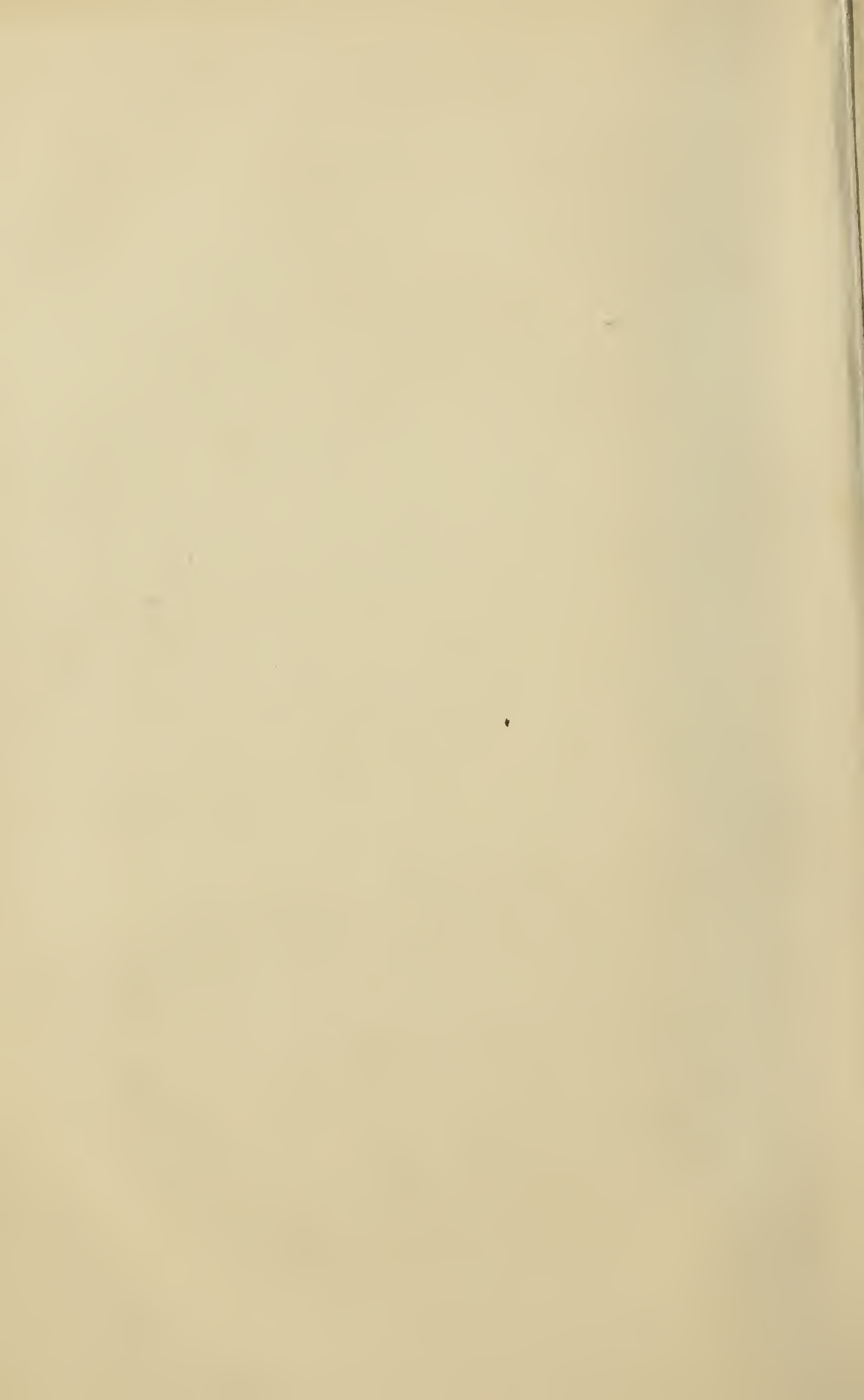
* See case by Dr. Quain in *Path. Trans.*, vol. xvii., p. 79, and case by Dr. Moxon at page 55 of this volume.—ED.

DESCRIPTION OF PLATE I.

This plate illustrates the specimen exhibited by Mr. Christopher Heath, in which the right carotid and subelavian arteries were tied by Mr. Fearn, of Derby, for an aneurysm of the innominate artery, one hundred and seventeen days before death (p. 42).

a. Aorta. *b.* Dilated portion of aorta. *c.* Exterior of a portion of innominate aneurysm. *d.* Division of right carotid by ligature. *e.* Division of right subelavian by ligature. *f.* Right pneumogastric nerve. *g.* Left carotid. *h.* Left subelavian. *i.* Opening of innominate aneurysm. A small portion of clot projects through the opening and close to the margin an accidental section of laminated fibrine is seen.





close to the cardiac orifice of the stomach. A large quantity of coagulum was found in the abdominal cavity, which altogether weighed upwards of three pounds. The blood was found to have reached this cavity, in the manner displayed in the preparation, breaking out of the sac into the coats of the œsophagus, and reaching the peritoneal cavity by forcing a passage between the fibres of the muscular wall.

MR. THOMAS P. PICK, 4th of December, 1866.

6. *Aneurysm of the arch of the aorta bursting into the left bronchus.*

The preparation was taken from the body of a man, a pipe-layer, aged 41, who was admitted in St. George's Hospital under the care of Dr. Page. He stated on admission that he had been ill seven weeks with violent cold and cough; but that he was subject to winter-cough. The nature of the case was obscure and it was difficult to account for the physical signs. The left lung was very resonant on percussion except at the base, as indeed was the whole chest, but there was no breathing to be heard on the left side. Over the right lung there was harsh, raucous breathing. There was no bruit heard accompanying the heart sounds, nor indeed any abnormal sound about the heart. The sputa were very scanty. The face was slightly congested. The pulse very feeble. The man was in good spirits, appeared cheerful, and had such a healthy aspect that very little importance was attached to his case. Two days after admission the resonance had entirely disappeared from the left lung, which was uniformly dull throughout; the ribs were drawn in on the left side, but they moved slightly with inspiration.

In the afternoon of the same day he had just been visited by the nurse and he had spoken cheerfully to her; when before she had turned to the next bed, he cried out and fell back with a stream of blood gushing from his mouth and nose and died in a moment.

At the *post-mortem* examination, twenty hours after, the body was found to be in good condition and the rigor mortis very marked. There were soft and recent adhesions in the left pleura. The lung on this side felt solid throughout, and sank like a stone in water. The upper lobe presented a characteristic example of pulmonary apoplexy consisting of a large diffused mass of a uniform dark colour throughout, except just in the centre of the lobe where two or three decolorized patches were to be seen. The bronchial tubes were found to be full of coagulated blood. The lower lobe of this lung presented a very

different appearance; it also felt solid, but on section was seen to be of a fawn colour, and occupied by a substance, resembling both in appearance and consistence, brain-matter. This substance was found to be contained in the bronchial tubes and their ramifications and was discovered, by examination under the microscope, to consist of altered fibrine, being composed mainly of broken-down blood-corpuscles and granular matter, with rounded cells, resembling ill-formed pus-corpuscles.

The right lung also felt somewhat solid, but it floated in water. On section it was seen to be occupied by a number of patches of pulmonary apoplexy, which were studded over it in every direction, but especially at the base. These patches varied in size from a marble to a hen's egg. They were circular in shape, circumscribed, of a uniform dark colour, and presented a marked contrast to the surrounding parts. The bronchial tubes were full of coagulated blood of the consistence of currant jelly.

On the anterior aspect of the heart were two or three white patches of old pericarditis. The heart was uncontracted and empty. The mitral valve was slightly thickened by atheromatous deposit. The aorta was intensely atheromatous, being studded all over with patches and converted into a rigid tube. The whole of the arch was somewhat dilated, but especially the descending portion and the commencement of the thoracic aorta, external to the origin of the great vessels. On the inferior wall of this portion was an ulcerated opening large enough to admit the finger, partially plugged by a block of fibrine, which was, in places, adherent to the margin of the opening. The opening had smooth and rounded edges and communicated directly with the left bronchus close to the bifurcation of the trachea.

The liver was fatty and the kidneys were in an early stage of granular degeneration. The other viscera were natural.

Remarks.—During last session Dr. Ogle brought before the notice of the Society several cases of aneurysm bursting into the air-passages; and this instance would scarcely have been worthy the attention of the members, except in connexion with the peculiar condition of the lungs, as bearing on the pathology of the so called pulmonary apoplexy.

It seems probable from a consideration of the symptoms of the case, in conjunction with the *post-mortem* appearances, that when the man came under observation the communication between the aneurysm and the bronchus already existed and that the blood was slowly draining itself

into the lung, retarded, no doubt, to a certain extent, by the plug which was found in the opening; this was evidenced by the dulness of the base of the lung during life at the first examination, and after death by the fact that the blood in this situation had undergone such changes as proved that it must have existed there for some time. This view of the case is further borne out by the result of the second examination two days after the first, when the *whole* of the left lung was found to be dull on percussion, denoting that the entire organ was infiltrated with blood, and is corroborated by the fact that the sanguineous effusion was found after death to have undergone less change in the upper than in the lower part of the lung. Lastly some sudden movement on the part of the patient most probably displaced, to a certain extent, the clot which had formed in the opening and produced the sudden gush of blood from the mouth and nostrils from which he died.

The main objection to this hypothesis is the fact that during life there was no hæmoptysis; which supposing that the opening existed, ought to have been present. This however may be easily explained by supposing that the clot of fibrine which was found in the opening at the *post-mortem*, blocked up the bronchus during life in such a manner as to allow the passage of the blood downwards into the smaller bronchial tubes, but to prevent its passage upwards through the mouth. The fact that during life no air could be heard entering the lung is sufficient ground for this supposition. Another objection that might be urged is the fact that there were no definite symptoms indicating the time when the first rupture took place; but this also may be explained by the presence of the clot. The fibrinous plug having formed before the vessel gave way filled up the weak part of the wall, and thus, when ulceration did take place, prevented a sudden gush of blood, which is the cause of the well-known symptoms of rupture of an aneurysm.

Mr. THOMAS P. PICK, 4th of December 1866.

7. Rupture of the aortic valves by violence.

M. W., aged 33, a discharged soldier, was admitted into the Queen's Hospital, Birmingham, in September, 1866. He stated that he had always been in good health until the beginning of the last year, and he referred his present illness to an accident which had occurred to him at that time. For the last six years he had served in an infantry regiment on the Mediterranean stations and when quartered at Gibraltar in Janu-

ary, 1865, he injured himself in the following manner:—One day when engaged in the cook-house, he was obliged to stretch across some high coppers to obtain a vessel, and in making an extraordinary effort to reach it, he was suddenly siezed with an intense pain in his chest. As far as he can remember, he neither fainted nor vomited; but was carried to the Hospital, where he remained for four days, suffering from pain in the præcordial region, palpitation, and dyspnœa. About ten months subsequently, the palpitation and difficulty of breathing, which had never completely left him, became much worse, and he was again obliged to enter the Military Hospital. After five weeks treatment he was sent to England, and he was discharged from the army in January, 1866; he has suffered ever since from difficulty of breathing, &c., and has been quite unable to work. Neither since his discharge, nor at any time previously, has he had rheumatic fever.

The following notes were taken a few days after his admission into the Queen's Hospital:—

His expression is anxious, there is slight duskiness of the lips, and the face is a little puffy. He complains of palpitation and dyspnœa, also of a fixed pain at the ensiform cartilage, whence a sharp pain shoots across his chest, and occasionally runs down his arms, particularly the left; this pain frequently occurs at night, and is accompanied by difficulty of breathing, so great that he is compelled to sit up and struggle for breath. He has a harassing cough and expectorates mucus frequently mixed with blood. The urine is scanty and high coloured, but free from albumen. The legs are slightly œdematous. Pulse 115, regular, jerky, and visible in the radials and larger arteries.

The chest expands freely, and is resonant all over the lungs. The breathing is rather harsh, and is accompanied at the bases of the lungs by small moist sounds.

The area of cardiac dulness is somewhat increased, extending from the nipple to the right edge of the sternum. The apex beat is feeble and close to the upper margin of the sixth rib, or one inch and three-quarters vertically below the nipple. At the base of the heart two murmurs are heard; that with the systole is somewhat harsh, and is followed by a long, soft, blowing murmur, which replaces the second sound and is terminated by the succeeding first sound. These murmurs are best heard at the junction of the fourth left costal cartilage with the sternum; they are also audible at the ensiform cartilage and at the manubrium sterni. The systolic murmur is well heard along the aorta and in the carotid arteries, but is not distinct at the back of the chest. At the

apex of the heart a soft blowing murmur accompanies and follows the first sound. This murmur is well propagated towards the axilla, and is followed by a muffled and prolonged second sound, which at times almost amounts to a murmur.

At first the man improved under treatment, but towards the beginning of November the dyspnoea increased; the œdema of the extremities became much greater; and blood again appeared in the sputa. The symptoms steadily increased in spite of treatment; fluid was effused into the cavities of the chest and abdomen; and the patient died, rather suddenly, on November 24th.

The *post-mortem* examination was made on November 27th.

The brain was not examined.

A considerable quantity of clear serous fluid was found in the right pleural cavity, and some few ounces in the left. Both lungs were œdematous, and very highly congested, with spots of extravasation in the lower portions.

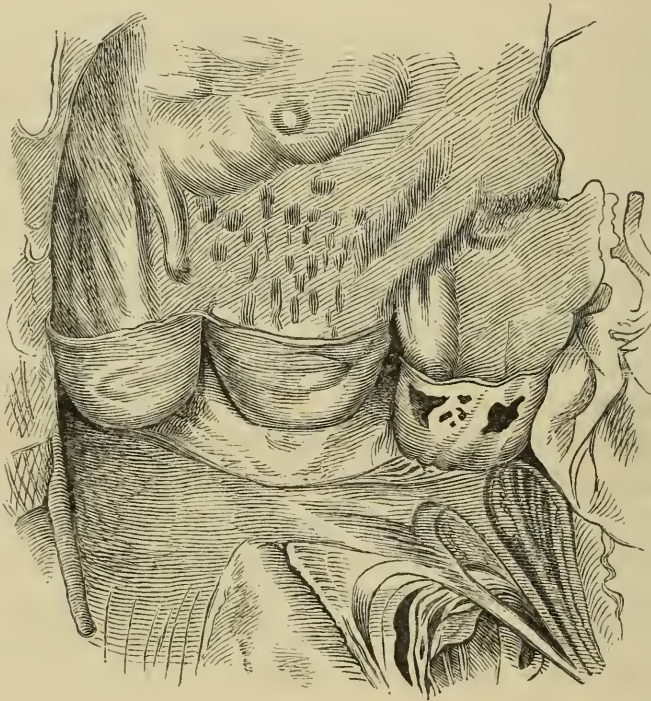
The pericardium contained about twelve ounces of clear serous fluid. The heart weighed fourteen ounces and a-half avoirdupois. The right cavities contained some dark clots, the left but little blood. The aortic valves permitted free regurgitation. Both ventricles were dilated and hypertrophied; the cavity of the left was especially enlarged, but the thickening of its walls was not very great. On examination the incompetency of the aortic valves was found to be due to the following condition:—

The right angle of the left semilunar segment was torn from its attachment, so that the valve projected towards the ventricle; it was however, still attached about one quarter of an inch below the attachment of the left angle of the posterior segment. The curtain of the injured valve was perforated in two places, each aperture being about the size of a small pea, while the central part of the curtain was pierced by smaller holes. (Fig. 5.) The other aortic segments were thickened, and rather closely applied to the aorta, in this respect contrasting with the projection of the injured one. The thin edge of the right segment was perforated by two small apertures, formed most probably by the absorption of the thinner part of its curtain.

The superior part of the mitral valve was thickened at its free edge on the auricular surface; the inferior curtain was healthy, as were the valves on the right side of the heart. The lining membrane of the aorta was thickened by atheroma; its calibre was small; and the circumferences of the aortic, pulmonic, and left auriculo-ventricular apertures,

were less than normal. The liver and stomach, especially the latter, were much congested; the spleen was small, and unusually hard; the kidneys and other viscera were healthy.

WOODCUT 5.



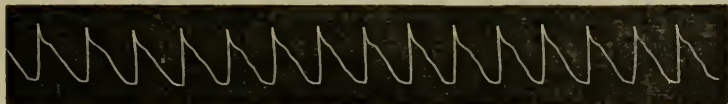
Remarks.—(1.) In its general history the case corresponds with those which Dr. Peacock has recorded in his Croonian Lectures.* The effort to which the accident was referred by the patient was eminently calculated to produce the highest tension in the aorta, and consequently the greatest pressure on the aortic valves: that the injury must be traced to this effort can scarcely be doubted, but it is by no means easy to determine its extent. The perforations in the curtain of the valve may have occurred at the same time that the angle was torn from its attachment; but, if so, they were probably then of small extent and have since increased in size. On the other hand, these perforations may be accounted for on the supposition that the valve, softened by atheromatous inflammation subsequent to the injury, was broken through by the pressure of the blood on its projecting curtain, at some time between the accident and the admission of the man into the Queen's Hospital.

* On some of the Causes and Effects of Valvular Disease of the Heart, 1865, p. 34.

(2.) The murmurs heard on auscultation find a ready explanation in the valvular lesions discovered after death. With regard to the sounds heard at the apex of the heart, the murmur with the first sound may be best referred to regurgitation through the mitral orifice, consequent on the dilatation of the ventricle. The peculiarity of the second sound at the apex, a peculiarity so marked at one time as to cause much doubt as to its place of origin, was most probably due to the continued regurgitation from the aorta through the apertures in the curtain of the injured valve, no lesion sufficient to account for the production of a direct murmur at the mitral orifice having been found.

The sphygmograph gave very useful information concerning the nature of the aortic obstruction and the amount of regurgitation. The vertical line of ascent in the following trace, (Fig. 6.) pointed to no

WOODCUT 6.



obstruction at the aortic orifice, sufficient to interfere with the rapid egress of the blood from the ventricle; and the sharp summit, followed as it is by an oblique and not abrupt line of descent, pointed to an easy, but not sudden, and copious regurgitation.

Dr. B. W. FOSTER, 15th of January, 1867.

8. *Hour-glass shaped aneurysm of the aorta.*

The patient from whom the specimen was taken was a piano-tuner about 45 years of age. He was a man of steady habits, and there was no history of his having received any injury. I had only seen him on a few occasions and it is remarkable that he complained solely of dyspeptic symptoms, especially of severe gastralgia. The pain, too, was relieved by remedies directed to the stomach.

For some days before death the pain had been more severe than usual, and he had then also a good deal of cough. He was not, however, confined to bed, and was found dead in a sitting posture on the floor of the room in which he had been left by himself for a short time.

On *post-mortem* examination an extensive aneurysm of the aorta was discovered. A rupture had occurred in this by which the posterior

mediastinum was filled with blood, and death by hæmorrhage had ensued.

Commencing immediately at the aortic valve, the aneurysm involved the ascending aorta, the entire arch, and a considerable portion of the descending vessel. It measured along its convex surface ten inches. But the striking feature of this large aneurysm was its hour-glass like form. It was divided into two distinct portions by a narrow part occurring just beyond the point where the left subclavian artery was given off. The first sac, or that nearest the heart, measured two inches and three-quarters in diameter, and from it the three great vessels were given off. This sac was formed by the three coats of the artery; it contained only coagulated blood. The narrow portion measured an inch and a-half in diameter. The enlargement of the vessel here showed that both sacs formed one extensive aneurysm. The second sac was of about the same diameter as the first, but more elongated. In the postero-inferior part of this was found a ragged rent, about two inches in extent, through which the hæmorrhage had taken place. The adjacent parietes were much thinned and the entire interior of the sac was lined by thick layers of fibrine, portions of which protruded from the rent. For a considerable distance beyond the sac the aorta was the seat of atheromatous deposit. Some of the calcareous plates were of the size of sixpence and projected through the lining membrane of the vessel.

The heart was large, the left ventricle being much hypertrophied; but the aortic valves were healthy and competent.

The lungs, liver and stomach were normal.

Dr. LEARED, *5th of February, 1867.*

9. *Disease of the aortic valves, in a girl aged 4 years.*

The preparation and notes of this case were given me by Dr. Coster, of Hanwell, to bring before the members of this Society.

The little girl from whom the specimen was taken died suddenly on January 16th at Hanwell. She had generally been healthy and lively, and had never suffered from rheumatic fever. She was subject occasionally to slight dyspnœa and pain in the left side, but not urgent enough to induce the mother to take her to a doctor. At the end of last year the child contracted hooping-cough, though not of a severe form, so that she was not placed under medical care.

On the 16th of January the mother left the child at home for a few hours, quite well except her cough, and on her return found her dead.

Post-mortem examination.—The body was well nourished. The lungs were emphysematous in patches, and there was some lobular collapse. The bronchial tubes contained a good deal of mucus, and their lining membrane was congested. On examining the heart, the walls of the left ventricle were found hypertrophied. The aortic orifice was much contracted; its valves were much thickened and fused together.

In the arch of the aorta was a patch of atheromatous deposit. The remaining valves of the heart were healthy.

The liver, kidneys and stomach were normal.

From the age of the patient the question arises whether the changes in the aortic valves took place during fetal life or not. It has been observed that congenital diseases of the heart are more frequently found on the right side; but in this case the disease, though situated on the left side, may have been congenital, as the child always enjoyed good health and never suffered from rheumatism.

Dr. WORKMAN, 19th of February, 1867.

10. *Aneurysm of the pulmonary artery in a phthisical lung.*

The specimen exhibited was a portion of the lower lobe of the left lung, in which was an aneurysmal swelling given off by a branch of the pulmonary artery of the size of a crow-quill. The aneurysm filled up entirely the cavity that contained it, but was not adherent to its wall. This cavity had the appearance of an ordinary vomica. The aneurysm was of the size of a large chestnut: within it was a concentrically laminated clot, filling two-thirds of its capacity. It was not terminal to the artery, which proceeded further; but the channel of the artery was narrow and wrinkled beyond the aneurysm. The spot where the aneurysm rose from the artery was very close to the surface of the cavity. I could not trace the coats of the artery upon the aneurysm, whose outer layer was very like the deeper, obviously fibrinous, layers. Two other smaller firm masses were present in the lungs, which masses had a concentrically laminated structure, like the clot in the aneurysm above-described; into one of these a small branch of the pulmonary artery was traceable: I did not succeed in tracing a branch to the other. These appeared to be older aneurysms in a state of involution.

The lungs otherwise were examples of ordinary phthisis; but fibrous induration and compensatory emphysema made a greater part of the changes than is usual.

The larynx had a warty thickening with an abraded surface over the right arytaenoid cartilage. The cæcum had one large transverse tuberculous ulcer in it, and the kidneys and liver were one-third above their usual weight.

The patient from whose body these parts were removed was under Dr. Moxon's care in Guy's Hospital, having been admitted on November 28th. He had been a boat-keeper, had lost a sister by phthisis, and had been very intemperate, drinking undiluted rum freely. His illness had lasted one year, and his cough had from the first been excessively severe. Six months ago he had violent dyspnœa and palpitation of the heart on the least exertion. Six weeks before admission he coughed up two pints of bright frothy blood; three weeks later he again brought up a smaller quantity, and again the day before his admission. He had no hæmoptysis while in the Hospital. He suffered much from dyspnœa and very severe prolonged cough, and he died with signs of respiratory obstruction.

This is the third case of aneurysm of the pulmonary artery in phthisical vomicæ which I have met and reported in the *post-mortem* records at Guy's. In all the cases there was a history of hæmoptysis. One of the patients died suddenly by the rupture of the aneurysm.*

Dr. MOXON, 19th of February, 1867.

11. *Cystic dilatation of internal saphena vein.*

The patient from whom this preparation was taken was a woman aged 26, a cook, who was admitted into St. George's Hospital under the care of Mr. Prescott Hewett.

She stated that ever since she could remember she had suffered from swelled veins. Five years ago a small lump the size of a hazel-nut appeared just below the knee; it was blue and looked simply like a swelled vein; it was quite soft. She suffered no inconvenience from it till six months before admission, when she was attacked with severe pain down the leg and she was unable to straighten her knee; the veins in the leg became quite hard. The tumour which had remained stationary since its first appearance, now rapidly increased in size and became quite hard. Since this occurrence it had caused her great pain.

* See *antea*, p. 45, and also vol. xvii., p. 79.—ED.

On admission there was found to be a tumour the size of a small hen's egg on the inner side of the leg, just below the knee and in the course of the internal saphena vein. The tumour moved freely on the parts beneath; the skin over it was thin and discoloured. A hard thickened cord resembling an occluded vein could be felt entering from below and leaving it above.

The tumour was removed by two semilunar incisions.

Upon examining the tumour after the operation it was found to consist of a solid mass, about the size of a walnut, and projecting from it on either side was a rounded solid cord. On section it was seen to be a cyst, with walls a couple of lines in thickness, and containing coagulated blood; near the wall of the cyst, the clot presented a striated or laminated appearance, like the interior of a consolidated aneurysm. The clot appeared to be intimately adherent to the wall of the cyst and was evidently of old standing. The rounded cords attached to the outside of the cyst were found upon more careful examination to be veins with the coats much thickened, but lined internally by a smooth lining membrane, which appeared to be directly continuous with the lining membrane of the cyst; so that a bristle (as may be seen in the preparation) could be passed directly down one of these tubes into the interior of the cyst. Upon tracing this membrane down upon the inner surface of the cavity, it was found in one place to terminate abruptly, in another to become gradually lost on the wall of the cyst.

Remarks.—This case presents a rather peculiar and somewhat rare form of varicose veins and one to which Andral, in his celebrated classification of the different forms of varices, makes no allusion. Nor indeed do I find it described in any of our ordinary works on Surgery, though several isolated cases may be found recorded.

The preparation proves without doubt that this was a simple sac communicating with the internal saphena vein and exactly resembling an aneurysm on an artery. The only question then to solve is whether the tumour was formed by a rupture of the coats of the vein and the formation of the sac-wall by consolidation of the surrounding tissues, being thus the analogue of a traumatic aneurysm on an artery; or whether it was formed by a weakening and dilatation of one or more of the coats of the vein, in the same way that a true pathological aneurysm is produced on an artery.

Mr. Gay, to whom I am much indebted for his kindness in giving me his opinion on this specimen, in some recent lectures, where he describes this disease under the name of "true varix," is inclined to

think that the tumour is formed in the former of the two methods mentioned; namely, by rupture of the coats of the vein and formation of the wall of the sac out of the surrounding parts. The preparation before us does not assist us in elucidating the matter, but on the whole tends to uphold this theory. Another case, however, of which I have notes and which occurred some three years ago, bears more on the point.

The case was that of a man, aged 45, admitted under the care of Mr. Pollock into St. George's Hospital. He stated that he had suffered from varicose veins all his life. Ten years before admission the veins became inflamed and an abscess formed on the inner side of the thigh in the course of an enlarged vein; this burst and discharged matter for some time. About the same period a second swelling appeared just below the knee; this, however, did not suppurate, but remained as a small hard lump, which caused him no inconvenience until six weeks prior to admission. It then without assignable cause burst and discharged a very considerable quantity of blood. From this time up to the date of his admission, hæmorrhage was constantly taking place from it.

When admitted there was found to be a distinctly circumscribed oval swelling on the inner side of the leg just below the knee and in the course of the internal saphena vein. The tumour was adherent to the skin and was surmounted by a dry scab.

It was removed by two semilunar incisions. Unfortunately the preparation has been lost, but a careful examination of it was made at the time and the following I have extracted from my notes.

It was found to be a cyst with walls of some thickness containing coagulated blood from which some of the more fluid parts had been absorbed, leaving the fibrine and colouring matter and presenting a laminated or striated appearance. The sac-wall appeared to consist principally of fibrous tissue, with some small amount of yellow elastic tissue and some muscular fibres. Connected with it were two large veins, of the diameter of goose-quills, whose coats were thickened and their lining membrane distinctly continuous with the lining membrane of the sac. They contained firm clots, which were adherent to their inner surface.

In this case it will be seen that the lining membrane could be traced to be distinctly continuous with the inner membrane of the sac, and furthermore the walls of the sac were made up of tissues such as are found in the coats of veins.

A still more striking preparation as bearing on this point is contained

in the Museum of St. Bartholomew's Hospital. In this specimen in which there is a partial dilatation of the coats of the femoral vein, with a circumscribed pouch projecting on one side, it is distinctly stated that the sac is lined throughout by a continuation of the lining membrane of the vein, and what is of more importance a small portion of one of the valves, which are situated just at the point where the vein joins the sac, may be seen attached to the interior of the cyst.

Again, in the same Museum is a preparation, kindly pointed out to me by Mr. Baker, of a cyst which was removed from the thigh of an elderly woman, in whom it occupied the position of the upper part of the internal saphena vein. It is small and oval in form, with a wrinkled but polished lining membrane, and exhibits in its interior two valves, like those of a vein, attached to its wall. On one of these valves is a soft lobulated growth. The walls of the cyst are thin and loosely attached to the skin and other adjacent parts. No portion of a blood-vessel could be traced opening into the cyst.

It seems to me, therefore, that in some cases at all events these tumours must be regarded as dilatations of the coats of the veins themselves, these coats being weakened no doubt by some cause.

It will be noticed in the two cases described in full that an attack of inflammation preceded the formation of the cyst and was undoubtedly the cause of the weakening of the coats of the vessel. The second case is especially striking because it will be noted that the inflammation, which above the knee ran on to the formation of abscess, below the knee simply caused a weakening of the coats which gave rise to their dilatation.

Mr. THOMAS P. PICK, 19th of February, 1867.

12. *Peculiar pigmentation of the aorta, presumably due to staining by nitrate of silver.*

This specimen was taken from the body of a lady aged 69, who died suddenly from fatty heart. For the last seventeen years of her life she had a peculiar slaty-blue tint of complexion. She was formerly treated in various ways for headaches, which first came on after a severe nervous shock. After death the face was of the same colour as during life, but the peculiar tint was not apparent over the body generally. All the viscera were more or less pigmented. The aorta was covered with fat and of a slaty-blue tint externally. On opening the arch two

distinct encircling bands of brown pigmentation were found. Microscopical examination of the lining membrane revealed minute brown granules lying among debris of epithelium and elastic fibres. Hydrochloric acid and the subsequent addition of ammonia had no action upon the granules.

The pigmentation was more uniform and of a grey tint upon the outer coat of the vessel. The left kidney, the only one examined, though pigmented generally, did not present to the naked eye the appearances in the Malpighian bodies as described in one case by Virchow.* The muscles were mostly tawny, but much of this was doubtless due to fat. It has been observed in these cases that the parts exposed to light are the most coloured, the covered portions of the body being nearly natural.†

Dr. DUCKWORTH, 5th of March, 1867.

13. *Embolism of the pulmonary artery.*

Jane J., aged 63, was admitted into the Middlesex Hospital under the care of Dr. Murchison, on February 26th. She was suffering from dropsy of the lower extremities and urgent dyspnœa; her face was livid; she had frequent cough, her expectoration was viscid and rusty, and she appeared almost moribund. Twelve years ago she had had an attack of rheumatic fever, and had since been subject to palpitation and short breath. Her present illness began, about seven weeks before her admission, with dropsy of the lower extremities. On physical examination of the chest, dry and moist râles were everywhere audible, and on the right side there was dulness on percussion in front from the third rib downwards; over the dull space fine crepitation was audible and there was a distinct friction sound. The heart was hypertrophied, but no bruit was audible. The patient died on February 28th.

On *post-mortem* examination the middle lobe of the right lung and the upper part of the lower lobe were found to be solidified, partly by two circumscribed circular patches of reddish-brown colour and granular section, which presented the usual characters of hæmorrhagic infarctions, and partly by diffused red hepatization. A branch of the pulmonary

* Cellular Pathology (Translation by Chance.), Lect. x.

† Vid. a paper by Dr. Roget in which he quotes Fourcroy. *Med. Chir. Soc. Transactions*, vol. vii.

artery leading to each of these circular patches, with its smaller subdivisions, was filled by firm, reddish-black, fibrinous plugs.

In the base of the right lower lobe was a cavity the size of a large walnut, with smooth walls and black, fluid, stinking contents, and lying in it, attached by a pedicle, was a small piece of gangrenous lung-tissue. A branch of the pulmonary artery, the size of a goose-quill, leading towards this cavity, contained a firm, tawny mass of fibrine adhering to the coats of the vessel.

In the left lung were several small patches of hæmorrhagic infarction resembling those on the right side, and in the lower lobe was a recent cavity the size of a hazel-nut filled with purulent fluid and with black gangrenous walls; a branch of the pulmonary artery, the size of a crow-quill, leading to this, was obstructed by a plug of fibrine partly firm and tawny in colour, and partly soft and black.

Attached to the central aortic semilunar valve was a vegetation, the size of a pea, with an irregular ragged surface. There was also considerable stenosis of the mitral orifice. The valves on the right side of the heart were normal.

The kidneys contained numerous wedge-shaped metastatic deposits of large size; most of these were yellow in colour and apparently of old date.

It is difficult to explain in this case the mode in which these so-called emboli in the pulmonary artery could have been formed, as nothing was found in the right side of the heart or in the veins to account for them. Those in the kidney were clearly due to the ragged vegetation on the aortic valve, and it is possible that fragments of this may have plugged branches of the bronchial artery and caused circumscribed patches of gangrene in the lung, and so led to coagulation of the blood in the branches of the pulmonary artery. Dr. CAYLEY, *5th of March*, 1867.

14. *Case of fatal hæmatemesis, caused by calcification and thrombosis of the portal vein.*

On December 28th, 1866, about two P.M., shortly after partaking of luncheon, H. F. W., Esq., aged 57, formerly an Officer in the Army, was seized with faintness, which was soon followed by vomiting of about a pint of blood. Medical aid was promptly obtained, and the usual treatment resorted to, consisting of the free use of ice and iced water, accompanied by frequent doses of gallic acid, and subsequently

of acetate of lead with opium; perfect quietude was enjoined; while cold beef-tea in small quantities was ordered to be given every two hours, together with iced champagne occasionally.

Under this treatment there was no return of the hæmorrhage till the following morning at nine o'clock, when the patient, while on the night-chair in the adjoining room, whither he went contrary to orders, was again seized with faintness, and vomited about one pint and a-half of dark liquid blood.

Dr. Smith who was immediately in attendance again advised a continuance of the styptics and other treatment, and gave most peremptory orders as to the maintenance of the horizontal posture. During this day, the patient rejected nearly everything swallowed, and brought up at intervals small quantities of blood. About half-past nine, P.M., the hæmorrhage again recurred to the amount of a pint, when Dr. Moorhead, in the absence of Dr. Smith, was immediately summoned.

On his arrival at ten o'clock, he found the patient nearly pulseless and perfectly blanched. Within a few minutes another vomiting of about a pint of liquid blood took place. It was then obvious that the case was hopeless, unless hæmostatics, which would act directly on the blood as it poured into the stomach, should succeed in arresting the hæmorrhage: with this view, half-a-drachm of tincture of perchloride of iron with morphia, in iced water, was exhibited, but only ten minutes elapsed till the stomach again rejected its contents—pure liquid blood. As no food or stimulant could be retained, an enema of beef-tea with brandy and morphia was then administered. Every effort, however, proved unavailing; and the patient gradually sank and died, December 30th, at three P.M., having lost nearly seven pints of blood.

With regard to the history of the case, Dr. Smith states that in the early part of September last the patient had copious discharges of blood from the bowels, which, however, disappeared after about ten days' treatment. About twenty-five years since, the patient sustained an injury of the right hip-joint, which rendered him an invalid for twelve years. Since then, till last September, he always enjoyed fair health, complaining only occasionally of pain in the right hypochondrium, with slight biliousness, for which he resorted to the use of 'antibilious pills.' He was of sallow complexion and of average stoutness.

Post-mortem examination (by Drs. Smith and Moorhead) thirty-two hours after death.—On opening the abdomen the omentum was seen loaded with fat, which concealed from view all the intestines. The stomach when removed from the body and laid open was found nearly empty and greatly congested towards its cardiac extremity, while its

central and pyloric portions were pale and perfectly healthy. The duodenum was normal. The liver was thinner than usual and presented an anæmic appearance, but was otherwise free from disease. It was, however, adherent to adjacent structures at several points by fibrinous bands. The spleen was enlarged to nearly three times its usual size, but was otherwise healthy, while the small and large intestines were of dark colour, being distended with grumous blood and flatus.

On dissecting the parts contained in the gastro-hepatic omentum, the attention was arrested by an osseous or calcareous spiculum about an inch in length, situate in the walls of the portal vein about an inch from its entrance into the transverse fissure of the liver. When the diseased portion of the vessel was removed and carefully examined, it was observed that the calcareous plate was produced by degeneration of the middle coat of the vein and extended along its anterior aspect in the direction of its length to the extent of an inch and a-half, being nearly half-an-inch wide at its intestinal extremity, while at its hepatic end the plate nearly embraced the entire circumference of the vein, greatly narrowing its calibre and converting the vessel into a rigid tube. The canal of the vein, at the part where the degenerations presented themselves, was found completely occluded by a dark-red fibrinous concretion or thrombus, more than an inch in length, which was firmly adherent to its inner coat. The vein was considerably dilated at the site of the thrombus, while on the hepatic side of the obstruction it was contracted and assumed the appearance of a fibrous cord.

This thrombus being obviously the immediate cause of the hæmorrhage, further investigation was not allowed, and consequently the head and thorax were not examined.

Remarks.—The foregoing case is thought worthy of a permanent place in the records of pathology, as, if not quite unique, it is at least of peculiar interest from its extreme rarity. This opinion is borne out by the fact that in none of the works of modern authors is any reference made to a similar case, nor is there any mention of thrombosis or embolism of the portal vein as a probable cause of hæmatemesis.*

The first point of interest presented by the case is the calcareous degeneration of the vein in question, which undoubtedly led to the slow coagulation of the blood at the seat of its occurrence. Now, while the

* Several similar cases of 'Thrombosis Venæ Portæ,' with remarks on its causes, symptoms, diagnosis, &c., will be found recorded in Frerichs' '*Treatise on Diseases of the Liver*'; *Syd. Soc. Transl.*, vol. ii., p. 384.—ED.

systemic veins are exempt from this and other kinds of degeneration peculiar to the arterial system, the calcification of the vena portæ in this case would appear to show that function rather than structure (for it has the structure of a vein) is intimately associated with such pathological developments. Had further *post-mortem* investigation been allowed, it is probable that similar deposits would have been discovered in the walls of the aorta and cerebral arteries, proving the existence of a general dyscrasia.

That the calcareous plate acted mechanically in determining the formation of the thrombus there can be little doubt, as at the part of the vein surrounded by the osseous ring the calibre was so narrowed as not to exceed in diameter a few lines. Owing to this obstruction the vein evidently yielded to the force of the blood-current, and consequently became dilated as previously described on its intestinal aspect, while the blood slowly coagulated in the same manner as after the deligation of an artery. A thrombus was thus formed which completely arrested the onward flow of blood through the vein and so became the proximate cause of the hæmatemesis.

It is almost needless to state that the pathological condition just described affords an adequate explanation of all the symptoms during life, including the former intestinal hæmorrhage and frequent pain in the right side, with biliousness, while it also accounts for the inefficacy of treatment on the final occasion.

Though it is to be regretted that the specimen is considerably mutilated, owing to its dissection prior to the discovery of the thrombus, yet it is hoped that sufficient remains to render the case intelligible and interesting to the members of the Pathological Society.

DR. ANDREW CLARK *for* DR. MOORHEAD, 2nd of April, 1867.

15. *Traumatic, circumscribed aneurysm of the femoral artery: ligature of the artery with a silver wire; secondary hæmorrhage; death from exhaustion.*

The patient from whom the preparation was taken, was a plumber, aged 46, who was admitted into St. George's Hospital, on February 13th, 1867, under the care of Mr. Brodhurst.

He stated that for the last six months he had noticed a throbbing swelling in the right ham, but as it caused him no inconvenience, he paid little attention to it. Twelve days before his admission, whilst he was

coming down a ladder, he missed one step with his right foot and slipped sharply on the one below; at the time of the accident he felt a sharp twinge in the lower part of the thigh, and twenty-four hours afterwards he noticed a swelling in the lower and inner part of this region, just above the knee. Since this time he had been under medical treatment, and the swelling had diminished considerably. He stated that he had never enjoyed good health and that he had suffered from lead-colic, and at one time from paralysis on one side.

When admitted there was found to be a diffused, soft swelling on the inner side of the lower part of the right thigh, which pulsated very forcibly and synchronously with the heart's action. There was a distinct and loud bruit. The pulsation and bruit were entirely stopped by pressure on the femoral artery in the groin. The sac could be easily emptied of its contents, and its walls could be felt to be very thin. The tumour was about five inches in length in a vertical direction, and was situated partly under the hamstring muscles and partly under the sartorius and vastus internus. The posterior tibial artery on the affected side was felt to beat much more feebly than on the other. There was some slight loss of sensation and power on the right side of the face.

Digital and instrumental pressure were at first tried, and, as far as the aneurysm was concerned, with very good results, for the tumour became much consolidated and contracted considerably; but unfortunately the man first got an attack of bronchitis, and then bed-sores and ulceration from the pressure of the pad of the tourniquet. It was also ascertained that the patient suffered from intra-thoracic aneurysm. Under these circumstances it was deemed more advisable to apply a ligature to the femoral, and this was accordingly done on March 21st. The artery having been exposed in the usual manner, a silver wire was passed round it, and the two ends twisted together; by this means the pulsation in the tumour was entirely arrested; the silver wire was now cut off short, and the wound closed with sutures. The man went on well after the operation; the tumour became quite solid; and on the seventh day, the wound was all but healed. On the tenth day, however, hæmorrhage came on, which was controlled by a pad; on the evening of the same day, it recurred; and the artery was cut down upon, and tied higher up with a couple of silver ligatures. No further hæmorrhage occurred till the twelfth day, when bleeding again came on and reduced the man to the lowest ebb of life. A silk ligature was now applied to the vessel; but the man sank and died on the following morning.

At the *post-mortem* examination there was a long wound in the thigh over the course of the femoral artery. The artery and the aneurysm were removed from the body, and as may be seen in the preparation, the artery is encircled by three silver wires and a silk thread. The lower wire is the one first applied, and it will be noticed that this has almost entirely cut its way through the artery, only about the eighth of the calibre of the vessel remaining intact. The vessel below has been laid open, and there is found to be very little clot or effort at repair; so little, in fact, that at the *post-mortem* the orifice was patent and it was possible to inject water through it in a full stream. The upper ligatures remain firm and the vessel is quite closed from above, so that it is probable that the second attack of hæmorrhage came from the lower end of the vessel. About three inches below the ligatures and just where the femoral artery becomes popliteal, there is a large aneurysm, the size of a cocoa-nut, filled partly with laminated fibrine, but for the most part with coagulated blood. The sac of the aneurysm is formed by consolidation of surrounding parts, and communicates with the artery which runs down the back of the tumour by an opening the size of a shilling, the edges of which are rounded off and smooth. It will be noticed that the vessel, which is much diseased and atheromatous throughout, is especially so at the point of rupture. Below this sac and connected with the popliteal artery is a small consolidated aneurysm the size of a walnut, evidently the pulsating tumour which was first observed.

Concerning the other organs it may be stated that all the arteries were extensively atheromatous. The arch of the aorta was considerably dilated, and springing from it was a sacculated aneurysm which passed up behind the innominate artery and trachea. The kidneys were in an advanced state of granular degeneration.

Remarks.—The great interest, undoubtedly, in this case, is the plan of treatment by the silver wire, and notwithstanding this, the occurrence of secondary hæmorrhage. This mode of proceeding, as is well known, was first adopted by Dr. Warren Stone, of Louisiana,* and his object in applying it was to prevent the chance of secondary hæmorrhage, since it would remain on the vessel permanently without inducing ulceration. This was followed by its use by Mr. King,† of the Hull Infirmary, in two cases. In one case the external iliac was tied

* *American Journal of Medical Sciences*, Oct. 1859.

† *See Lancet*, vol. ii. 1866. Oct. 6th.

and death resulted from suppuration; in the other the femoral was ligatured and secondary hæmorrhage occurred on the eighth day and the vessel was secured higher up with a silk ligature. No account, however, is given of the state of the vessels.

The external iliac was also tied by Mr. Pollock with a silver wire, and though the case terminated fatally from bronchitis, the result as far as the ligature is concerned was highly satisfactory.*

Mr. Holmes also successfully tied the femoral artery with a silver wire for popliteal aneurysm. In all these cases, with the exception of one of Mr. King's, there was no secondary hæmorrhage, and in Mr. Pollock's case, as well as in some experiments made on animals, where we had an opportunity of examining the vessels after death, no ulceration had occurred. The question therefore arises why ulceration of the vessel and secondary hæmorrhage occurred in the case more immediately under notice. The answer appears to be in the fact that in order that the artery may not be divided, the ligature must not be drawn too tight; the force employed should only be sufficient to stop the beating of the tumour.

Thus in a case in which I ligatured the carotid artery of a rabbit, and only applied the ligature sufficiently tightly to stop the bleeding from a small puncture made above the point of compression, at the end of three weeks the ligature had not caused any ulceration; it was firmly embedded and encysted, and the vessel was closed by a permanent clot.

Again, the femoral artery was exposed in a dead subject and it was ligatured in two places by a silver wire; in one place the ligature was tied with as much force as that with which one would ordinarily apply a silk ligature; in the other only sufficient strain was put on to entirely stop the current of a stream of water injected through it. In the first case the internal and middle coats were cut through; in the second there was no injury at all to the vessel. It must be borne in mind, however, that the vessels in the case related were atheromatous, and were therefore more brittle and liable to be injured than healthy vessels would be, and therefore, though Mr. Brodhurst states that he only tied the vessel loosely, still most probably the sudden jar caused rupture of the internal and middle coats, and hence the subsequent ulceration and secondary hæmorrhage.

MR. THOMAS P. PICK, 16th of April, 1867.

* See *Lancet*, vol. ii., 1866. Sept. 22nd.

16. *Abnormal origin of arteries from the aortic arch.*

Mr. Barwell showed a specimen of abnormal distribution of arteries in the neck—*i.e.*, displaced origin of the right subclavian from the aortic arch.

The origin of the right subclavian, not from the innominate but from the aorta itself, is not uncommon, and in such condition the trunk may arise from any part of the arch; but it is, as Quain observes, singular that whenever abnormality of this sort occurs the most irregular is the most usual form—*viz.*, that the right should arise on the distal side of the left subclavian, from the posterior part of the arch, and pass to its appropriate limb behind the trachea and œsophagus.

In this particular example this was the case, but a few additional facts are worthy of notice. These were:—

1. The absence of a vertebral artery in the foramina of the vertebræ. A branch from the deep cervical entered the foramen magnum in the usual situation of the vertebral at the skull.

2. The thyroid axis was given off from the right carotid; it was small and did not supply either the subscapular or transversalis colli, which arose together from the subclavian beyond the scaleni. It supplied a branch to the thyroid gland, the ascending cervical artery, and a number of branches nourishing the immediate neighbourhood.

3. The superior intercostal artery was supplied by a small posterior branch from the transverse arch of the aorta, a branch analogous to the other intercostal.

Mr. BARWELL, 16th of April, 1867.

17. *Thrombosis of the pulmonary artery causing sudden death.*

This was the case of an apparently healthy girl, 19 years of age, who was employed as a nurse in the Sick Children's Ward at King's College Hospital. On Friday, the 15th March, she complained of a rheumatic pain in her right knee-joint, which was, however, neither swollen nor tender on pressure and there was no general feverishness. None of the other joints were affected. Altogether she seemed to be suffering from a very slight indisposition. An alkaline mixture was prescribed, and she was recommended to remain in bed to give rest to the joint. On the next day she was not seen, but the nurses who slept in the same room reported that she had been cheerful and well all day, and had scarcely complained of pain. On the following morning (Sunday),

the third from the first appearance of the pain, she awoke about six A.M. and entered into conversation with her companions, saying that she had passed a good night, and that she was free from pain. Shortly after this she complained of feeling weak, and asked for the bed-pan to be given to her, that she might pass water without getting out of bed. This was done, and immediately afterwards her rapid and hurried breathing attracted attention. Dr. Fenn, the House Physician to the Hospital, was at once sent for, but before he arrived she was dead.

On *post-mortem* examination all the organs and structures of the body were found to be healthy. There were no clots in any of the peripheral veins. In the right side of the heart, and in both pulmonary arteries, there was a firm, solid clot of decolorized fibrine, of a pale yellow colour, which was adherent to the valves and fleshy columns of the heart, but not to the walls of the arteries themselves. This coagulum extended into the smaller but not into the most minute ramifications of the arteries. (In the preparation it has been unfortunately cut across in removing the vessels.)

This was a case such as is generally described as embolism of the pulmonary artery. The term thrombosis has, however, been used advisedly, to distinguish it from cases of embolism properly so called, in which a clot has primarily formed in one of the peripheral veins, from which a portion subsequently becomes detached, and being carried through the right side of the heart into the pulmonary arteries, there becomes impacted and forms a nucleus round which fibrine subsequently becomes deposited. In thrombosis, on the other hand, the coagulation primarily occurs in the pulmonary artery itself. Although the occurrence of spontaneous coagulation in the pulmonary artery is admitted by some writers, especially by Dr. Humphry, of Cambridge,* still there can be no doubt that it has been considered of comparative rarity. Indeed, the author of the most recent and most elaborate work on pulmonary embolism,† denies the possibility of its occurrence, except in the few minutes immediately preceding death, and then he believes that it always commences in the minutest ramifications of the arteries, gradually creeping backwards until it reaches the larger branches and the right side of the heart. It will be remarked that in this instance, which is believed to be one of spontaneous thrombosis, the minute ramifications of the pulmonary arteries were empty. I may mention, in illustration of this point, that just before this case

* *On Coagulation of the Blood in the Venous System During Life.*

† *Des Embolies Pulmonaires*, par Dr. Benj. Ball, Paris, 1862.

occurred to me I had been occupied in collecting together all the cases of sudden death due to pulmonary obstruction after delivery that I could meet with. I have been able to find the histories of twenty-five cases (see Table), in which accurate *post-mortem* examinations had been made; and examination of them seems to show that, in the puerperal state, cases of true embolism and of spontaneous thrombosis may be separated from each other by a distinct line of demarcation, depending on the period after delivery at which the fatal result occurs.

In seven out of these twenty-five cases there was clear evidence of true embolism, and in them the death occurred at a remote period after delivery; in none of them before the nineteenth day. This contrasts remarkably with the cases in which the *post-mortem* signs showed that no true embolism could have occurred. These amounted to fifteen out of the twenty-five, and in all of them, with one exception, the death occurred before the fourteenth day, often on the second or third. The reason of this difference seems to be that in both classes of cases the coagulation of the blood was caused by a similar blood dyscrasia, due to the puerperal state. In true embolism, however, the dyscrasia first caused coagulation in the peripheral veins, and it was not until changes had taken place in the clots so formed, generally in the way of fatty degeneration, that portions of them became separated and carried to the pulmonary arteries, there to cause the fatal obstruction. In primary thrombosis of the pulmonary arteries, however, the same altered condition of the blood which induced clotting in the peripheral veins in the former class of cases, here caused it first in the pulmonary arteries so that death ensued at a much earlier period after delivery, and at a time corresponding to the peripheral thrombosis in cases of true embolism. It seems to me probable that in this instance the coagulum had formed for a considerable period before death; probably it had been forming during the night preceding the fatal result. As long as the patient remained quiet sufficient blood passed through the obstructed vessels to carry on the animal functions, and no discomfort was felt. When, however, she was obliged to exert herself there was a sudden call for blood, which could not be supplied through the occluded arteries, and the fatal result took place. This corresponds to the general history of such cases, since, in a large majority of them, death immediately followed some sudden and unwonted exertion.*

* See a paper by the Author on "*Thrombosis and Embolism of the Pulmonary Artery as a Cause of Death during the Puerperal State.*" *Lancet*, July 20th, 27th, and August 10th, 1867.

Synopsis of eleven cases of obstruction of the Pulmonary Artery in the Puerperal State.

The fourteen other cases referred to above, are tabulated at the conclusion of Dr. Barnes's paper on "Thrombosis and Embolia in Lying-in-Women," in vol. iv. of the 'Obstetrical Transactions.'

In the cases marked * coagula were found in the peripheral veins as well as in the pulmonary artery.

Reference.	Previous Symptoms.	Symptoms.	Duration of illness from attack till death.	Post-mortem Signs.
1 * BALL, Des Embolies Pulmonaires, p. 82.	Swelling in left groin six days after delivery; phlegmasia dolens of left leg. Pulse 110. Loss of appetite. Pallor. Fœtid lochia.	Embarrassed respiration on 19th day after delivery, coming on suddenly; pale face; cold extremities; feeble pulse; almost insensible; age 23; primipara.	4 hours.	Abscess in left broad ligation; uterus healthy; left femoral and iliac veins filled with fibrinous clots, in concentric laminae of a yellowish-white colour; soft recent clots in right heart; pulmonary arteries filled with soft black clots as far as second and third ramifications, containing at intervals consistent, decolorized portions exactly similar to the clots in the femoral veins.
2 * Ditto, ditto, p. 60.	Phlegmasia dolens of left leg, a month after delivery.	Six weeks after delivery was suddenly attacked with pain in right side and intense dyspnœa; subsequently moist rales were heard in the bronchi, and then there was a gangrenous odour of the breath.	7 days.	Clots of various colour and consistence were found in the veins of the lower extremity, partially adherent to the coats of the vessels. The pulmonary arteries were filled with recent clots. There was a gangrenous abscess in the upper lobe of the right lung.
3 * Ditto, ditto, p. 92.	Easy labour; feverish symptoms with dyspnœa for four days, from which she recovered.	Sudden dyspnœa with epigastric pain on 9th day; primipara.	A few minutes.	Pus in the uterine veins; pulmonary arteries blocked with clots, some recent and dark, others decolorized and softened in the centre.
4 * KLINGER. Arch. für. Physiol. Heilkunde, 1855.	Shivering, followed by pain in the left femoral vein on the third day af-	Sudden attack, the date of which is not stated; face pale; extremities cold; feeble pulse; rapid respira-	Three quarters of an-hour.	All the veins of the lower extremities were blocked with fibrinous deposits, firmly adherent to the vessels; clots were found in the pulmonary arteries.

Reference.	Previous Symptoms.	Symptoms.	Duration of illness from attack till death.	Post-mortem Signs.
5 * WADE, Obst. Trans. vol. vi.	ter delivery; subsequent phlegmasia dolens on the same side. Phlegmasia dolens of right leg two days before the attack.	tion; aged 21; primipara. Was attacked with sudden dyspnoea on the 21st day while walking upstairs; face pale; skin cool and clammy; primipara.	15 days.	Dense, firm, white clots in both pulmonary arteries, extending as far as the third and fourth divisions, and perforated in the centre; patches of pneumonia in both lungs.
6 ROE, Lancet, June 17th, 1865.	Delivery by forceps; great debility; purging; much mental depression.	Sudden attack during exertion on 29th day; breathing deep and gasping; great pallor; aged 40; primipara.	Half an-hour.	Clots in both pulmonary arteries, coloured in small branches, decolorized in the main trunks.
7 MACKINDER, Obst. Trans. vol. i.	Rather anæmic; easy labour; excessive secretion of milk.	On the 17th day, while nursing, suddenly exclaimed she was dying.	A few minutes.	A large fibrinous plug in all the ramifications of right pulmonary artery, also in the commencement of the left.
8 Ditto, ditto.	Bad health; weak, and exsanguine.	Died suddenly on 18th day when attempting to get into bed, aged 22; primipara.	A few minutes.	A non-adherent, firm, fibrinous clot, three inches in length, in the left pulmonary artery; lungs highly congested.
9 * Bullet. de la Soc. D'Anatom., March, 1860.	Post-partum hæmorrhage. Old-standing heart disease. Oedema and tenderness of legs.	Three weeks after delivery great embarrassment of respiration followed by hæmoptysis.	?	Old decolorized coagula in femoral, hypogastric, and ovarian veins; heart greatly dilated and hypertrophied; apoplexy of right lung. Both pulmonary arteries occupied by dense, firm coagula, softened in the centre; those in the smaller branches were softer and of a dark-red colour.
10 * PLAYFAIR. Lancet, July 20th, 1867.	Puerperal mania; oedema of left leg observed <i>after</i> the attack.	Sudden collapse on 13th day; face and extremities livid and cold; aged 45; primipara.	Six hours.	Peritonitis; soft clots in veins of both legs; right heart and pulmonary arteries plugged with a firm, dense, homogenous, decolorized clot, partially adherent.

Reference.	Previous Symptoms.	Symptoms.	Duration of illness from attack till death.	Post-mortem Signs.
11 PLAYFAIR. Lancet, July 27th, 1867.	Placenta prævia; delivery by turning; extensive bronchitis and emphysema.	Sudden collapse on 5th day; gasping respiration; pulse 140.	A few hours.	Extensive congestion and emphysema in both lungs; pulmonary arteries filled with dark-red, soft, unadherent clots in all their ramifications; no coagula in peripheral veins.

Dr. W. S. PLAYFAIR, 15th of April, 1867.

Report on Dr. Playfair's specimen of thrombosis of the pulmonary artery.—The heart submitted to us for examination is of average weight and size; it exhibits nowhere signs of recent inflammation of the peri- or endo-cardium, and the microscopic examination shows the muscular tissue to be almost normal; the transverse striæ especially are quite distinct in most of the fibres. The aortic valves and the commencement of the aorta manifest traces of atheromatous deposit; the mitral valves and those of the right side are normal.

The left side of the heart contains a moderate sized decolorized clot, extending from the auricle into the ventricle. The right side of the heart contains a much larger clot, filling out the auricular appendix and part of the auricle itself, also extending into the ventricle and further into the pulmonary arteries. The portion of the clot contained in the right ventricle is quite decolorized and very tenacious, similar to that in the left side of the heart, while the portion occupying the right auricle and appendix is not perfectly decolorized and is less tenacious. The clot exhibits nowhere a laminated appearance as if composed of different layers, as is seen in aneurysmal sacs, or in the thrombi of obstructed veins. The clot is rather firmly adherent to the muscoli pectinati as well as to the columnæ carneæ, but is, as far as can be seen in the specimen, less so to the walls of the pulmonary artery, of which only about the length of an inch is preserved in the specimen.

The microscopic examination of the perfectly decolorized portion of the clot exhibits a large number of white blood-globules contained in the meshes of the coagulated fibrine, while the less completely decolorized portion occupying the appendix of the right auricle contains

a moderate amount of red globules, together with a still larger proportion of white globules.

The characters of the clot are such as are not very rarely seen in cases of slow death, and thus there is nothing in its appearance to lead us to the belief that the clot was the cause of death; in fact, judging simply from the specimen before us, we should have considered that it resulted merely from the diminution and gradual cessation of the heart's action.

General Remarks.—In offering this opinion as to the nature of the clot in the present specimen, we feel quite alive to the difficulties which may present themselves in the formation of a very positive opinion in any individual case, for we consider that the history of the last illness, together with the circumstances of death, must be known, and more especially a correct knowledge of the condition of the lungs. We are of opinion that there may be various degrees and stages of coagulation between that which is seen in the ordinary *post-mortem* clot and that which is evidently the result of slow formation previous to death. The case of the latter, or *ante-mortem* clot of some days' formation, is one which is well marked and easily recognized by its alteration in colour, lamination, and other characteristics; but, as regards the ordinary clot, the one usually met with in the dead body, we would suggest that some more positive data be brought before the Society, by those who possess the opportunities, as to any change which it may exhibit under different circumstances. At the present time there appears to be no fixed opinion with respect to the supposed time in which the usual final coagulation of the blood occurs. A very general opinion appears to have prevailed that this coagulation occurs before or during the act of dying, and thus the natural conclusion, that, in cases of sudden death where firm coagula have been found, the coagulation occurred during the lifetime of the patient from some morbid condition of the blood itself and death was the consequence. There are others, however, and we reckon ourselves amongst the number, who believe that the blood is quite capable of coagulating after death, and that usually the clot which is found on the right side of the heart, having the decolorized part uppermost and the red corpuscles below, is formed in the same manner as when blood flows from a vein into a vessel. Both of us have found clots in the hearts of persons who have been suddenly killed, and one of us may instance two cases of the kind where death was caused by crushing of the cervical vertebræ. We would suggest that cases of this kind be

especially observed in reference to this question of coagulation, so that the Society may have a good standard with which they can draw a comparison.

We apprehend that the only cases in which a difficulty at present exists are those where the clot has been supposed to present neither the well marked characters of the long standing *ante-mortem* coagulum, nor those of the ordinary coagulum, as usually met with ; for of course the characteristic examples of embolism would be excluded from this doubtful category, and also those cases (which, perhaps, are the commonest of all) where a coagulation of blood has occurred on the right side, evidently before death, but due directly to mechanical causes arresting its flow, such as disease of the heart itself and the various affections of the lungs.

Excluding, then, the cases of *ante-mortem* coagulation originating in connection with disease of the heart and lungs causing a mechanical arrest of the flow of blood, and excluding also the well marked cases of embolism, where, for example, a large fibrinous mass has passed from the vena cava into the right heart or pulmonary artery, we apprehend the only cases left for discussion are those where a slow coagulation of the blood is supposed to have occurred during life, and which has at last choked the cavities of the heart. We apprehend also, that the suggested causes for this condition would have reference either to an inflammation of the endocardium or to a morbid state of the blood itself.

In a supposed case of the kind, before a correct judgment can be given, we think it necessary to have a very accurate knowledge of the appearance of clots found under ordinary circumstances, and equally necessary that the condition of the lungs and other organs be known, as well as particulars of the final illness.

Dr. SAMUEL WILKS,

Dr. HERMANN WEBER, 7th of May, 1867.

18. *Minute and microscopic aneurysms of the cerebral arteries, taken from seats of hæmorrhagic effusion.*

It has been recently stated by M. Bouchard (*La Pathogénie des Hémorrhagies Cérébrales*, Paris, 1867), that in cases of apoplexy he had succeeded in finding at the seat of the effusion, and in various parts of the brain, a number of minute aneurysms, about the size of a

pin's head or smaller. Most of these were just visible to the naked eye; they have been met with in the following parts (in decreasing order of frequency):—the optic thalami, the pons Varolii, the grey matter of the convolutions, the corpus striatum, the cerebellum, and the white substance of the cerebrum. Oftentimes a considerable number exist in various parts of one and the same brain; and, according to M. Bouchard, it is usually to the bursting of one or more of these that the fatal effusion of blood is due.

Since I have been aware of the observations of the above-mentioned writer, I have had the opportunity of making *post-mortem* examinations of two individuals, who were brought into St. Mary's Hospital in a moribund condition; one, as was subsequently shown, owing to a most copious effusion of blood into the right corpus striatum, which had burst through this body and completely filled both lateral ventricles; and the other owing to a large effusion into the centre of the pons. In each case, after submitting the brain to a certain preparatory process, I succeeded in finding in the portions of brain examined five or six of the small aneurysms, such as Bouchard has described. Parts of the brain, including and contiguous to the seat of hæmorrhage, were set aside in a vessel, immersed in a dilute solution of bichromate of potash (one grain to two ounces of water), and then allowed to remain for a week or ten days, when the brain-matter, although its decomposition had been considerably retarded, had become soft and pulpy. It was then placed in an open mouthed vessel, and a very gentle stream of water was allowed to play upon it for some hours, until the clot and almost all the brain-tissue had been washed away. When the vessels were then placed in clean water, on a shallow dish, the small aneurysms could be easily seen with the aid of a pocket-lens.

The disease leading to the production of these aneurysms is not the ordinary atheroma, but a condition of the vessels which Bouchard names *sclerosis*. The walls of the vessels themselves become thickened and undergo a kind of fibroid degeneration. The peri-vascular sheaths also are thickened, and instead of being hyaline have a more or less marked fibrous texture, whilst the connective tissue nuclei on their outer surface have enormously increased in number. Though a considerable number of the smaller vessels were in this condition, the larger vessels at the base of the brain and elsewhere, in the two organs examined by myself, were in a well marked atheromatous condition.

In the case of effusion into the corpus striatum, in addition to

several small aneurysms about the size of a pin's head, I found a much larger aneurysm in the substance of the corpus striatum with an easily recognizable rupture leading into its cavity. It was doubtless the bursting of this which led to the very abundant effusion of blood, in quantity sufficient to fill both lateral ventricles. In the case of effusion into the pons I did not find the ruptured vessel or aneurysm. The largest aneurysm met with in this case was nearly a line in diameter, whilst the rest were about the size of a pin's head.

In addition to these, which are undoubted aneurysms of the cerebral vessels, I met, in each of the above brains, with a large number of the so called "dissecting aneurysms of the cerebral arteries." These have been described and, I believe, figured by Professor Virchow, but the name is an erroneous one, since it is now quite certain that the peri-vascular sheath of the cerebral vessels cannot be considered as one of the coats of these vessels. It is an independent membrane, separated by a distinct space from the tunica adventitia of the artery or vein, and when one of the small vessels is torn across, whilst the sheath remains entire, an extravasation of blood takes place into the peri-vascular space and causes, as it were, a natural injection of these canals for a certain distance. In this way the sheath gets considerably distended with blood-corpuscles and the contained vessel is more or less compressed, so that the existence of this peri-vascular sheath may be demonstrated in such cases with the greatest ease. In patches of red softening of the brain, and in the condition described by Cruvelhier as "apoplexie capillaire," very many of the vascular points which are seen are due to effusions of this kind out of the ruptured vessels, and into the space bounded by their peri-vascular sheaths. In cases of extensive effusion of blood into portions of the brain a large number of small vessels get torn across from the mechanical influence of the effused blood upon the adjacent brain tissue, and we may always find in such places a certain number of the vessels having their enveloping sheaths distended with blood for variable distances, because, in a certain number of cases, whilst the vessels have been ruptured, their sheaths have remained entire.

Dr. H. CHARLTON BASTIAN, *7th of May, 1867.*

19. *Dilated aorta, producing aortic regurgitation and ventricular hypertrophy; diagnosis chiefly by sphygmographic examination of the radial pulse.*

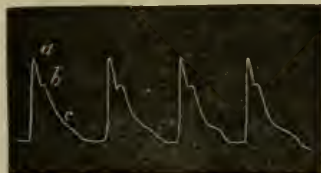
The patient was a man named Tomline, aged 63, a fine strongly-built man, with iron-grey hair, but with a look of suffering in his face, which was streaky, and of a red and sallow colour mixed. He was a carman by occupation, and had lived a temperate and careful life in all respects. He had been very healthy; never had rheumatic fever, nor, to his knowledge, any serious illness. He applied at the Infirmary for Chest Diseases, City-road, under Dr. Horace Dobell, in January, 1867. He then stated that, about twelve months previously, he awoke one morning with a sudden pain and sense of oppression at the sternum, with dyspnoea, and that he broke out into a cold perspiration. These were his first symptoms of illness, and the only cause for them which he could assign was that he had the day before been unloading a cart of greens, very early on a cold morning, and he thought he had taken a chill. The cough, dyspnoea, sternal uneasiness, &c., had continued ever since. On examination Dr. Dobell found, and recorded on the patient's paper, the following signs:—"Double bruit at the base of the heart, the systolic bruit heard in both carotids and subclavians. Much enlarged cardiac dulness, with heaving, diffused impulse. No bruit at apex, except a very faint transmitted sound. Locomotive pulse in humeral arteries, none in radials." No diagnosis was marked on the paper, but it appeared that Dr. Dobell considered the case one of aortic incompetence, with probably dilatation of the arch itself.

Dr. Anstie was subsequently requested to examine the patient. He verified the above-mentioned physical signs, and also satisfied himself that there was no discoverable rigidity of the arteries of the arms. The sphygmograph was applied to the radials, and the two pulses were found nearly but not quite to correspond in form; the difference was a constant quantity, but, although it had a certain slight bearing on the diagnosis, is hardly worth reproducing. The right pulse, given below (Fig. 7), indicates sufficiently all the characters of the pulse-wave which it is necessary to study in the case.

These characters are three:—(1). The large size of the pulse (which, indeed, to the finger presented the character of the "Corrigan's pulse)," and the brusqueness of the main elevation of the uniting lever. (2). The existence of a small square secondary shoulder (*b*), occurring soon after the apex (*a*) of the curve. (3). The entire absence of any-

thing like a distinct secondary wave after the notch (faintly indicated in this case at *c*), which marks the closure of the aortic valve. The

WOODCUT 7.



first of these features indicates low arterial tension, or increased cardiac force, or (from the circumstances of this case) probably both. The square secondary shoulder (*b*), near the apex, gives the idea of that kind of resistance to the heart's action which is produced by inelastic arteries; and, as the vessels of the arms are not rigid, it is probable that the character of the trace (which is seen in both pulses) is due to diminished elasticity of the aorta. The almost entire abolition of the "grosse ascension" (Wolff), or secondary wave, which follows the closure of the aortic valve (at *c*) shows that the regurgitation through that valve (indicated by a loud diastolic bruit at the base) is very great; so great, in fact, that it is probably not dependent on lesion of the valves themselves but on enlargement of the arterial orifice.

Dr. Anstie held no communication with Dr. Dobell as to the diagnosis during the life of the patient. The man died at the end of April, after an illness in which his cough, dyspnoea, and cardiac oppression became aggravated, while there were anasarca of the lower limbs and signs of effusion into both pleuræ. Dr. Fowler of Bishopsgate Street, under whose care the patient was at the last, kindly obtained permission for Dr. Anstie to make a *post-mortem* examination, which he did, with the assistance of Messrs. Palmer and Lloyd, of the Westminster Hospital. Dr. Anstie explained to these gentlemen before the *post-mortem*, that, taken in connection with the symptoms and the results of auscultation and percussion, the pulse-traces reduced the diagnosis, as he believed, to a certainty. That diagnosis was, that atheromatous disease and general dilatation of the aortic arch were the starting point of mischief, and that the aortic incompetence and cardiac hypertrophy were little, or not at all, dependent on valvular disease.

The examination verified this opinion. The heart was found enormously hypertrophied, the wall of the left ventricle being one inch in thickness. All the valves were perfectly healthy, but the aortic orifice

was greatly enlarged, so as to produce incompetence to a large extent; this incompetence was surmised from the obvious appearances of the part, joined with the plain signs discovered during life, for the fluid test was by an accident omitted to be applied till the examination had proceeded too far. There could be no doubt of the matter however. The whole aortic arch was pretty evenly dilated, to about three times its natural size. On slitting it up there were all the appearances of universal atheromatous change, extending with much regularity from a point almost immediately above the valves, quite to the descending portion of the aorta, where they gradually ceased. In many places there were also calcareous deposits, which had worn through the inner coat of the artery, rendering its surface very rough in many places.

Both pleuræ were filled with pale limpid serum, and there was a little of a similar fluid in the pericardium. There were some old and rather tough adhesions between the right lung and the diaphragm and chest-wall. The tissue of the lungs, though much congested, especially posteriorly, was healthy enough.

Dr. ANSTIE, 21st of May, 1867.

20. *Atheroma of the coronary arteries, with fatty degeneration of the heart and dilatation of the right auricle and left ventricle.*

The specimen was taken from the body of R. W., a man aged 65 years, who was admitted into the Middlesex Hospital, under my care, on the 23rd of April, 1867.

He was a painter and had for some years been accustomed to drink freely of beer and gin. Had never had either gout or rheumatism, but for the last eight or nine years had been affected with shortness of breath on exertion, and had also been subject to cough, from which he had been suffering constantly for three months previous to his coming under my care.

His chest was prominent and rounded in front and also posteriorly over the lower lobes of both lungs. It was everywhere abnormally resonant, excepting in the cardiac region. Rhonchus and sibilus were audible over the whole anterior and upper and posterior parts of the thorax, and there was mucous crepitation at the base of both lungs posteriorly. The area of the cardiac dulness was much increased, extending five inches in horizontal diameter from the right margin of the sternum to

nearly an inch beyond the left nipple, and vertically from the fourth costal interspace downwards for two inches and a-half. The heart's impulse was feeble but much diffused, extending from the outer side of a line drawn vertically through the nipple to the epigastrium. A loud systolic murmur was heard over the cardiac region; it was very distinct below the nipple, but was most intense over the lower part of the sternum close to its right margin. Pulsation was noted in the veins of the neck soon after the patient's admission, but it disappeared after a few days. The lower limbs were very œdematous. The urine was of low specific gravity (1010), and remained to the last perfectly free from albumen. The expectoration was thick, muco-purulent and always more or less rusty. The arteries at the wrist were rigid and somewhat tortuous. The case was diagnosed as one of chronic bronchitis and emphysema, complicated with enlargement of the heart and incompetency of both the mitral and tricuspid valves. After various fluctuations the patient died on May the 20th.

Post-mortem examination.—The pericardium was normal. The apex of the heart was tilted upwards so that the organ lay in a nearly transverse direction. A large portion of the heart, consisting almost entirely of the right ventricle, was uncovered by lung. The heart was greatly enlarged and weighed twenty-five ounces and a-half. The right auricle was much dilated; the right ventricle was slightly dilated, and its walls measured two lines in thickness; the tricuspid orifice was much enlarged, measuring four inches and three quarters in circumference, but the valve itself appeared to be normal. Both the pulmonary and aortic valves were also normal and competent. The left auricle was but slightly dilated; the left ventricle was very greatly so, its cavity measuring five inches in length; the walls of the latter were half an inch thick at the base and three lines at the apex. The mitral valve was nearly normal, being only slightly thickened and presenting a few atheromatous patches at its base; the mitral orifice was much enlarged, measuring four inches and a-half in circumference. The muscular tissue of the heart, and especially that of the columnæ carneæ, was pale and flabby, and was found on microscopical examination to be in an advanced stage of fatty degeneration. At the commencement of the aorta were some small patches of atheroma. Both branches of the left coronary artery were diseased; that running in the groove between the ventricles was converted, for a distance of three inches from its origin, into a rigid calcareous tube with a rough lining and a diminished calibre. The branch running in the auriculo-

ventricular groove was also partially calcified. The right coronary artery was also extensively atheromatous for a distance of about two inches from its origin, but its calibre was scarcely diminished, and during the rest of its course the artery appeared to be nearly normal. The lungs were bulky, everywhere crepitant, and generally emphysematous both in the anterior and posterior parts; there were no large bullæ but the air-vesicles appeared to be generally dilated. The mucous membrane of the bronchial tubes was everywhere injected and here and there ecchymosed, and there were several deposits of dark pigment on the mucous membrane of the larger tubes. In the middle of the upper lobe of the left lung were two small cheesy masses about the size of horse-beans. The kidneys, liver, and spleen were healthy.

Remarks.—There are several points of interest in the above case, but it has been brought under the notice of the Society chiefly on account of the very great dilatation of the left ventricle, and of the existence of well-marked cardiac murmurs, indicating regurgitation through the mitral and tricuspid orifices during life, without any corresponding lesion of those valves being found after death. The heart was of very large size and great weight, but the hypertrophy was simple—that is to say, the walls had only grown in size in proportion to the increased size of the organ but scarcely exceeded their normal thickness. The man had long suffered from dyspnœa, consequent on very general emphysema of the lungs, and to this cause doubtless the great dilatation of the right auricle and the more moderate dilatation of the right ventricle were mainly due; but we must look for some other cause to explain the hypertrophy and dilatation of the left ventricle. To me these seem only explicable on the supposition that the arterial system generally had been deficient in elasticity, requiring such increased efforts on the part of the left ventricle to carry on the systemic circulation, as in process of time caused the hypertrophy; and that the nutrition of the heart becoming impaired in consequence of the diseased state of the coronary arteries, fatty degeneration of its muscular tissue had ensued, diminishing its tone and rendering it unable to resist the strain consequent on the retarded circulation. Hence would easily arise great dilatation of the left ventricle, independently of any mechanical obstruction to the circulation in the heart itself. It is evident from the normal state of the valves that the regurgitation was caused by the abnormal enlargement of the auriculo-ventricular orifices, which the valves were

in consequence no longer competent to close. It is an interesting circumstance in the history of this case that the patient never suffered from anything resembling angina pectoris, nor from dyspnoea in any greater degree than patients suffering from equally general emphysema usually do.

Dr. GREENHOW, 21st of May, 1867.

21. *Aneurysm of the popliteal artery undergoing spontaneous cure and giving rise to gangrene of the extremity.*

Mr. Bruce was indebted to Mr. Erichsen for the opportunity of bringing this interesting specimen before the notice of the Society.

History.—George S., aged 63, a pianoforte maker, had formerly suffered from fever in Sierra Leone and Mexico, but since then, with the exception of occasional pain in his knees and loss of power in his legs, has [enjoyed average good health. His medical attendant told him that he had once had inflammation of the heart, but he does not remember having had acute rheumatism.

On April 26th he suffered from a severe pain in the left knee, and shortly afterwards his toes became numb, the application of hot water being the only thing he felt. On the following morning he noticed a black spot about the size of a threepenny-piece below the outer malleolus, and on the third day he found a brown patch on the outer surface of the middle third of the leg, and subsequently he noticed that the foot was becoming mottled; at the same time he felt a gnawing pain in the ankle.

On April 29th he was admitted into the Hospital; the foot was at this time very much mottled, a black spot existing below the outer malleolus, and the brown patch on the leg, measuring five inches by two inches and a half, presented the appearance of dry parchment. Sensation was almost entirely lost in the foot, the temperature of which was very low: the neighbouring parts were much inflamed.

The gangrene was unmistakably of the moist variety, and was evidently not the mummifying or senile gangrene. At first sight it appeared to be most probably the result of embolus obstructing the tibial arteries, but the absence of all evidence of disease of the heart, and the doubtful history of acute rheumatism, rendered the diagnosis somewhat obscure. On subsequent examination, however, the House Surgeon, Mr. Poore, detected a swelling in the ham of the existence of

which the patient himself was quite unconscious. The tumour was oval in form, firm, without yielding on manipulation any sensation of expansion, pulsation, or bruit; from its position, however, immediately over the artery and from its history there could be but little doubt of its aneurysmal nature. Considerable pain was experienced at this time in the ankle, and large blebs were forming upon the foot.

On May 20th, Mr. Erichsen performed amputation in the lower third of the thigh, employing a long anterior and short posterior flap, in order to avoid too great proximity to the tumour. Very little blood was lost during the operation, and no difficulty was experienced in securing the vessels in the stump, which appeared perfectly healthy.

The patient subsequently became greatly prostrated, and progressed but slowly; at the time, however, at which this report was written he was in a fair way to recover.

On examination of the limb after removal it was found that an aneurysm existed in the ham, situated on the lower part of the popliteal artery, at its division into the tibials. It was oval in form, measuring two inches and three-quarters in length and one inch and seven-eighths in width. Springing by a very broad base from the superficial side of the artery, it overhung the continuation of the vessel both above and below and thus exercised a very considerable amount of pressure upon it. The popliteal vein was completely incorporated with the outer wall of the sac, and in consequence of the pressure exerted upon it by the tumour its cavity was in great part obliterated, the superficial and deep veins of the leg being enormously distended and partially occluded by coagula. The deep tibial veins were so large and tortuous as completely to conceal the artery, which was found however, on dissection, to be entirely occluded by a thrombus throughout its whole extent. The anterior tibial was free, except at its origin, where it became implicated in the tumour. The popliteal artery was occupied, for the space of about one inch, by a decolorized firm coagulum, which terminated above in a conical extremity at the origin of one of the articular branches. The upper extremity of the aneurysm had overlapped this portion of the vessel and exercised considerable pressure upon it.

On making a section of the aneurysm it was found that a deposit of laminated fibrine occupied the outer two thirds of its cavity, being deposited with great regularity around the wall; the remaining central third, however, which was in more direct connection with the vessel, was filled with an ordinary loose coagulum. This black coagulum

extended into the posterior tibial, which it completely occluded, and into the anterior tibial for about a quarter of an inch, the remainder of this vessel being free.

The sac of the aneurysm was of moderate thickness, and of very considerable strength, consisting chiefly of the outer and middle coats of the vessel greatly thickened; it was impossible to determine whether the internal coat entered into the formation of the walls of the sac. The walls of the vessel both above and below the aneurysm appeared perfectly healthy.

Remarks.—This case illustrates several points of great interest in the pathology of aneurysm, and may serve to explain some of the causes of the occurrence of gangrene during attempts to obtain obliterations of aneurysmal tumours by any of the methods of treatment usually adopted. The very conditions, which had almost enabled nature to cure the disease, were necessarily followed by gangrene, a result which would inevitably have followed any of the methods adopted by art.

In considering the conditions most likely to lead to the spontaneous cure of aneurysm, Hodgson* mentions, as one of the most important, the relation of the sac to the artery from which it springs, especially with regard to the reflection of the body of the tumour upon the superior or inferior part of the vessel. Scarpa† moreover observes, “it is not improbable, that in the cases of spontaneous radical cure of external aneurysms there occurs also a particular position of the aneurysmal sac by means of which the sac being compressed by the ligaments and tendons, makes such a fold as to compress with an equable force, as in the artificial compression, the trunk of the injured artery at its entrance into the sac, and is therefore capable of producing the approximation of its sides.” Hodgson describes a case in which a femoral aneurysm was cured by compression of the vessel by the sac.

This condition was present to a notable extent in the present case; not only did the sac overhang the continuation of the vessel both above and below, but the amount of pressure exerted upon the artery entering the sac had been sufficient to cause complete occlusion of it up to the nearest branch; the plug of fibrine filling it was firm,

* *A Treatise on the Diseases of the Arteries and Veins, &c.*, by Joseph Hodgson, Lond., 1815.

† *Scarpa on Aneurysm*, Wishart's Translation, p. 196.

decolorized and conical, and resembled in every respect that resulting from the ligature of a vessel. The effect on the circulation must have been considerable, the only channel through which blood could have entered the sac must have been the anastomosis around the knee-joint connecting the tibials with the popliteal artery, and this would serve to supply only a very slight current of blood, liable to be arrested by the least obstruction. The force of the circulation was evidently inadequate to maintain the fluidity of the blood in the sac and sudden coagulation consequently took place, as evidenced by the black loose clot found occupying the central parts of the tumour; this probably occurred on the 26th of April, on which day the patient stated that he had suffered from severe pain in the knee-joint, and it was immediately followed by the occurrence of gangrene in his foot. Other conditions, doubtless, had an important influence in producing this result, more especially the relation of the vein to the aneurysmal sac. It is evident that very considerable and constant pressure must have been exercised by the tumour upon this vessel, and its effects upon the venous circulation of the limb were most marked in the enormous dilatation of the superficial and deep branches. The obstruction thus offered to the return of blood from the extremity would tend to increase the difficulty in maintaining the collateral circulation, and was doubtless the turning point of the process.

The importance of considering the relation of the great vein of the limb to the sac of an aneurysm is well exemplified by a preparation in the Museum of University College. The case was one in which Mr. Erichsen ligatured the femoral artery for poplital aneurysm; the patient progressed favourably for a week, when gangrene suddenly occurred in the foot, and the limb had to be removed; on examination it was found that the vein was completely incorporated with the wall of the aneurysm, and that in consequence of the rapid consolidation that had taken place in the sac, so great pressure had been exerted upon the vein as to occlude it completely and lead to gangrene, which was of course of the moist variety. There can be little doubt that this is a not uncommon source of the gangrene which occasionally follows the treatment of aneurysm by compression. Amongst the numerous cases of aneurysm recorded in the *Transactions of the Pathological Society*, there are but two which bear any resemblance to the present one. In vol. iii., p. 88, Mr. Avery described a case of aneurysm of the femoral artery, situated at the origin of the profunda, in which gangrene ensued during the progress of spontaneous cure in consequence of the sudden coagulation of blood in the interior of the sac.

It is worthy of notice, moreover, that in this case also the artery had been plugged at its entrance into the aneurysm in consequence of the pressure of the mass of the tumour, and that the vein was not only occluded by old coagula, but so firmly bound down and incorporated with the sac itself as to cause some difficulty in tracing it. In the other case, described by Mr. Wood in vol. ix., p. 122, gangrene followed the rupture of a popliteal aneurysm; this case resembles the present one in that it had existed for many years, and had attained considerable magnitude without attracting the attention of the patient. This is a fact of some importance and significance in connection with certificates of health required by Insurance and other Companies.

The specimen above described is preserved in the Museum of University College. Mr. A. BRUCE, 21st of May, 1867.

IV. DISEASES, ETC., OF THE ORGANS OF DIGESTION.

A. TONGUE AND DIGESTIVE CANAL.

1. *Ulceration of the appendix vermiformis and abscess in the cellular tissue.*

The specimen was removed from a girl aged 17, a patient of Mr. Kay's, of Old Street, who was seen by Dr. Peacock shortly before her death. It appeared that about three years before she had an attack of subacute inflammation of the peritoneum, which confined her to bed for six weeks, and under the effects of which she suffered at intervals ever after. Her last illness commenced with severe abdominal pain and feverishness in May, and she sank with symptoms of general peritonitis at the end of August. The small intestines were found very much distended, and at the right iliac space they were firmly matted together and adherent to the parietes by old attachments. On tearing through these adhesions, a large abscess containing thick pus was laid open, and on more careful examination there were found two ulcerated openings, by which the canal of the appendix communicated with the cavity of the abscess. The appendix was free from obstruction, but in the cæcum there was some hard fæcal matter and a small piece of woody material, apparently a portion of the shell of an almond, which was very irregular in shape, and might have been previously impacted in the appendix. There was also a female *Tricocephalus* in the cæcum. The symptoms under which the girl sank were due to the occurrence of inflammation of the general peritoneal surface.

Dr. PEACOCK, 16th of October, 1866.

2. *Report on the pathological appearances observed in the stomach and intestines of patients dying of cholera at the University College Hospital during the autumn of 1866.*

The changes in the stomach and intestines differed in most cases but little from those described as existing in previous epidemics.

The stomach, as a rule, showed the signs of acute catarrhal inflammation, as evidenced by general fine injection of the membrane, which in one or two cases only had proceeded to slight degrees of ecchymosis.

Its internal surface was almost invariably covered with a very thick tenacious mucus, in which casts of the secreting glands could sometimes be found.

The membrane was almost always unusually swollen and softened, and of a dead opaque white colour, and enlargement of the solitary glands in the neighbourhood of the pylorus was very common, proceeding in one case to such an extent as to resemble the "cutis anserina." The affection of the lymphatic apparatus throughout the whole gastro-intestinal membrane was very marked. In some cases, instead of isolated solitary glands scattered thickly through the tissue of the stomach, the whole of the sub-mucous tissue of this organ and also that intervening between the secreting tubules were swollen, white, and infiltrated with cell-elements and structures resembling those which ordinarily occur in the solitary glands and Peyer's patches of the intestines.

The solitary glands in the duodenum were almost always enlarged, in some cases attaining the size of hemp-seeds, and forming thick clusters in this portion of the intestine. The same enlargement was observed through the whole of the small intestine; but the enlargement of Peyer's patches, at the end of the ileum, was, in one or two cases, so great as almost to resemble the first stage of typhoid fever.

In the colon the solitary glands had frequently given way at the surface, forming small pits or depressions, and in one instance, a child, the same appearance was observed in the stomach, producing an appearance corresponding with the follicular erosion of some authors. As a rule, the changes in Peyer's patches were less marked than in the solitary glands; but the mucous membrane over them was frequently more injected than in other parts, and, in some cases, was softer than in other portions of the canal.

Opacity of the villi, and studding of these with minute white points, arising from distention of the lacteals, was almost invariably observed.

The mesenteric glands presented very variable degrees of alteration. Sometimes they were little affected. In other cases they were hyperæmic, swollen, milky, and softened.

The degrees of hyperæmia of the intestinal canal varied considerably, and in a greater proportionate degree than did those of the stomach, when the injection was, as a rule, purely capilliform, and where, in only one case, was ecchymosis observed.

In a few instances the membrane was generally pale throughout, and in some, that had presented the most severe symptoms during life, the colon was found pale and almost unaffected.

In some cases pure punctiform injection occurred universally, while in others this was limited to the membrane covering Peyer's patches. Ecchymosis was not unfrequent, and minute extravasations were in one case so thickly scattered over the surface of the small intestine as to give it the appearance of having been finely sprinkled with Cayenne pepper.

In three cases only had the hæmorrhage under the submucous tissue occurred to any marked extent, and in all of these its chief seat was in the colon and cæcum, where large tracts of the submucous tissue were infiltrated with blood, which in one case had caused sloughing of the mucous membrane.

In a fourth case blood was found in the small intestines, but without any visible trace of its source being discovered.

In most of the cases where the colon had suffered, various degrees of the same condition were also found in the small intestine.

The total number of cases where hæmorrhage or ecchymosis was observed amounted to six.

Out of thirty-four *post-mortem* examinations, ulcerations were noticed in three cases, independently of other alterations; in a fourth they were associated with tubercle, when they presented the somewhat interesting feature of various degrees of cicatrization occurring without contraction. The tuberculizing process appeared in no respect to be affected by the choleraic changes.

In two of the others they existed to a very marked degree, and affected chiefly the cæcum and colon. In one case the change was in part apparently induced by sloughing, caused by the extravasation of blood below the mucous membrane, but independently of this, there were, in this instance, numerous ulcerations affecting large tracts of the cæcum, which gave no traces of such an origin, and which bore a strong resemblance to the appearances observed in another case, where diphtheritic sloughs, ragged, blackened, or ash-grey in colour, occurred, in

sizes varying from a shilling to half-a-crown, in the cæcum and first part of the colon.

In a third case, where the colon was unaffected, ulceration was seen commencing over Peyer's patches, in the lower portion of the ileum.

In another case it was interesting to remark, that in a patient who was admitted in the early part of the epidemic with symptoms of choleraic diarrhœa, the disease subsequently took the course of dysentery, and ended fatally. Nearly the whole of the large intestine presented an appearance of dysenteric ulceration, scarcely a trace of healthy mucous membrane being left.

Microscopic examination of the stomach and intestines revealed but little that is new.

The glands of the stomach invariably presented the appearances of acute catarrhal inflammation. The epithelial cells were enlarged, grouped in masses, and in some places irregularly distended the tubes, while in other parts they were broken down, and the tubes were only filled with a granular detritus. (Plate II., Fig. 4.)

Very similar changes were found in the intestinal glands (Plate II., figs. 5 and 6), in which the author could not discover any indication of the shrinking or shrivelling of the tubes, described by one recent distinguished observer, though the author thought it possible that this condition might represent a further step of the breaking down of the epithelial cells which he had observed. He was, however, of the opinion, that in the majority of cases the tubes were rather distended than otherwise.

Nuclei were often seen crowded in great numbers between the tubes, but in parts where these were not present the tubes were very closely packed together, pressing upon one another.

The tubes were often found denuded of their epithelium, but the author of the report was not disposed to lay much stress upon this appearance, as it is so common a result of *post-mortem* changes. In addition to this, fatty degeneration was often seen in the epithelium in the deeper portion of the tubes. Dr. WILSON FOX, 16th of October, 1866.

3. Cancer of the stomach, which had partially cicatrized.—

Hæmatemesis.

This case is interesting as an example of a temporary recovery from a cancerous ulcer of the stomach.

Jane E., aged 46, a cook, was admitted into the Middlesex Hospital

DESCRIPTION OF PLATE II.

Figures 1, 2, and 3 illustrate the microscopic appearances of Dr. Greenhow's case of Cancerous Tumour of Ileum (p. 114). From drawings by Dr. Cruicknell, magnified 220 diameters.

Fig. 1. From the superficial spongy portion of the growth, showing altered mucous membrane, with very long villi, and an exuberant growth of epithelial cells, mostly of the normal columnar type, but presenting much variety.

Fig. 2. From the deeper parts, forming the whitish-looking infiltration, presenting an alveolar structure, the alveoli being filled with large, regular, nucleated, round and oval cells.

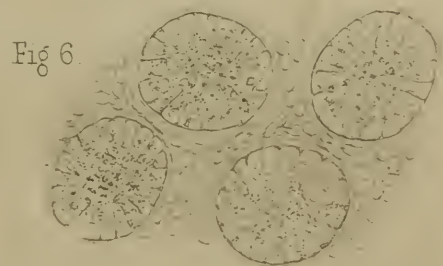
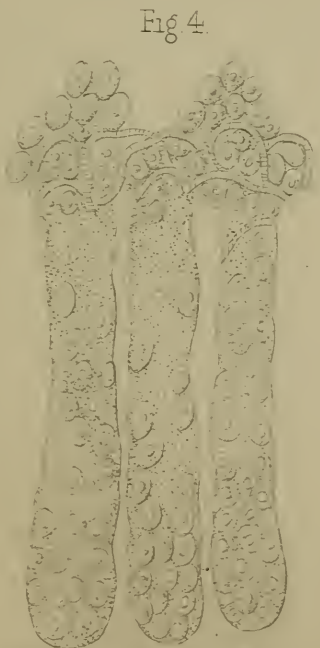
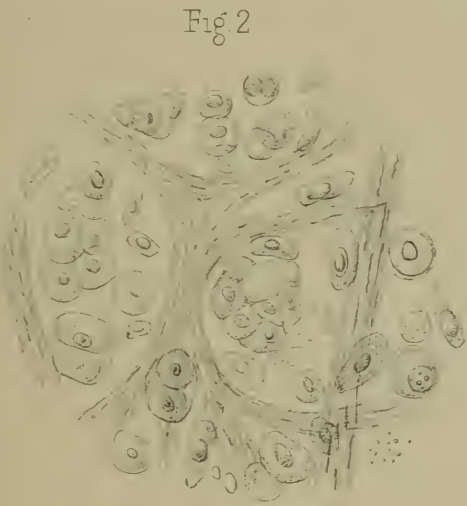
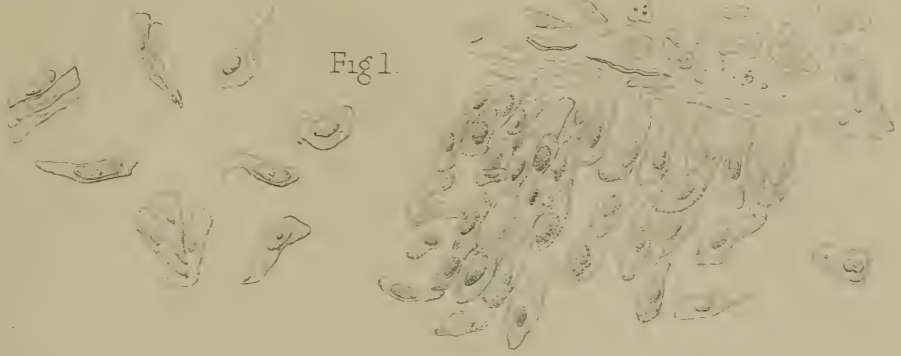
Fig. 3. Separate cells, many of them containing two or three nuclei.

Figures 4, 5, and 6 illustrate Dr. Wilson Fox's observations of the pathological appearances of the stomach and intestines in Cholera (p. 88). Magnified 400 diameters.

Fig. 4. Gastric glands in a state of catarrhal inflammation. The tubes are gorged with enlarged epithelial cells, many of which are broken down into a granular detritus.

Fig. 5. Intestinal glands presenting similar appearances; vertical section. At *a, a, a*, a separation of the epithelium from the basement membrane is shown.

Fig. 6. Ditto ditto; horizontal section, showing great numbers of nuclei between the tubes.



under the care of Dr. Murchison, in an almost moribund condition on October 2nd. She had been vomiting large quantities of blood on the day previously and on the morning of her admission. It appeared that three years before she had had an attack of profuse hæmatemesis, from which she had recovered, and had since been able to continue to do her work as a cook. She was not emaciated.

On *post-mortem* examination, a cancerous tumour about the size of a bantam's egg was found on the posterior wall of the cardiac end of the stomach. A great portion of its surface was covered by mucous membrane, but towards its posterior part was a large irregular sloughy cavity penetrating into the middle of the tumour and filled with blood-clot. In its anterior part was a deep cicatrized depression round which the mucous membrane was puckered and thrown into folds. The exterior of the tumour was invested by the muscular and serous coats of the stomach. On section it was of soft consistence and pinkish white colour, and somewhat lobulated; it exuded a milky juice, and on microscopical examination, presented an areolar matrix with nucleated cells and free nuclei in the areolæ. Many of the glands in the lesser omentum and behind the stomach were enlarged and infiltrated with cancer. There were no secondary deposits in the viscera.

Dr. CAYLEY, 6th of November, 1866.

4. *Perforation of cæcum and fæcal abscess.*

The patient, aged 34, spinster, complained by letter two years before death of some pain under the stomach and constipation. Nothing more was heard for six months, when I was summoned to see her for exhausting shivering fits, occasional sickness, and profuse perspiration. The right iliac region was extremely tender. Indications of tubercles existed in either lung. The symptoms gradually increased in intensity. Constipation began to alternate with diarrhœa. Micturition became painful; tongue preternaturally red; nausea. Pain constant and extending towards mesial line. Within three months a well-defined hardness could be felt over the cæcum extending towards pubes. Marked and increasing emaciation. Five months later an elevation was formed half an inch above and to the right of the pubes. Fluctuation being shortly established, it was lanced, when a large quantity of fœtid pus escaped. Six months later another abscess formed in the right inguinal region, which burst by itself. Both these openings discharged without inter-

mission purulent matter, occasionally mixed with watery fæces, and pus was likewise discovered in the intestinal discharges. Occasional hæmorrhage from bowel or from the above openings. She died within eighteen months of the first shivering fit.

The *post-mortem* examination showed a communication between the two abscesses, and also with the cæcum through the obliterated ileo-cæcal valve. The cæcum represented a large, hard, and thickened mass everywhere infiltrated with tubercular substance. No trace of the processus vermiformis. The cæcum adhered closely to the iliac fascia, which in fact formed its posterior wall. The enormous abscess thus formed extended to and involved the right broad ligament and the posterior wall of the bladder. Here and there long filaments were attached to the tubercular masses, terminating in round tubercular bodies of the size of a pea. Close above the ileo-cæcal valve was a recent perforation. The chief interest lies in the extensive destruction of the intestinal wall, and the rapidity with which adhesion took place, to sustain intestinal function and life.

Dr. MAURICE SCHULHOF, 6th of November, 1866.

5. *Intus-susception of the ileum at the ileo-cæcal valve.*

J. M., aged 37, a blind-maker, had been in rather delicate health, being subject to a chronic cough and his bowels habitually loose to the extent of two or three actions in the day.

On September 2nd, had been twice to the water-closet before his dinner, of which he ate heartily; he then became sensible of pain in the abdomen; this continued during the following day, and on the 4th he took a dose of castor-oil, which operated twenty times and increased the pain very much.

On the 6th, he applied to a medical man, who gave him a pill of calomel and opium and a bottle of aromatic chalk mixture.

On the 7th, he applied to me; he then complained of great pain in the abdomen limited to the right iliac and lumbar regions, with a constant desire to go to stool, and passing only a little slimy matter from the bowel.

8th.—The pain continues; right iliac region very tender on pressure; bowels are constantly wanting to act, but only a little dark slimy matter is passed.

9th.—The pain is very severe, and an irregular tumour is noticed in the right iliac region, which is resonant on persuasion.

13th.—The symptoms continue, but are increased in severity, the calls to stool are incessant; the matter discharged is now large in quantity,—a dark liquid containing blood, and with a most offensive odour.

14th.—The pain is still quite limited to the right iliac region which is extremely tender; he is almost continually on the stool, but it affords him no relief. About two pints of very foetid dark liquid matter is shown to me, and in a separate vessel half a pint that contained florid blood; his tongue is clean; pulse, weak. Up to this time he had been treated with frequent doses of solid opium only, but at his earnest desire a liquid medicine was prescribed, of which, however, he only took one dose, as it caused vomiting, which, together with the other symptoms, continued until the 19th, when he died exhausted.

Post-mortem examination was made on the 28th. The cæcum was adherent to the parietes of the abdomen in front, so that it was punctured by the incision; it was also adherent to the omentum; the tissues of it were so rotten that I could not raise it entire from its position; the colon was also rotten and broke through the transverse portion during my efforts to remove it; the odour from it was most offensive. The mucous surface of the whole of the large intestine was covered with masses of coagulum, and the tissues generally were in a softened state.

Within the cæcum the ileum was seen to project in an elongated nipple for about one inch and a-half. The small intestines were distended, and contained a large quantity of liquid, fæculent matter, which appeared to have been unable to enter the colon. The intus-suscepted portion of the ileum was drawn out during the removal, but the gut showed evidence of its strangulation by the deeply injected portion of three inches, situated at two inches distance from the valve.

DR. THOMAS BALLARD, 16th of October, 1866.

6. *Salivary calculus.*

A young lady, aged 24, had severe pain and swelling under the tongue, and in the right sub-maxillary region, on October 21st; this continued until the 26th, when an abscess burst near to the outlet of Wharton's duct. The duct however continued distended, and there was

still some pain in its course. On November 2nd this calculus passed from the abscess into the mouth. It weighs two grains and a quarter. Five years ago this young lady had a similar indisposition, and then passed two much smaller calculi. Eleven years ago she was salivated during an attack of jaundice.

Dr. THOMAS BALLARD, 6th of November, 1866.

7. *A specimen of polypoid disease of the rectum, from a man 59 years old.*

About three inches of the entire circumference of the gut—commencing at about three inches and a half from the verge of the anus—were studded with large polypoid protrusions in various stages of ulceration. The bowel was tied by inflammatory adhesions to the bladder and sacrum, but was not thickened or hardened by infiltration.

The disease had been sought for nine months before the patient's decease, in consequence of an obstinate and troublesome diarrhœa, and was found to consist at the time of an apparently single uvula-like protrusion three or four inches within the rectum. Subsequent examinations by various eminent medical men led to the conclusion that the case was one of cancer.

Mr. Jessop expressed his opinion that the disease was not cancerous for the following reasons:—

1st. In structure the growths consisted of simple fibre, in which were no cancerous elements.

2nd. The material by which the gut was bound to neighbouring parts consisted entirely of inflammatory exudation.

3rd. There were no enlarged lymphatic glands.

4th. Although the disease had probably existed for two years, there was no secondary deposit in any organ.

Mr. Jessop believed the case to be one of fibro-cellular polypi, which had destroyed life by exhaustion, attendant upon a long continued ulcerative process.

Mr. JESSOP, 20th of November, 1866.

8. *Large cancerous ulcer of the base of the tongue.*

This specimen was removed from a man, aged 54, who was sent to Mr. Heath, suffering from difficulty of breathing and great fœtor of breath. He had been out of health nine months, and lately had had

great difficulty of breathing, particularly when he attempted to swallow. He had become much emaciated. The finger detected an ulcer about the epiglottis, but there was no obstruction to the passage of food, a good sized bougie being readily introduced.

He was admitted into the Westminster Hospital on the 7th of July, 1866, and on the 17th the breathing had become so difficult that it became necessary to interfere. Dr. Gibb examined the throat with the laryngoscope, but only succeeded in obtaining a partial view, owing to the great irritability of the parts. He saw, however, an ulcer at the base of the tongue close to the epiglottis, and coincided with Mr. Heath in the propriety of immediate tracheotomy. The operation was accordingly performed, and gave immediate relief.

During August the patient was very comfortable, and improved much in health, so much so as to be able to walk about occasionally. In September, however, the tongue and the sub-lingual tissues became much swollen and infiltrated, and he began to lose ground rapidly, but had no difficulty of breathing to the last. He died exhausted on the 25th September, 1866. The specimen showed a large excavated ulcer at the base of the tongue eating deeply into the tissues, and at one point going through the entire thickness of the organ. The epiglottis was involved in the disease and in great part destroyed, but the larynx was unaffected. The sub-lingual tissues and the glands in the neck were much infiltrated with cancerous material. The ulcer was evidently of an epithelial character. Mr. CHRISTOPHER HEATH, 18th of December, 1866.

Report on Mr. Heath's case of large cancerous ulcer of base of tongue.—The specimen sent to us by Mr. Christopher Heath comprises rather more than the anterior two-thirds of the tongue, with the whole larynx. Between these two organs is an ulcerated cavity in which the projecting portion and anterior ligaments of the epiglottis, and all the textures which should constitute the base of the tongue are wanting. The space equals a hen's egg in extent, and it opens backwards into the pharynx by a wide aperture, which reaches nearly to the tonsil on either side, and measures more than an inch from before backwards. The ulcer is prolonged toward the pharynx on each side of the stunted epiglottis by recent shallow rents of the mucous membrane, in one of which is a vessel with its open mouth plugged by coagulum.

The walls of this great ulcer are almost wholly composed of natural textures, which, being sundered from one another and partly broken into small shreds, give a rough villous appearance to the surface. Only

at the anterior surface of the epiglottis and under the mucous membrane adjoining the ulcerated edge on the dorsum of the tongue are there any solid granulations or morbid deposit. In the latter place is a thin bluish compact layer, which gradually thickens to rather more than one line, and ceases abruptly at the ulcer. The specimen is not in a state of preservation which would allow of a satisfactory microscopic examination, but a few indistinct nucleated epithelial cells were discovered.

There are no traces of glandular disease in any part of the specimen.

As the size of the cavity is much greater than can be accounted for by the substance deficient in the tongue, it is evident that some other cause for its increase must have existed than either cancerous destruction or simple ulceration. Such a cause appears to be suggested by the splitting apart of the exposed textures. Situated where the submucous tissues are particularly lax and the pressure of swallowing is greatest, a breach of the surface originally of small size might be forcibly expanded into a large and ragged cavity by repeated acts of deglutition, while liquid parts of the food might be injected by the same muscular efforts amongst the separable tissues of the region, and might be extravasated and occasion abscesses in adjoining parts of the neck. The original character of the disease on which the actual destruction of tissue depended, would then be preserved at only a few parts of the cavity, or might even be entirely obliterated.

Accordingly, in this specimen, there were no indications of the early nature of the disease, except doubtful traces of cancer at the outskirts of the cavity; while the mechanical force to which the tissues had been subjected was shown not only in the character of the surface, but also in the recent shallow rents of the mucous membrane, which have been described as passing in the direction of the pharynx on either side of the epiglottis. At the same time it should be added that the absence of surrounding cancerous induration may be in part explained by the fact that the specimen was not removed until the body had been five or six weeks in the dissecting-room.

The clinical history favours the view of the case above given.

MR. CHARLES H. MOORE,

MR. WM. ADAMS,

MR. CHRISTOPHER HEATH, 1st of *January*, 1867.

9. *Ulceration of the appendix vermiformis.*

The subject of this case was a married man, aged 33, who had always enjoyed good health, and who filled the position of in-door servant. About twelve months since he was seized with pain in the right iliac region; vomiting, speedily followed with the usual symptoms of peritonitis. After the employment of turpentine-stupes and the exhibition of opium, the symptoms became less urgent; at the end of the week the bowels resumed their normal function without the use of any aperient, and he returned to his employment.

On the 1st of December last, he attended a wedding party and engaged in dancing, the next day he felt pain in the right lumbar region; this pain still further increased the following day, although he could wait at table. On the night of the third of December, the recurrence of great pain and tenderness in the right iliac region induced him to send for medical assistance, when turpentine was employed externally, and five of grains calomel, with a grain of opium, were given by the mouth. Calomel and opium were also continued in smaller doses throughout the next day. When seen by me on the 5th of December, he was found much depressed by an active purgation which had taken place during the night. His countenance was anxious, the abdomen hard and tender, the tenderness being greatest on the region of the cæcum; there was frequent vomiting. He was enjoined to avoid movement of any kind; opium was at first exhibited by the bowels, and afterwards by the mouth. For a few days his symptoms were mitigated, the abdomen lost its tenderness, and the sickness occurred at long intervals only.

On the 10th of December, after having moved in bed, the vomiting and pain returned, the abdomen became tympanitic and he died on the evening of that day.

Post-mortem examination.—The small intestines were found to be highly vascular, and matted together by lymph of a yellowish colour. They separated from one another readily. The omentum was bound down on the right side to the appendix vermiformis of the cæcum by old adhesions, and partially covered an opening in that tube of an oval shape, about a quarter of an inch long. The opening was near the termination of the appendix, which, towards its lower third, was of a dark colour, and bound by old adhesions to the peritoneum posterior to it. The cæcum contained two hardened faecal masses of a waxy consistence and of the size of nutmegs, and a few small pieces the size of a millet-seed were found in the appendix. The rest of the intestinal tract was quite

empty. The peritoneal cavity contained about half-a-pint of yellow puriform fluid, but no foreign body could be found therein.

Remarks.—One feature of interest in this case is the length of time intervening before the recurrence of grave symptoms. There is reason to believe that the exertion in dancing tore away the omentum from its conservative attachment, and that, but for this, the ill-consequences of waxy concretions in the appendix might have been further postponed. Its occurrence in a male patient adds another instance to strengthen the views of Volz and Dr. Crisp, as to the greater liability of males to this accident. Moreover, some amount of interest attaches to the treatment of these cases. Their diagnosis is not difficult, and one cannot but feel that the exhibition of calomel takes away the only chance of recovery by the peristaltic action it is apt to induce.

Perfect rest of body and the use of opium alone is the treatment which the history of this case indicates.

Dr. LANGDON DOWN, 18th of December, 1866.

10. *Fatal obstruction by a ball of cocoa-nut fibre.*

The case was that of an idiot boy, aged 16, who had been employed in mat-making at the Earlswood Asylum. It had been a habit of his to put a shred of cocoa-nut fibre into his mouth, and play with it between his teeth. Attempts had been made ineffectually to check the habit.

It was noticed one day that he vomited after his breakfast, and he pointed to his abdomen, as if it were the seat of pain. He was placed in the Infirmary, and it was found that the sickness returned after each meal, and that the bowels had failed to act. Before the fourth day there was almost complete suppression of urine. He rolled about the bed, and gave utterance to a moaning sound. On palpation of the abdomen, a hard mass could be felt on the left side of the umbilicus. Saline and oleaginous cathartics were given by the mouth, but were attended by speedy vomiting. Enemata were then given by O'Bierne's tube, but without relief. Galvanism was then employed over the abdomen, through the thin walls of which the intestines could be seen to move about. The galvanism was re-employed several times, and was followed by a manifest alteration in the position of the hard mass, which now occupied the right iliac region. Moreover, there was great alleviation of his symptoms; the vomiting was less frequent, the urine became abundant, and there was less uneasiness. Still the obstruction

of the bowels remained. Galvanism and O'Bierne's tube were again employed, but without success. He became gradually emaciated, his abdomen tender and tympanitic, and he died on the fifteenth day of the obstruction.

Post-mortem examination.—The whole of the intestinal tract was found injected, and at one part matted together by yellowish lymph. Corresponding to this part, the ileum, about twelve inches from the cæcum, was distended by a hard substance the size of a hen's-egg. The intestine below the mass was contracted, that above was distended with flatus. On removing the hard mass it was found to be made up of cocoa-nut fibre tightly interlaced.

Remarks.—This case illustrates very well the different symptoms which are presented by obstruction at different parts of the intestinal tube. The frequent vomiting and scanty urine indicated a much higher seat in the canal than when, later, the vomiting became less urgent and the urine abundant. Moreover, although failing to effect an entire removal, the case indicates the value of galvanism in the treatment of chronic obstruction.

Dr. LANGDON DOWN, 18th of December, 1866.

11. *Disease of the peritoneum.*

The subject of this specimen, was an infant aged one year and nine months. The parents and two elder brothers are healthy. The paternal grandfather died eight years ago of cancer of the liver. The infant thrived well for several months, but the umbilicus always protruded, and in consequence of this, when ten months old, my attention was attracted to the condition of its abdomen. It was then much distended, and a hardened mass could be distinctly felt, occupying the umbilical and left lumbar regions. The growth increased in size and density, and the child ceased to thrive; he gradually lost flesh, although at times he ate ravenously. He frequently suffered much pain, which was subdued by opium; he took for the last six months from half to seven-eighths of a grain each twenty-four hours. Beyond the pain and emaciation, there was no particular symptom developed during his illness. He died of exhaustion after two or three liquid stools, his intellectual functions being perfect to the last.

The *post-mortem* examination shewed extreme emaciation, and scarcely

any blood in the body. There was a decolorized coagulum in each ventricle of the heart. The diaphragm was arched up to the level of the fourth rib. The thoracic organs were quite healthy, as were also the abdominal, except the mesentery, which, with the intestines, had grown into a solid mass weighing two pounds and a-half.

The visceral and parietal surfaces of the peritoneum were quite adherent to the upper regions of the abdomen, the liver being inseparably united to the diaphragm, and the tumour to the abdominal parietes, in front, as low as the umbilicus; but below this point—in the hypogastric and iliac regions—there was some transparent fluid in the peritoneal cavity; the surfaces were not adherent, but were studded with masses, each the size of a pea, of a cheesy appearance; and just above the umbilicus one of these masses, an inch in diameter, had penetrated the parietes between the recti muscles, and had almost reached the surface.

Dr. THOMAS BALLARD, *5th of February, 1867.*

Report on Dr. Ballard's case of disease of the peritoneum.—We have examined, with some care, the mass of bowels which was submitted to us for report. They were generally very firmly united to one another by old, tough, membranous adhesions; they were studded here and there, along their mesenteric attachment, with moderate-sized masses of what appeared to be tubercular matter; and the mesenteric glands were, for the most part, enlarged, and many of them contained deposits of tubercle.

The mucous membrane of the intestines was, in the greater part of its extent, healthy. There were, however, a few small, shallow, and apparently cicatrizing, ulcers. The two largest of these were seated in the colon; also one was found in the lower, and one in the upper part of the ileum. There was no tubercular deposit connected with them, although it is not impossible that they may have resulted from the softening of such deposit in the substance of the mucous membrane. At the lower part of the jejunum we found an irregular cavity continuous with the bowel, containing faecal matter, and crossed in various directions by bands of somewhat blackened mucous membrane. It was obvious, after careful investigation of the part, that the cavity had originated from a knuckle of intestine, which had undergone ulceration and perforation, and of which (by these means) the two parallel portions had come to communicate freely with one another. It seemed pretty clear to us that the cavity comprised also a circumscribed portion of the peritoneal sac. The muscular coat of the intestine, immediately above

the cavity, was considerably hypertrophied, showing that there had been here some chronic impediment to the passage of faecal matter ; but the presence of such matter, in the intestine below, showed that the obstruction had not been complete.

Examination by means of the microscope confirmed us in the belief that the deposit on the peritoneum and in the mesenteric glands was tubercular.

Dr. J. S. BRISTOWE,

Dr. W. CAYLEY, 19th of February, 1867.

12. *Cases of perforation of the sigmoid flexure of the colon, probably due to the irritation of fæces.*

CASE I.—A woman, named M. H., aged 42, died in St. George's Hospital, under the care of Dr. Barclay, August 28th, 1863. She had for some months before her admission suffered from constipation, and she described herself as of a "bilious habit." She was attacked about a month before her death with pain and tenderness in the left iliac region, and she eventually sank with symptoms of circumscribed peritonitis.

At the *post-mortem* examination a partially empty cavity, as large as a cocoa-nut, was found occupying the left iliac region of the peritoneal cavity. The front of this cavity was formed by the abdominal wall, the back by the bowels, which were matted together by firm lymph. The cavity contained pus and faecal matter. It communicated with the sigmoid flexure of the colon by means of some ulcerated perforations.

On laying open the intestine about half-a-dozen ulcers became visible. These were oval, like button-holes, and of much the same size. They were all near together, parallel to each other, and transverse to the axis of the bowel. They were without thickening, looking as if a piece of the bowel had been cleanly punched out. The mucous coat was more widely destroyed than the serous. There was no trace of tubercular disease in their neighbourhood. The only signs of morbid action in their vicinity were some transverse brown lines, chiefly occupying the transverse folds of the bowel, and looking as if they had been produced by contact of the fæces. These, however, were small, did not correspond accurately with the ulcers, and from this specimen it was doubtful how far the ulcers and the brown stains were connected.

The right kidney was atrophied and contained tuberculous matter. There was no tubercle elsewhere.

CASE II.—C. R., a tailor, aged 42, died in St. George's Hospital, February 10th, 1865. He had for some years occasional pain in the left hypochondrium, latterly severe. This apparently was associated with constipation, for it was generally relieved by purging. He became œdematous; the urine was found to be albuminous, and finally he had diarrhœa, which proved incontrollable and appeared to be the chief cause of death.

At the *post-mortem* examination, a large circumscribed cavity, full of blackish foul matter, was found in the left side of the belly, bounded by the diaphragm, spleen, and descending colon. In the upper part of the descending colon were two small narrow ulcers, which opened into the cavity. There was no thickening of the coats of the bowel, nor was there any evidence of morbid action in this situation, excepting the ulcers themselves. These were like button-holes, the two close together, parallel, and with their long diameters across the axis of the bowel.

The kidneys were infiltrated with the waxy or "depurative" deposit. The small bowel was similarly affected. There was no tubercle in the body, nor any other morbid condition, excepting that the cystic duct was blocked up by a calculus.

CASE III.—A. B., aged 21, died in St. George's Hospital, October 10th, 1865. She had suffered habitually from constipation. Of late she had had much pain in the belly, with vomiting, tympanitic distention, diarrhœa, and extreme prostration. After these symptoms had lasted with more or less variation for two months, she sank. It appeared that a year previously she had had violent abdominal pain, which was attributed to gall-stones.

At the *post-mortem* examination, a circumscribed faecal abscess was found in the neighbourhood of the left psoas muscle, lying in the peritoneal cavity circumscribed by adhesions. This was in connection with three small ulcers which had perforated the descending colon. These openings were about the size of a pea, the edges were sharp, and the adjoining bowel was perfectly natural.

The peritoneum had many minute tubercular deposits upon its free surface, particularly where it covered the abdominal wall. In some cases the tubercle had perforated the membrane, so as to be in contact

with the tissues beneath. A single cheesy tubercle was found in the right lung.

The femoral veins each contained old, soft, buff-coloured coagulum.

The perforation of the colon in these cases appears to be of a kind which, though perhaps not very uncommon, has not obtained especial notice. No cases of the same sort are reported in the *Transactions* of the Society.*

The ulcers are quite peculiar in appearance. They are not dependent upon typhoid fever, or upon malignant or tubercular deposit. They are formed upon the prominent transverse folds of the bowel, by reason of which they are parallel to each other, and across the axis of the intestine. They begin from within, affecting the mucous membrane more widely than the serous. They are frequently associated with peculiar brown stripes which lie upon the prominences of mucous membrane in such situations as the ulcers occupy. These marks look like faecal stains. They are accompanied by change in the mucous membrane, as appears from their being sometimes spotted with minute extravasations of blood. That these stripes are apt to terminate in ulceration is clearly seen in early cases where a minute elongated ulceration may be seen to occupy the centre of each brown stripe and the summit of the intestinal fold. In cases of longer standing the connection between the brown mark, and the ulcer which arose in it, of course becomes less evident.

These appearances cannot fail to suggest that ulcers of the kind described have arisen from the irritation of the faeces. That hardened excrement is capable of causing ulceration by its contact is shown by the frequent perforation of the vermiform appendix by faecal concretions. In all the cases recorded, constipation had apparently preceded the ulceration. Whether any unnatural condition of the faeces has rendered them more than naturally irritating is a question which cannot as yet be answered.

It will be observed that there is a great tendency to circumscription of the peritonitis resulting from the affection described. The fixed and protected condition of the sigmoid flexure gives facilities for the processes of adhesion and limitation which do not pertain to the more movable parts of the bowel.

Dr. DICKINSON, 19th of February, 1867.

* See vol. xv., p. 97.—Ed.

13. *Ulceration of sigmoid flexure of the colon.*

Michael McD., aged 50. Admitted into St. George's Hospital, December 1st, 1866.

History:—The patient had suffered from gonorrhœa, followed by inflammation of the testes, two years before admission. He had also had some scrofulous abscesses about the body, especially at the lower part of the left side of the thorax and below the right clavicle.

On admission, he complained of pain in the left iliac fossa, which had existed for twelve days, without vomiting, but accompanied by constipation. For the two days previous to admission he had suffered excruciating pain in passing water; but he complained of no pain in the back. The tongue was thickly coated. On examining the abdomen a hard mass could be felt, lying above the brim of the pelvis on the left side, and apparently extending into the iliac fossa.

The bowels were well opened, and some diminution took place in the size of the tumour. No pus was discovered in the stools. By December 7th the swelling had extended more to the right side, and was extremely tender. On the 8th a notable change had taken place. The patient was livid, and much weaker, with a pulse of 120. He had a severe rigor at nine A.M. All along, the man had complained of pain in the region of the prostate gland, and had experienced slight difficulty of micturition. The urine contained pus. On the 9th another rigor followed, and from this date the yellow hue of pyæmia set in; the patient became gradually weaker and weaker, and finally died on December 27th.

Post-mortem appearances.—Abscesses were found below the right clavicle, and over the eighth rib on the left side, at its junction with the cartilage. There was deposit of crude tubercle at the apices of both lungs. The prostate gland was riddled with abscesses. In the left groin a large abscess was found, extending in front of Poupert's ligament, along the crest of the ileum and into the pelvis, external to the peritoneum. The sigmoid flexure of the colon was adherent to the abdominal walls for a considerable length; at one spot in this region the intestinal walls had been destroyed by ulceration, the abdominal parietes forming the external wall of the gut. The ulcer was of about the size of a shilling. From this perforation of the colon suppuration seemed to have originated, as all the surrounding parts (save those involved in the abscess) were found to be healthy. On opening the intestine, the internal aspect of the ulcer presented the following appearances :

—Its edges were rounded and slightly raised; the mucous membrane was more extensively destroyed than the muscular or serous coats. In two or three places beneath and raising the mucous membrane, were seen several brownish-red stripes, following the course of the circular muscular fibres. The stripes were only found in the neighbourhood of the ulceration. The mucous membrane covering them was not destroyed, but merely raised; under it minute points of ecchymosis were seen contrasting strongly with the brown-red colour of the stripes. Two of these stripes or ridges, bounded the perforation, one above, the other below it, the upper one being partly involved in the ulceration. The remainder of the intestines, on examination, was found to be natural.

The remarkable point in this case was the existence of the raised lines following the course of the circular muscular fibres. A similar preparation may be seen in the Museum of Guy's Hospital, taken from a patient who had suffered from constipation; also another, from a patient who had had the appendix cæci vermiformis perforated by a concretion. In this case the mucous membrane of the colon is described as being discoloured by dark brown streaks.

How far, then, are these streaks connected with the ulceration? In the case exhibited, from the ulcer being nearly midway between two of the streaks, it may be inferred that the ulceration was unconnected with them, for if so the raised striæ would surely have been more involved, whereas only one of them was ulcerated, and that only to a slight degree. Another interesting fact is that, as far as can be made out, such striæ are always found (if found at all) after constipation, or some other intestinal obstruction has occurred.

Dr. T. T. WHIPHAM, *19th of February, 1867.*

14. *Case of double stomach.*

The specimen consisted of a stomach, the cardiac and pyloric portions of which were almost completely separated, being joined only by a channel of communication of about a calibre sufficient to admit a fore-finger and of about an inch in length. Besides the contraction there was no trace of disease, past or present, at this part, either on the inside or outside, and no thickening could be felt like that of hypertrophied muscular fibre. The disease was, therefore, quite unlike the ordinary cases of hour-glass contraction.

The specimen was taken from the body of a woman, aged 63, who

was brought to the dissecting-rooms at St. Bartholomew's Hospital. She had died a few days before in one of the wards from the effects of a severe burn. She was the subject of trichiniasis.

Mr. W. MORRANT BAKER, 19th of February, 1867.

15. *Naso-pharyngeal polypus removed by ligature through the nose.*

George E., aged 14, a native of Carmarthen, was admitted under the care of Mr. Bryant into Guy's Hospital on November 2nd, 1865, with a large growth obstructing the posterior nares, and completely preventing nasal respiration. It had been growing for about two years, and at first gave rise only to obstruction of the right nostril; six months subsequently difficulty in breathing through the left nostril made its appearance, and for about one year all nasal respiration had been completely lost. The boy had also suffered from severe epistaxis every two or three months. The growth was unattended by any pain.

When admitted he was unable to breathe, except through the mouth; his mouth was always partially open, and he spoke in a manner peculiar to patients suffering from naso-pharyngeal obstruction. The soft palate was found to be pushed forwards to an extreme degree by a dense, hard, globular swelling, which evidently projected downwards from the base of the skull into the upper part of the pharynx, and was clearly visible behind the soft palate; it completely filled and blocked up the pharynx.

On November 14th an attempt to remove the growth was made by means of the *écraseur* and a wire-rope. The rope was passed through the right nostril, and its loop brought out of the mouth, it was then pressed well up behind the polypus, so as to strangle its peduncle. The growth was, however, too firm in its texture to allow of its immediate division by means of the wire and *écraseur*. The instrument was consequently left in, and the wire was tightened daily. On the fifth day the ligature came away, the wire having cut through what was believed to have been the peduncle of the polypus. Oddly enough, however, no tumour came away, but the polypus gradually diminished in size, and the soft palate returned to its normal position. On November 24th the boy could breathe through both nostrils, and by December 6th the growth had so far diminished in size as to allow the finger to be passed freely into the pharynx, when only a small hard growth was felt high up behind the posterior nares. In all other respects the boy

was much relieved. He returned home in January, 1866, and remained well for three months, when the difficulty in breathing through the left nostril reappeared, and the tumour in the pharynx began palpably to grow. On January 7th, 1867, he was re-admitted into the Hospital, a year having elapsed since he left. His symptoms were then precisely similar in character and in degree to those he had experienced on his previous admission. All nasal respiration had ceased, and a large solid fibrous growth was seen, pressing the soft palate forwards upon the tongue, and completely blocking up the upper part of the pharynx. On January 19th, Mr. Bryant again operated upon the boy. He passed a double whip-cord ligature through the right nostril, and with some difficulty looped it round the growth. He fixed the ends of the cord to the écraseur introduced through the nose, and strangled the peduncle of the polypus. The instrument was left in, and the end was tightened daily.

On the sixth day, or January 25th, the instrument became loose, and the growth came away, the boy pulling with his fingers the loosened polypus out of his mouth. All his symptoms at once subsided, and when he left the Hospital, on February 7th, he could breathe freely through both nostrils, and no signs of disease could be detected.

Remarks.—The polypus which was removed measured three inches and a-half by two, and was of the firm fibrous kind, of which it was a fine example.

The practical interest in the case lies in the fact that the growth failed to come away after the first operation.

MR. THOMAS BRYANT, *5th of March, 1867.*

16. *Emphysema of the peritoneum found in a man who died of melanosis of the œsophagus.*

The man, from whom these specimens were taken, was 64 years of age. He died on the 23rd of December last: the examination of the body took place on the 26th. The weather was cold at the time. He had been a hard spirit-drinker at one period of his life; several years ago he had hæmatemesis, from which he quite recovered; for the last two or three years he had been subject to nausea and occasional vomiting, and latterly to intense pain in the epigastrium, which was not increased by taking food. The matters vomited were of a brownish-red colour. He died in a state of complete emaciation.

The liver was fatty; the other organs, except the œsophagus, were healthy. The disease in the œsophagus extended nearly through its entire length. It was thickened and was studded, especially on the surface, with black deposit.

The peritoneum was nearly universally studded with air-vesicles, but more especially the diaphragmatic portion where the vesicles were larger and more numerous. Some of them were nearly as large as a cherry. The contained air was free from odour, and there was no sign of decomposition in any part of the body. No opening could be detected, nor was there transudation of any of the intestinal contents, nor of the food.

Mr. DE MORGAN for Mr. G. FLEETWOOD BURY, 19th of March, 1867.

17. Case of retro-peritoneal hernia.

This specimen was found in the body of an old woman in the dissecting-room of Guy's Hospital. It was ascertained that she had died soon after admission into St. George's workhouse, but no history of her symptoms during life could be obtained.

The sac was formed by the peritoneum reflected over the inferior mesenteric artery being pushed down behind that vessel, so that it and its left colic branch formed the edge of the sac.

The intestine entered immediately after the end of the duodenum, and emerged three feet lower down in the jejunum. As it lay in the sac it had the descending colon to the left, the spine to the right, and the peritoneum covering the quadratus lumborum behind. There was no appearance of strangulation, and the bowel was readily removed from the sac.

There is a rare, if not unique, specimen in the Pathological Museum at Prague, of a precisely similar form of hernia passing above and behind the *superior* mesenteric artery. In the description of this case of "retro-peritoneal hernia," by Dr. Treitz,* reference is made to a case of Mr. Hilton's, in which he operated for internal strangulation, and which appears to have been of a similar kind, although there was no *post-mortem* examination to confirm the diagnosis.

The present specimen will be placed in the Museum of Guy's Hospital.

Dr. PYE SMITH, 2nd of April, 1867.

* Hernia retro-peritonealis; ein Beitrag zur Geschichte innerer Hernien. Prag, 1857.

18. *Case of ulcer of the stomach, terminating fatally by hæmorrhage.*

The subject of this disease was a young soldier aged 27, of seven years' standing, and who had seen no foreign service, except in Canada for a short period. He was muscular, and except in some deficiency in colour, his appearance was not indicative of ill-health. He had led an irregular life, and had been in Hospital during his service frequently for the minor venereal affections. He reported himself sick on the morning of the 8th of March, when he complained of vomiting and purging with which he had been seized during the night passed. He denied having taken indigestible food; the tongue was a little furred, and the pulse rather weak; the patient's manner and appearance did not indicate suffering or a severe ailment.

He was ordered a rhubarb draught with ammonia. In the afternoon, while walking about, having in the interim been pretty well, he complained of nausea, and almost immediately fainted. He soon rallied, and was given an ammonia draught, and became apparently as well as before the syncope.

When seen at morning visit on the following day (19th), he complained only of a little weakness, but had no disturbance of stomach or bowels, or pains. With reference to the seizure of the previous day, I thought it advisable to place a stethoscope over the cardiac region, and I made an examination, necessarily, I regret to say, hurriedly, for a duty required my presence in barracks, and I postponed the investigation to a future opportunity which was not afforded me.

I made out the existence of a low harsh bruit, most audible at the top of the sternum, and I think systolic in character. I had not time to compare it with the pulse. The heart's action was quickened, but the impulse only slightly increased. The man was allowed to get up in the ward and go about.

I was summoned to him some three hours later, and found him in a state of collapse. He had been suddenly attacked about one o'clock A.M., with vomiting of blood in very large quantity. At first large dark clots were ejected, and subsequently coagula of brighter colour. The poor man admitted then that he had misled me by his statement at the time of his admission into Hospital, and stated that the matter vomited in the night before he saw me had consisted of blood alone, and that he had been thrice attacked before morning.

The patient rallied somewhat under stimulants and no further vomiting occurred, but severe pain extending from the stomach to the back

set in and became in the latter locality very distressing. It occurred in paroxysms, with slight intermissions, and was accompanied by craving thirst.

The pain subsided as he grew weaker, and he died quietly at a quarter to seven o'clock P.M.

I should have remarked that this man was invalided by me from Canada, four years back, for hypertrophy of the heart.

Autopsy.—Heart enlarged and much fatty deposit on its parietes. Left ventricle considerably hypertrophied, the wall above an inch thick. Two of the three aortic valves were imperfectly separated by a septum. The free margins were greatly thickened by warty deposits. There was a patch of atheroma, of the size of a shilling, midway between the aortic and the mitral valves.

Stomach much distended, half filled with dark brown fluid, consisting of serum of blood mixed with fluid which had been drunk, together with large coagula. An ulcer, the size of a pea, was found on the anterior surface of the organ, a little below the cardiac orifice. The peritoneal coat alone was unaffected, and the orifice of the ulcer was plugged by a coagulum. No other ulcer was discovered, and this was evidently the source of hæmorrhage. The viscus bore evidence of subacute inflammation in various places. Blood was contained in the small intestines, and a good quantity oozed out per anum after death. Kidneys enlarged and pale: in a large cyst at the apex of the right, and immersed in straw-coloured fluid, was a calculus about the size of a pea and flattened. Another calculus of similar size and form was discovered in a small cyst—of only sufficient size to hold it—in the cortical structure of the left kidney. Urine slightly albuminous.

Remarks.—This case presented several features of interest, both clinically and pathologically.

When the man was invalided from Canada, the heart affection was confined exclusively to marked hypertrophy of the left ventricle. The abnormal development of the aortic valves had not then lapsed into a state of disease, but a course of hard drinking seemed to have produced it, while at the same time, the fat deposited in the walls of the heart lessened the impulse to scarcely more than the normal degree.

There was no history of rheumatism or of specific venereal disease, and he had only suffered from gonorrhœa and dyspeptic ailments.

My experience has not as yet borne out the views recently advanced by staff-surgeon, Dr. Davidson, Assistant-Professor of Pathology at Netley. That gentleman is inclined to associate valvular disease with

syphilis, viewing the latter as a predisposing cause. *A priori*, it might be well imagined that during the stage of secondary syphilis, when periosteal deposits take place, and when the blood is in an unhealthy condition, a greater tendency than ordinary to affections of both the pericardium and endocardium might be manifested. This hypothesis, however, has not been realized in *post-mortems*. However, possibly Dr. Davidson may intend his observations to apply to cases in which there had been previously a rheumatic tendency, or where there had been a grafting on of syphilis in a patient previously affected with the first-named disease.

Dr. F. ROBINSON, 16th of April, 1867.

19. *Black deposit in the large intestine from the presence of mercury.*

A lady, aged 74, of a naturally vigorous constitution, had for the last forty-three years of her life been in the habit of taking a grain of calomel every night, except on some twenty occasions, when she substituted either blue pill or grey powder. In addition she took an extra dose of calomel varying from half a grain to one grain twice a week. The drug had been originally prescribed on account of the liver's action being sluggish, but, finding relief from it, the patient in opposition to all professional advice, persisted in its use. For many years her health was not materially impaired, and she enjoyed a good appetite and digestion. Ten years ago she was attacked with pleurisy of the left side, followed by partial collapse of the chest on that side, and two years later she had an attack of disease of the heart, the auscultatory signs last June being a systolic murmur at apex, midsternum, and under right clavicle, and also a double second sound. Latterly the bowels were easily moved, half a tea-spoonful of castor-oil being sufficient to act on them, and the motions were dark and very offensive. She was also troubled during the last year and a-half with flatulence and fugitive pains in the right and left iliac regions, but she never had any tenderness. These symptoms were always relieved on the bowels being moved by the habitual doses of calomel. A few days before her death she complained of pain in the rectum, and Dr. Frederick Bird, on examination, found a prolapsus ani, and noticed the protruded intestine to be of a very dark colour. During the last month albumen appeared in the urine, which had been tested several times for it previously; the legs became œdematous; the breathing, which had been short for some time, became more panting

and frequent; the heart's action became weak; and the patient sank and died in the beginning of April.

Post-mortem examination.—The body was not much emaciated, and the abdominal walls had some fat in them. The lower extremities were œdematous. The left lung was contracted and adherent on all sides to the pleural cavity, which was diminished to two-thirds of its natural size. The heart had some fat on its exterior, and its texture generally was pale in colour. The right auricle was considerably dilated; the wall of the right ventricle was thicker than that of the left, which was decidedly attenuated. The mitral valve had its tendinous chords partially agglutinated as low as the muscoli papillares, and its orifice presented on the auricular side the form of a crescentic slit barely three-eighths of an inch in length, which would not admit the point of the little finger.

The ring of the valve was thickened with deposit of cartilaginous hardness. There were patches of atheroma on and above the aortic valves, two of which were partially joined by adhesion, but were still free to act as valves. The aorta was dilated immediately above the valves. Microscopic examination of the muscular tissue of the heart showed it to be in various stages of fatty degeneration, the columnæ carneæ being in the least advanced, and the external parts in the most advanced, stage.

The stomach had thin walls, and its mucous membrane near the pylorus showed a few spots of ecchymosis. In the duodenum there were extensive patches of ecchymosis and Lieberkuhn's follicles were enlarged, and the valvulæ conniventes imperfectly marked. The jejunum and ileum were pale, but tolerably healthy. The internal surface of the large intestine was remarkably black, mottled in parts with patches of a lighter hue, the colour commencing at the ileo-cæcal valve, and contrasting strongly with the light colour of the small intestine. The mucous membrane was smooth and shining, and there was no ulceration or abrasion of the surface, but the whole presented the appearance of the skin of a toad's back.

On microscopic examination of sections of the intestine, the colouring-matter was found to be deposited in the submucous tissue between the epithelial and muscular coats, and to consist of—1st. Large black opaque masses of irregular form. 2nd. Minute granules, sometimes separate, and sometimes grouped together.

About four inches of the cæcum were then analysed for mercury. The

serous and muscular coats were carefully dissected off, and the submucous and mucous tissues cut into small pieces, and carefully dried over a water-bath for twenty hours. The dried substance was boiled with hydrochloric acid (one part of concentrated acid to eight of water) for an hour, small quantities of chlorate of potash being added from time to time. A green solution was thus obtained which was boiled with bright copper shavings. They were placed in a small tube with a bulb at one end, which was heated. A deposit took place in the upper and cooler portion of the tube, which consisted of well-marked globules of metallic mercury.

The liver was diminished to about a third of its natural size, and was of a reddish-buff colour. Its whole surface presented a granular appearance from the presence of light buff nodules, varying in size from a millet-seed to a pea, most strongly marked on the under surface, but visible also in sections of the organ. On microscopic examination, the fibrous tissue appeared much hypertrophied, particularly in the neighbourhood of the vessels; the hepatic cells were shrivelled and irregular in shape and contained a large number of granules. There were patches of fatty degeneration, in which the cells were full of fat-globules.

A portion of the liver was examined for mercury in the same way that the intestine had been, but no traces of the metal could be detected in this way, or by means of the spectrum-microscope. The gall-bladder was enlarged from distention, and its wall thinner than natural. It was filled with sienna-coloured bile, and contained ten parti-coloured gall-stones, each presenting several facets with rounded edges. One of these was analysed, and consisted of cholesterine, fatty acids, colouring-matter, and salts. The spleen was shrunk, hard, and very dark in colour.

The right kidney was small, its capsule adherent, and the surface beneath coarsely granular. On section, the cortical portion appeared granular and greatly diminished, and the pyramids somewhat displaced. The left kidney was enlarged and congested, with its capsule more or less adherent and the surface slightly granular. On section the substance was dark in colour, and the cortical portion diminished in extent. Sections of the right kidney were examined microscopically. The Malpighian bodies and convoluted tubes were very indistinct, and the natural tissue seemed in parts to be replaced by a fibrous structure of a dark colour. It was best marked near the capsule, and seemed to be the result of an exudation advancing from the surface, rendering indistinct, in parts obliterating, the tubes and Malpighian bodies,

and occasionally presenting a fibrous appearance. In the medullary portion the tubes were full of granular matter. The appearances closely resembled those described by Dr. Dickinson in vol. xliii. of the "*Medico-Chirurgical Transactions*" as diagnostic of the "Chronic Intertubular disease of the Kidney."

Remarks.—This case differs from cases of mercurial poisoning recorded in the "*Transactions*," and it appears to stand alone as an instance of the daily administration of small doses of mercury for a period of forty-three years without having induced salivation, soreness of the gums, necrosis of the bones, or other symptoms which usually follow from a long course of the drug. A curious feature is the fact of the mercury being only deposited in the large intestine, and its having for a great number of years given rise to no symptoms. The deposit must have taken place without exciting inflammation, as no thickening of the bowel, or ulceration of the surface, could be detected. Whether from the system being weakened, or from the injurious operation of the accumulated deposit, or from both, at last some symptoms indicative of irritation were set up, *e.g.*, the fugitive pains, the flatulence and the readiness of the bowels to be acted on, and the appetite and digestion failed at the same time. Although chemical analysis succeeded in detecting mercury only in the large intestine, there is reason to suppose that the degenerations and alterations of structure in other organs, in the heart, the liver, and the kidneys, were promoted by the deteriorating influence of the metal on the whole system. Originally of strong constitution and of great energy, both bodily and mental, this lady, of late years, had presented a peculiarly pallid and cachectic aspect, and yet was remarkably free from the wrinkled and decrepit appearance of advanced age. Dr. CHARLES T. WILLIAMS, 21st of May, 1867.

20. *Tumour of the ileum, with intus-susception of the enlarged bowel and its mesentery through the ileo-cæcal opening.*

J. M., aged 55, by occupation a wheelwright, was admitted into the Middlesex Hospital under my care on April 23rd, 1867. With the exception of liability to cough in winter, the patient had enjoyed good health until about Christmas, 1866, since which time he had suffered from pain in the abdomen, more especially on the right side, and also from frequent attacks of severe vomiting. The pain varied greatly in

severity at different times, being always worst when the bowels were bound, and considerably mitigated by the action of aperients.

The man used much paint in his occupation, and on admission there was a faint but characteristic blue line at the margin of the gums. In the right side, just above the crest of the ileum, was situated an ill-defined, movable, somewhat ovoid, tumour. Percussion over this tumour elicited comparative, but not absolute, dulness, and the rest of the abdomen was everywhere resonant and slightly tympanitic. Pressure over the abdomen, especially on the right side, produced pain, which was not, however, very severe. The hepatic dulness was of normal extent, and between it and the tumour intervened a perfectly resonant space. The pulse was 86, of good strength and volume; the tongue was covered with a thick white fur; the urine was rather scanty and of a very dark colour, its specific gravity was 38, and it contained neither albumen, bile, nor sugar.

The patient was much relieved by having the bowels cleared out with castor-oil; the abdominal tenderness greatly diminished, the pulse fell to 75, and the urine became of lower specific gravity and of more natural appearance; but the tumour remained as at the time of the patient's admission. After a day or two the pain returned, but was relieved again and again by the use of castor-oil until the 2nd of May, when, notwithstanding the bowels having acted on the previous day, he began to suffer more severely and vomited large quantities of grass-green coloured fluid of a creamy consistence. Under the microscope, the matters vomited were seen to contain only fat, starch, and healthy epithelium. The pulse now became very frequent and the abdomen tense and tender, and, although the patient's sufferings were somewhat mitigated by treatment and he had even one or two intervals of comparative freedom from pain, the peritonitis ran on, and he died early on the morning of May the 9th. Notwithstanding his having taken opium in large quantities during the last days of life, his bowels acted several times after the accession of the fatal peritonitis, and he passed a small loose and fæculent stool the day before death.

Post-mortem examination.—With the exception of some old pleuritic adhesions on the right side of the thorax, and a little serous fluid in the left pleura and also in the pericardium, the thoracic organs and all the abdominal viscera, excepting the intestines, were found to be perfectly healthy. The abdomen was much distended, and the peritoneal cavity contained about half-a-pint of puriform fluid. The intestines

were glued together by masses of soft yellow lymph. On separating the soft adhesions between the intestines, some semi-fluid fæces were found to have escaped into the peritoneal cavity. Somewhat to the right of the middle line was an oval tumour, the size of a small cocoa-nut, apparently formed by the ascending colon. On laying open the large intestine, this tumour was found to be formed by an intus-susception of a portion of the ileum through the ileo-cæcal opening. The invaginated portion of the bowel was almost black, very œdematous, and presented at its lower extremity, around the central canal, an irregular somewhat nodulated mass, ragged and spongy on the surface, and white on section. The invaginated intestine was tightly constricted at the ileo-cæcal valve, and here the coats of the bowel had sloughed, giving rise to a perforation which would admit the tip of the little finger. Immediately opposite to this orifice was an opening into the cæcum, and the two perforations were so situated as to suggest the existence of a false passage between the ileum above, and the cæcum below, the intus-susception. The opening through the coats of the ileum was situated close to the mesentery, and it was at this point that the fæces had escaped into the peritoneal cavity. An elastic catheter was readily passed from the ileum into the cæcum, through the central canal of the invaginated bowel. The remainder of the abdominal organs, including the mesenteric glands, were perfectly healthy.

Dr. Cayley has favoured me with the following report of the microscopical examination of thin sections taken from the tumour.

“The superficial spongy-looking portions of the morbid growth were found to consist of altered mucous membrane, with very long villi, and an exuberant growth of epithelial cells, mostly of the normal columnar type, but presenting much variety (Plate II., Fig. 1). The deeper parts, forming the whitish-looking infiltration, presented an alveolar structure (Plate II., Fig. 2), the alveoli being filled with large, regular, nucleated, round and oval cells, somewhat resembling in size and appearance the epithelium of the bladder. Many of the cells contained two or three nuclei (Plate II. Fig. 3).

“The disease, which is undoubtedly of a cancerous nature, appears to have originated in the submucous tissue, and to have spread all round the circumference of the bowel.”

Dr. GREENHOW, 21st of May, 1867.

B. LIVER, ETC.

21. *Abscess of the liver.*

The patient from whose body the specimen was taken was 62 years of age, but in appearance at least six or seven years younger. He was tall, of spare frame, of temperate and active habits, and had returned to England six years ago, after spending thirty-five years in India. He had had a slight attack of malarious fever shortly after his arrival there, but had never had dysentery, nor indeed any other serious ailment during his long residence in that country. In the spring of 1862, two years after his return home, he had an illness of aguish character which lasted several weeks, and recurred at the same season in 1863 and 1864. The paroxysms were characterized by rigors, fever, and sweating, but none of these symptoms came on at regular intervals nor at the same period of the day. On each occasion he recovered perfectly, and was able to resume his usual active life and favourite field-sports.

From the spring of 1864 he remained in uninterruptedly good health until the month of March, 1866, when he had a return of the same aguish attacks, and first came under my observation in April when he was much debilitated by their frequency and severity. They sometimes occurred almost daily, sometimes after intervals varying from two or three to eight or nine days. The rigors lasted from half-an-hour to two hours, and were followed by moderate heat of two or three hours' duration, and by sweating, which however did not usually come on till night and then lasted for some hours. Any slight chill seemed to induce an attack, and, on one occasion, the exposure consequent on my making a thorough examination of the thoracic and abdominal organs sufficed to do so. He was free from pain, except that for a fortnight in May he suffered from a slight attack of sciatica on the left side. His weight had decreased twenty pounds during the first weeks of his illness, before he came under my observation. His pulse rarely exceeded 72 during the earlier months of his illness, except during the paroxysms, when it rose to 90 or upwards. The tongue was injected, rough and fissured, looked denuded, and had upon the centre, about an inch from the tip, a small nodule, about the size of a hemp-seed, surrounded by a patch of aphthous-looking, white exudation, which varied somewhat in extent from day to day. This state of tongue continued throughout the illness and the patient said it had existed for more than twenty years. Such an appearance suggested syphilis, from which, however, the

patient declared he had never suffered, and there seemed no reason to doubt his statement. The liver and spleen were, by percussion, of normal size; the breath- and heart-sounds were also normal; and, with the exception of abundance of lithates during each of the aguish attacks, the urine was normal and never presented any trace of albumen.

The attacks proving obstinate, I sent the patient, early in June, to the South Coast, where he soon lost the rigors and sweating and suffered from nothing but a slight attack of diarrhœa, his bowels having previously been habitually constipated. On his return to town, in July, he had gained flesh, and thought himself much improved in health, but the liver had become considerably enlarged, especially the left lobe, which formed a firm, globular, semi-elastic tumour in the epigastrium. The vertical dulness of the liver extended ten inches from the fifth rib downwards in a line with the nipple; horizontally the dulness extended quite across the epigastrium. The tumour was perfectly smooth, and neither painful nor tender on pressure; indeed, the patient was quite unaware of its existence until I discovered it. During many weeks the tumour remained stationary in extent, but it became somewhat more prominent, and very soon there was a sense of weight and uneasiness in the epigastrium which prevented the patient's either stooping forward or lying flat on his back; and he could only sleep in a semi-recumbent posture. About the middle of August, slight œdema of the left foot appeared, but soon passed away again. The tumour became in time very considerably softer and more elastic, but no distinct fluctuation could ever be detected; the appetite failed and the patient became emaciated. The pulse continued quiet until near the end of September, when it rose to 90; the skin became warm and dry in the day-time, but there were slight feelings of chilliness towards evening and sweating in the early morning. On September the 28th I detected fluid in the peritoneal cavity, and there was considerable anasarca of the feet and legs; the bowels acted loosely twice daily. The tumour, which had remained hitherto quite smooth and had not descended below the umbilicus, now extended downwards towards the left iliac region, and the lower border of the liver could be distinctly felt to be thickened and nodulated. There had been no appearance of jaundice throughout the illness.

On the 11th of October, the patient had an attack of diarrhœa and vomiting, which was, however, soon subdued, but during the night of the 12th, after passing one copious loose stool consisting chiefly of blood, he expired rather suddenly.

Post-mortem examination.—The liver was found to be greatly en-

larged, and the left lobe obviously contained fluid. At the first puncture several ounces of clear serum escaped, and, on laying the lobe open, an abscess was discovered, containing nearly two quarts of pus, in which was floating a large blood-clot, weighing, probably, upwards of a pound; the pus was partly thick and creamy, partly thin and reddened by blood. The walls of the abscess were formed of condensed hepatic tissue, for the most part not more than a quarter of an inch in thickness. The lower part of the left lobe was red throughout, and along its free margin a number of small abscesses had formed, the projection of which beyond the lower border of the lobe had caused the nodules felt during the last two weeks of life. These small abscesses were not connected with the large one and were filled with very thick creamy pus. The right lobe of the liver was also considerably enlarged and of a pale yellow colour. On its anterior convex surface was a depressed cruciform cicatrix, which, on being cut through, was found to consist of dense, fibrous-looking tissue, extending a quarter of an inch into the substance of the liver; there was another similar depression near the lower border of the lobe. The liver was attached to surrounding organs, but there were no adhesions between it and the parietes of the abdomen. The liver-tissue was soft, and microscopical examination detected the presence of many oil-globules in the cells. The gall-bladder contained a number of small angular gall-stones, and was moderately distended with red purulent fluid of the consistence of cream, in which floated a large, loose, recent blood-clot. The cystic duct was pervious, though partially plugged near its union with the common duct by a small coagulum. The mucous membrane of the gall-bladder was reddened by the injection of its vessels and presented several patches of deeper congestion.

Remarks.—This case is chiefly interesting on account of the peculiar difficulties it presented in the way of forming a correct diagnosis. When I first discovered the tumour in July, I felt sure that it must be either abscess of the liver or a rapidly growing malignant tumour, and I inclined strongly to the belief of its being the former, but was unable to satisfy myself on the point in consequence of the absence of any distinct fluctuation. The family history of the patient, moreover, pointed strongly to the probability of malignant disease, several of his immediate relatives having died of cancer. My own convictions, however, still leaned to abscess, and, early in August, I was anxious that a small exploratory puncture should be made, but, after mature consultation with an eminent hospital physician, I was deterred from attempting it by the obscure nature of the case, and the, at any rate, very doubtful

result. I continued, however, to believe the disease to be abscess, until within two or three weeks of the patient's death; when, the rapid extension of the tumour downwards towards the left iliac fossa, the appearance of nodules on the free border of the left lobe of the liver, and the occurrence of ascites, seemed to require me to inform the friends that I could no longer entertain any hope of the disease being other than a malignant tumour. There appears, however, little cause to regret the determination we came to in August; for, examination having proved that there was no adhesion between the surface of the liver and the parietes of the abdomen and that the pus was too thick to have been evacuated through a small exploratory trocar, there is no doubt that the larger puncture, which would have been necessary, must have been attended by great danger. As regards the nature of the disease, the cicatrices on the liver have so strongly the appearance of being of syphilitic origin, as to induce me to return to the idea at first suggested by the state of the patient's tongue.

Dr. GREENHOW, 16th of October, 1866.

22. *Gall-stones discharged through the abdominal wall.**

Two gall-stones, of the size of small marbles, were shown, which came from an abscess in the umbilical region. The history is as follows:

M. W., aged 50, a healthy, active, abstemious woman, wife of a publican, consulted Mr. Everet, in February, 1866, for what appeared to be a bilious attack. A purge gave relief, but, after a day or two, she took a long walk and came home exhausted, and suffering great pain in the right side, where there was a slight swelling, below and to the right of the umbilicus. She stated that she had strained herself in stooping, and that she had felt something "give way."

Rest in bed, with aperients and anodynes, removed the urgent symptoms, leaving only a very slight swelling, hard pressure of which gave no pain. She went about her ordinary avocations, feeling quite well. During March and April, her health was good, but when questioned as to the state of her side, she invariably replied—"About the same. I only feel a little uneasiness, and a sort of weight there." In the beginning of May she lost her husband. During his illness she had exerted herself very much in lifting him in and out of bed. At the end of

* See a similar case at page 147.—ED.

the month she began again seriously to complain of her side ; and upon examining it, Mr. Everet was surprised to find a large tumour of the size of a cricket-ball at the spot before described. From the absence of symptoms, this was thought to be faecal, but purging did not remove it. Leeches and poultices equally failed. An eminent surgeon was then consulted, who pronounced it to be a superficial carbuncle, or abscess, the probable result of a strain ; and enjoined absolute rest in the recumbent posture. In the beginning of August a discharge commenced from an aperture of the size of a pin's-head ; it was at first slight, but increased enormously, and was of sero-purulent quality. It continued to flow daily and rapidly, until the latter end of September, when pure healthy pus began to appear ; in ten days this was succeeded by a discharge of gall-stones, four in number, and of about the size of a small toy-marble. They came away without pain, and were found in the poultice. They were not flattened from apposition, and were composed of cholesterine. Meantime, the swelling had varied in its characters, being sometimes smooth, at others, as though corrugated, giving a sensation like that produced by passing the fingers of one hand over the backs of the four fingers of the other. In the course of next month the patient's state remained much the same, but a distinct hardness could be felt situated very superficially about, and especially below, the discharging aperture. Mr. Gowland explored this, and removed another gall-stone, and further found that the hardness was caused by the presence of a quantity of friable material, having the qualities of dried bile ; as this matter was detached with difficulty, and appeared to be embedded in the tissue, it was judged better to leave it alone for the present. During the whole of the patient's illness, lasting nine months, she never had any appearance of jaundice, nor was bile to be detected in her urine.

Dr. MOXON for Mr. THOMAS DENNY EVERET, 20th of November, 1866.

23. *Syphilitic disease of the liver, dura mater, and brain.*

E. A. O., aged 40, has had, according to his own statement, several chancres, one about ten, another about two years ago ; when questioned on the subject he was already so weak, and his pronunciation was so much impaired, as to render it impossible to obtain a description of the nature and duration of these chancres, and of the secondary symptoms. In July, 1866, he was admitted into the German Hospital under Mr. De

Merie's care, on account of caries of the sternum. The general nutrition was much impaired, and the patient was remarkably anxious. Under the influence of nourishing diet, iodide of iron, and cod-liver oil, he was much improved, and, although the caries was not quite healed, he was able to return to his work as a tailor in August. In the middle of September, however, while at work, he fell down in a fit of unconsciousness; he is said to have recovered from this in about an hour's time, but to have had on the following day a fit of convulsions in the face and limbs, without entirely losing his consciousness. After this occurrence he is described as changed in his manner, being drowsy and entirely indifferent to what passed around him. In this state he remained up to his re-admission into the German Hospital, on October 13th, 1866, under the care of Dr. Sutro, for whom I saw the case several times with Dr. Burger, the resident medical officer, to whom I am indebted for the history. He was then much emaciated, unable to walk or stand, although he could to some degree move his legs when in bed; the movement of his arms, too, was impaired, that of the left more than that of the right; he was very drowsy, but could be roused and made to give short answers, with very indistinct pronunciation, which, however, was on some days better than on others. The pupil of the right eye was entirely dilated and almost motionless, but the susceptibility of the retina was not destroyed, and the ophthalmoscope showed no alteration; the muscles of the eye-ball were not affected. There was a certain amount of hyperæsthesia on the left side, but a still more remarkable increase of reflex irritability on the same side, the slightest touch of the skin causing general starting; this increase of irritability was observed also on the right leg, but in a less degree. There was retention of urine and constipation. The pulse was frequent and small. The treatment had consisted first in the administration of calomel, but this was after a few days replaced by iodide of potassium in large doses, which in the beginning seemed to have a beneficial effect; the improvement, however, was only transitory, for soon the stupor increased, convulsions of the facial muscles and some amount of rigidity of the semi-flexed lower extremities came on, and death took place November 8th, 1866.

Post-mortem examination.—The sternum was perforated at the seat of the former caries to the size of a farthing, the bone substance being replaced by fibrous tissue. The skin covering this part was not yet completely healed. The liver contained several tumours of irregular shape, of about the circumference of a small walnut, of pale yellow

colour and considerable firmness, giving out no juice, and being encapsuled by a dense grey fibrous tissue, which latter sent also numerous septa into the tumours. The yellow portion of the tumour consisted of small cells, partly in a state of fatty degeneration, amorphous matter, granules, and fat-globules. The remainder of the liver-tissue was of a remarkably coarse grain, from increase of fibrous tissue round the lobules, and the fresh sections had a somewhat greyish hue. One of the mesenteric glands contained a very similar tumour to those described in the liver.

In removing the skull-cap, which was not otherwise diseased, the dura mater covering the most anterior portion of both hemispheres was found intimately attached to the bone, and especially on each side of the crista galli, from which it could not be separated without using great force. On each side of the longitudinal fissure, the dura mater, arachnoid and pia mater were glued together, and from them small tumours or deposits extended into the substance of the brain, which in the immediate neighbourhood was softened and discoloured.

The tumours were of pale yellow colour, rather dry and grumous, and consisted of large granular corpuscles, small cells more or less metamorphosed, amorphous granules, and fat-globules; the surrounding brain-substance contained likewise many granular corpuscles, fat-globules, and other elements of broken-down nerve-tissue. The granular corpuscles extended especially in the direction of the right corpus striatum, and could be followed into the substance of this body, which contained a small hæmorrhagic spot, with slight softening in its circumference.

Dr. HERMANN WEBER, *4th of December, 1866.*

Report on Dr. Weber's case of syphilitic disease of liver, dura mater, and brain.—We have examined the morbid formations in the liver, dura mater and brain, and find that their microscopical characters have been accurately described by Dr. Weber. In the yellow cheesy masses attached to the dura mater we found large numbers of crystals of cholesterine. The characters correspond in every respect to syphilomata which have undergone caseous metamorphosis, but in the present degenerated condition of these formations, we do not think that any positive opinion as to their nature could be drawn from their microscopical characters alone.

Dr. W. CAYLEY,

Mr. J. W. HULKE, *18th of December, 1866.*

24. *Suppurating hydatid cyst of liver, with numerous secondary abscesses in the liver.*

Thomas B., aged 35, was admitted into the Fever Hospital on January 20th, 1866. For twenty years he had lived in Tasmania, but for the last four years in England. He stated that he had never had a day's illness until five weeks before admission, when he was seized with severe pain in his right side. This pain subsided in a week, but he lost his appetite and grew thin and after three weeks he began to be jaundiced.

On admission the pulse was 96; skin rather deeply jaundiced; tongue moist and red; bowels relaxed five or six times a day; motions contained no bile. The liver was much enlarged, measuring eight inches in the right mammary line. The tumour was smooth and painless, with an elastic fluctuating character on palpation: No "hydatid vibration" could be distinguished, but the dimensions of the liver posteriorly were not increased. The patient perspired a good deal while asleep, but never had rigors or vomiting, and although he was not aware of the existence of any tumour prior to the pain, he admitted that the swelling seemed almost as large at the beginning of his illness as when he came to the Hospital.

The diarrhœa resisted all measures adopted for its relief; the night-sweats became profuse, and the tongue dry. The emaciation rapidly increased; there was slight ascites; and on February 4th the patient had a severe attack of rigors, which recurred at intervals until his death on February 22nd.

On examining the body after death, an hydatid tumour, larger than a child's head, was found projecting from the under surface of the right lobe of the liver near its posterior border. It was but slightly embedded in the substance of the liver, but it encroached on the portal fissure, so as to compress the bile-ducts. The cyst was partly collapsed, but contained a quantity of thin purulent fluid, coloured with bile, and numerous secondary hydatid cysts. Two or three distinct hydatid cysts, about the size of cherries and a small orange, were discovered in the peritoneum near the upper end of the right kidney. No other cysts were found in the liver, but the entire substance of the organ was studded with numerous abscesses, from the size of a pea up to that of a chestnut and the outer surface of the liver was coated with recent lymph. There was no ulceration of the bowel to account for the obstinate diarrhœa.

Remarks.—This case illustrates one of the modes of fatal termination

of hydatid tumour of the liver, viz., suppuration of the cyst and pyæmia. When the patient first came under observation, there was some difficulty in determining whether the tumour was an abscess or an hydatid tumour. It was in fact an hydatid tumour becoming converted into an abscess. A puncture with a small trocar and canula made on February 7th brought away about six ounces of thin opaque bilious fluid, becoming purulent towards the end. This fluid, unfortunately, was not examined microscopically. It is interesting to note that it was ascertained at the autopsy that the instrument must have passed through an inch and a half of the hepatic tissue before reaching the cyst, but that no suppuration or other sign of inflammatory action marked its course. Dr. MURCHISON, 18th of December, 1866.

25. *Large hydatid tumour of the liver, full of secondary cysts, but containing no fluid.*

This liver was taken from the body of a man, aged 36, who was admitted into the Fever Hospital on December 2nd, 1866, with petechial small-pox, of which he died on December 5th. He was too ill to give any particulars of his previous history.

After death, an hydatid tumour, the size of a child's head, was found in the posterior part of the right lobe of the liver. The chief point of interest in the case was that this cyst was tightly packed with secondary cysts, but that it contained no fluid. The secondary cysts were collapsed; but still they exhibited their natural gelatinous character. They were not at all opaque or mixed up with any putty-like material. The outer cyst, however, at several places presented an atheromatous calcified appearance.

In this case a process of spontaneous cure appears to have commenced in the tumour, and the observation is interesting in connection with the manner in which a cure is probably effected in an hydatid tumour, when the fluid contents are drawn off by means of a small trocar and canula. Dr. MURCHISON, 18th of December, 1866.

26. *Fluid removed by simple puncture from an hydatid tumour of the liver.*

John N., aged 28, was admitted into the Middlesex Hospital under

my care, on December 3rd, 1866. He was a clerk, and had been in the Crimea for fourteen months in 1855 and 1856. His previous health had been good. In September, 1864, he had sore throat, and slight aching pain in his right side, and it was then discovered by Mr. Churton, of Erith, that he had a tumour in the abdomen, which was almost as large then as when he came under my notice. After that he suffered no uneasiness in the tumour until February, 1866, when it became the seat of occasional darting pains, and on this account he was a patient in the Hospital under my care, from March 31st to April 18th, 1866. Excepting these pains, which were very transient, and unaccompanied by any tenderness, the patient's general health was good and he had not the slightest fever. On April 7th, an attempt was made to empty the cyst by means of a small canula and an exhausting syringe. The action of the syringe, however, seemed to cause so much pain in the back and faintness that the operation was abandoned after obtaining only four or five ounces of fluid, a quantity evidently much less than what the tumour contained. Excepting an attack of urticaria, the operation was followed by no bad symptoms.

The patient was re-admitted on December 3rd, partly on account of a return of the slight pain from which he had previously suffered, but mainly with the object of having the tumour more completely emptied. At the time of his re-admission, the following note was taken of his state:—"Patient has a healthy appearance, and his only complaint is of a prominent tumour in the epigastrium, extending into both hypochondria, and evidently connected with the liver. It fills up the space between the sternum and the umbilicus, and causes a slight bulging of the ribs on both sides, particularly on the right. Its lower margin is about one inch above the umbilicus. It measures about six inches transversely, and five inches from above downwards. The hepatic dulness is six inches in the mesial line, and five inches in the right mammary line; in the right axillary and dorsal lines, it is normal. These dimensions exactly correspond with those noted when the patient left the Hospital last April. The upper margin of hepatic dulness is not more arched than natural. The tumour is globular, perfectly smooth, and not at all tender. It is very elastic, distinctly fluctuates, and presents the character known as 'hydatid vibration,' in a marked degree. It does not appear to be adherent, as its position varies with the respiratory movements. There is no jaundice, no ascites, no enlargement of the spleen, and no albumen in the urine. Tongue clean; bowels regular; no vomiting or pain after food; pulse, 72."

On December 7th, Mr. Moore introduced a fine trocar into the most prominent part of the tumour, and drew off by the canula, without any syringe, twenty fluid ounces of fluid. This fluid was opalescent, colourless, and alkaline, with a specific gravity of 1009; it contained no albumen, but yielded a copious white precipitate with nitrate of silver. Numerous hooklets and several entire echinococci were discovered with the microscope. It is worthy of notice that, although the patient had been taking large doses of iodide of potassium for several days before both operations, on neither occasion did the fluid contain a trace of iodine.

The operation was not followed by the slightest febrile excitement, or unfavourable symptom of any sort.

On the 12th December the patient got up, and on the 18th he left the Hospital apparently well, the tumour showing no tendency to enlarge, and the hepatic dulness in the right mammary line being only three inches and three-quarters.

On March 18th, 1867, I again saw John N—, who informed me that four days after leaving he was attacked with typhus fever, which he had probably contracted in the Hospital and with which he was dangerously ill. At the commencement of the fever the tumour appeared to enlarge; but by the time of his convalescence the swelling had quite subsided again, and now not the slightest trace of it can be discovered, the vertical hepatic dulness in the median line being only three inches.

Dr. MURCHISON, 18th of December, 1867.

27. *Hydatid tumour of the liver; tapping; recovery.*

The fluid exhibited was taken by tapping from R. O., aged 25, railway clerk, who was admitted into the Middlesex Hospital under my care on the 25th of September, 1866.

He stated that four years previously, while pushing a loaded cart, he had fallen forwards, and in the endeavour to save his head had come forcibly to the ground upon his chest, so that the middle of the sternum was severely bruised by a brass button on his waistcoat. He had much pain in the part afterwards, which was increased by taking a full inspiration, and at the end of three months a swelling formed which grew to the size of an egg, suppurated and broke. The wound closed up very slowly, and left a large irregular-shaped, irritable cicatrix, from one point of which a small bead-like drop of pus

was squeezed at the time of his admission into the Hospital; this was found to proceed from a small imperfectly healed sinus. Shortly after the accident he had observed that his abdomen became enlarged, and he began to experience pain in the right hypochondrium, and also in the right flank while walking. He had not become emaciated or feeble, neither was his general health at all impaired; but the local pain and uneasiness disabled him from work.

On his admission a large tumour was found occupying the right hypochondrium, and extending across the epigastrium into the left hypochondrium. The lower ribs on the right side bulged outwards, and the girth round that side, from the spine to the middle of the sternum, immediately below the nipple, was nineteen and a half inches, whilst on the left side it was only seventeen and a half inches. The circumference of the body, at the xyphoid cartilage, was thirty-six and a-quarter inches; at the umbilicus, thirty-three inches. On the right side there was dulness on percussion vertically from the lower border of the third rib for a space of ten inches. The dulness on the left side began a little lower, but also extended down to the umbilicus. The margin of the tumour was well-defined on the right side, much less distinct on the left. Posteriorly the margin of dulness was ill-defined, shading off imperceptibly into the normal pulmonary resonance an inch below the inferior angle of the scapula. The tumour was elastic, and obscurely tender on pressure or percussion. Close to the border of the right costal cartilages, a portion of the tumour was somewhat more prominent than the rest, and at this part the walls appeared to be thinner, and the contents more certainly fluctuating. Here also there was greater sense of uneasiness, and the tenderness on pressure was more obvious.

Taking into consideration the history of the accident and the existence of the small sinus, it became a question whether the tumour was an hydatid cyst, as I should have otherwise unhesitatingly pronounced it to be, or an abscess connected with disease of the sternum. On consultation, therefore, with several of my colleagues, it was agreed that an exploratory puncture should be made for the purpose of determining this point, and accordingly, on the 12th of October, the tumour was tapped by Mr. de Morgan at its most prominent part with a very fine trocar, and twenty-one ounces of limpid fluid were withdrawn, being all that could be evacuated at the time. This fluid was neutral, non-albuminous, had a specific gravity of 1010, and on being tested with solution of nitrate of silver, was found to contain a large

amount of chlorides. Although neither echinococci nor hooklets were found in the fluid, these characters seemed to prove beyond all question that it proceeded from an hydatid cyst. With the exception of a slight feverish attack, during which the pulse rose to 120, no untoward symptom followed the tapping, which had, however, failed effectually to empty the cyst.

On the 18th of October the girth of the patient, at the xyphoid cartilage, was thirty-six inches; the circumference round the right side, immediately below the nipple, was eighteen and a-half inches; that round the left side, seventeen and a-half inches; and the dullness on percussion still extended ten inches in a vertical direction, and quite across the abdomen. From this time the tumour again increased in size slowly, but very perceptibly, the patient complained of pain in the right loin and of dyspnœa and palpitation, and scanty crepitation with coarse breathing was heard over the base of the right lung. These symptoms leading me to apprehend that the tumour was making its way into the thorax, it was again tapped by Mr. de Morgan at a point between the ninth and tenth ribs, near their union with the costal cartilages, and one hundred and ten ounces of a pale straw-coloured semi-opaque fluid were withdrawn. This fluid had a specific gravity of 1012, contained a notable quantity of albumen, and gave a very copious curdy precipitate on the addition of solution of nitrate of silver. After standing all night there was a slight deposit from the fluid, which was found on microscopical examination to contain the hooklets of echinococci with pus and oil-globules in small quantity. The abdomen shrank much during the operation, and at its close was resonant over the left side, and also for a small space above the umbilicus on the right side, where it had previously been dull on percussion. As before, the operation was followed by a slight feverish attack, attended by pain in the back and tenderness of the abdomen, requiring, for a few days, the internal use of opiates and the application of soothing poultices over the abdomen. After this, however, the patient made a good recovery, and about Christmas he was sent to the Convalescent Institution at Walton-on-Thames. His girth was then thirty-three and a-half inches at the xyphoid cartilage, and the circumference round the right side, immediately below the nipple, was seventeen inches; round the left, sixteen and a-half inches; the vertical dullness on the right side was still nine inches in extent, but the feeling of elasticity and fluctuation had entirely disappeared and there was perfect resonance in the left hypochondrium. On his return from Walton I

found him quite well. No re-accumulation of fluid had taken place. The measurements round the thorax remained as at the last examination and the vertical dulness on the right side had decreased somewhat more in extent. There was no longer any crepitation in the lungs; he was quite relieved from the dyspnœa, and palpitation and the sinus over the sternum appeared to be perfectly healed.

Since the above case was communicated to the Society, I have had under my care another of the same nature, the particulars of which I may briefly mention:—

F. R., aged 30, a married woman, was admitted into the Hospital on the 20th of February, 1867. She had been ailing for five years. Her illness began with pain in the right hypochondrium, which, however, was not constant, but subsided and recurred again at intervals. About a year before she came under my observation, the pain had returned in a more severe form, and she had then, for the first time, noticed that her right side was larger and more prominent than the left. She had had several severe attacks of pain during the year, attended by a sense of tightness and dyspnœa on exertion, and had also frequently suffered from palpitation. The patient's aspect was sallow and anæmic, and her pulse was a little quick. The lower ribs on the right side were bulged outwards as if by some internal pressure. The hepatic dulness began at the lower border of the third rib, and extended ten inches vertically in a line through the nipple downwards towards the umbilicus. The dulness on percussion extended quite across the epigastric region, and evidently proceeded from a tumour of the liver which was elastic and slightly fluctuating. Percussion over the back of the thorax elicited a comparatively dull sound from the middle of the scapula downwards, and below the inferior angle of the scapula the dulness became absolute. On auscultation, scanty crepitation and harsh breathing were found over a small space at the base of the right lung posteriorly. The girth round the right side of the thorax, immediately below the mamma, was seventeen and a-quarter inches; that round the left side, in the same line, was fifteen and a-half inches.

On the 28th of February the patient was tapped by Mr. de Morgan between the ninth and tenth ribs with the same fine trocar used in the former case, and one hundred and forty-eight ounces of clear fluid were drawn from the tumour. After a few ounces had flowed, the fluid, which at first had been perfectly limpid, became slightly tinged with blood. The fluid was neutral; had a specific

gravity of only 1007, and contained a large amount of chlorides, together with a small quantity of albumen; the latter arising, doubtless, from the escape of blood during the operation. On microscopical examination a few hooklets of echinococci were found in the fluid. As in the former case, the operation was followed by a slight febrile attack, which, however, soon subsided.

On the 9th of March the patient was, in all respects, going on favourably. The pulse had fallen to 86, and the girth immediately below the mamma had decreased on the right side to fifteen and a half inches, on the left to fifteen inches. The hepatic dulness still extended on the right side nearly to the umbilicus; but the left hypochondrium had become resonant where it had been dull previous to the operation. The crepitation at the base of the right lung had altogether disappeared, but the respiration in that part was harsh and tubular. She was discharged convalescent on the 17th of March, but presented herself again for examination on the 4th of June, when all sense of enlargement and elasticity in the region of the tumour was gone, and she was quite free from pain in the side. There was still, however, considerable dulness on percussion over the right hypochondrium.

Both of the above cases have made good recoveries, no untoward symptoms having supervened on the tapping in either of them. In both cases the cyst remains, but experience has abundantly proved that its presence rarely leads to any unpleasant results.* As the tumour was threatening, in each of these cases, to make its way into the thorax, there can be no doubt as to the propriety of the course which was adopted with regard to them. There was a case, however, under my care two years ago, which appears to show that the shrunken cyst does sometimes set up irritation and its consequences at a more or less remote period.

E. B., aged 13, was admitted into the Middlesex Hospital on the 25th of September, 1865. She stated that some years previously she had been an inmate of another hospital, when she had been tapped in the right side, and a quantity of clear fluid had been drawn off. She now complained of pain in the abdomen. Her aspect was dull and anxious; skin, hot; pulse, 120; respirations, 40. Her tongue was glazed and injected, and the conjunctivæ were slightly jaundiced. The cardiac sounds were normal; the urine had a specific gravity of 1014 and contained a trace of albumen. The right side was dull on per-

* See Dr. Murchison's Paper on "Hydatid Tumours of the Liver," in the *Edinburgh Medical Journal*, December, 1865.

cussion, from the fifth rib downwards to the right loin, and from the median line to the umbilicus; the lower ribs, on the right side, had the appearance of bulging outwards slightly, and there was a slight prominence with an obscure sense of elasticity in the right hypochondrium. Posteriorly the right side was dull on percussion, from the inferior angle of the scapula downwards, but the dulness extended a little higher up in the axillary region than it did towards the middle of the back. There was marked tenderness over the whole of the right side of the abdomen, more especially just below the xyphoid cartilage. The abdomen was prominent, and, where not dull, decidedly tympanitic. The sounds of respiration were generally normal, but faint and distant over the dull part of the right side posteriorly, and somewhat puerile above it. The more urgent symptoms were relieved by poultices applied over the abdomen and by oleaginous enemata and by opium; but every slight exertion brought on a return of the abdominal pain and tenderness, often attended by obstinate vomiting. Towards the middle of November, scanty crepitation was audible over a very limited space at the base of the right lung, and it was then agreed at a consultation with several of my colleagues, that an exploratory needle should be passed into the tumour at its most elastic part, which was accordingly done by Mr. Hulke, on November the 22nd. A drop of glairy purulent fluid escaped, by the side of the needle, which was then withdrawn, and a trocar of medium size was introduced, giving exit to about two ounces of pus. A drainage tube was next passed as deeply as possible into the cavity, and secured in its position by plasters, and a large hot poultice was applied over the abdomen. The patient suffered much during several days after the operation from vomiting and abdominal pain; her skin again became hot, and her pulse rose to 120; but in less than a week, under the continued use of poultices and opiates, these symptoms subsided, and on the 9th of December the drainage tube, through which there had been a continuous, but not copious, escape of pus, was finally pushed out by the advancing granulations, and all discharge ceased excepting a little from the sore. Her pulse was then 98, and she was perfectly free from pain or tenderness in the abdomen. The tumour felt much softer and had greatly diminished in size. The dulness on percussion over the right side of the abdomen continued, but its margin was less clearly defined. On January 11th, 1866, the dulness on percussion over the right hypochondrium was found to have greatly contracted in extent, the normal resonance extending to within an inch of the margin of the ribs; but a few days before this

date, the patient had begun to cough, and to raise a little thick transparent mucus, which had on several occasions been specked with blood. The percussion resonance was normal over the upper part of the thorax, but dull anteriorly on the right side from the third rib downwards. There was also slight dulness over a limited area near the inferior angle of the right scapula. Scanty crepitation was heard over the base of the right lung posteriorly; in front, the respiration was faint and somewhat tubular in the dull region, but elsewhere it was normal. On January 20th she had a violent fit of coughing, and raised all at once about an ounce and a-half of pus, mixed with blood and containing some small blood-clots. On this day crepitation was audible over a very limited space below the right nipple, as well as posteriorly near the inferior angle of the scapula. On microscopical examination of the expectorated pus, no hooklets could be discovered in it, nor had any been found in the pus evacuated in November through the trocar and drainage tube. There seemed nevertheless to be no room for doubt as to the nature of the case; and three days later, during my visit, the patient was again seized with a severe fit of coughing, in which she expectorated a couple of ounces of pus and blood, together with a gelatinous mass, about the size of an elongated filbert, which Dr. Cayley and Dr. Cobbold, to whom it was submitted for microscopical examination, both pronounced to be an hydatid cyst in process of decomposition. The patient continued to cough more or less, and occasionally to raise purulent sputa mixed with blood, until the beginning of March, when these symptoms had almost entirely ceased, and she was in all respects convalescent. Her pulse had fallen to 80; she was quite free from pain, and had gained flesh. No crepitation was audible in the right lung, but at the nipple, and also at the inferior angle of the scapula, the respiration was harsh, and the dulness on percussion remained as at the last report. She was discharged in order to be admitted into some country establishment for convalescents. Dr. GREENHOW, 1st of January, 1867.

28. *Fatty degeneration of the liver, complicated with slight indications of peri-hepatitis and of amyloid degeneration, from a child affected with hereditary syphilis.*

A. L., eleven weeks old at the time of death, was one of twin children born of a mother aged 32, who had been affected with syphilis, condylomata in the vagina, syphilitic eruptions on the skin, and ul-

ceration of the tonsils and soft palate, from the commencement of her pregnancy which occurred soon after her marriage. The condition of the father is not known, nor is that of the mother before the commencement of pregnancy. The mother was attended by Dr. Burger, as an out-patient of the German Hospital, during the first four months of her pregnancy, after which time she stayed away; the principal part of the treatment having consisted in the administration of iodide of potassium. The two children were well developed, and manifested no sign of disease at the time of birth; both were nursed by their mother; one of them has remained well up to the present time, but the other commenced to lose flesh after the lapse of a fortnight; later, red patches manifested themselves on the nates and thighs and also on the lips, especially near the corners of the mouth. When the child first was shown to me by Dr. Burger, it was nine weeks old, and bore the unmistakable signs of syphilis, viz.: large, red, slightly elevated coppery patches, not removable by pressure, on the nates, the scrotum, the thighs and legs; mucous patches round the anus and lips; fissures on the lips, especially near the corners of the mouth; the child was, at the same time, much emaciated. The fourth of a grain of *Hydrargyrum cum Creta* was given twice a day, but almost immediately the treatment had to be given up, and the child to be admitted as an in-patient, on account of uncontrollable diarrhoea from which it died exhausted on the 31st of December, 1866.

Post-mortem examination.—The weight of the emaciated body was six pounds and a-half. The coppery spots and mucous patches were as distinct as during life. The contents of the skull normal; part of the lower lobes of both lungs was in a state of atelectasis; a small portion, however, of the inferior lobe of the right lung had the appearance of pneumonic consolidation and there was also some serous effusion in the right pleural cavity. There was likewise a moderate amount of almost transparent effusion in the peritoneal cavity. The liver was of a pale yellow colour, had a smooth and shining surface with the exception of several spots to which a small quantity of fresh lymph was loosely adherent, and the lining membrane was also slightly opaque in some places, especially near the broad ligament. The weight of the organ was six ounces and a-half; the gall-bladder was nearly empty, containing only a small quantity of greenish mucus, which the microscope showed to consist almost entirely of flakes of epithelium. The sections of the liver offered likewise a remarkably pale yellow aspect, the centres of

the lobules being small, rather sharply defined, and of a reddish-yellow colour, the surrounding pale yellow substance occupying at least four times the space of the deeper coloured centres. The consistence of the organ, when fresh, was firm, as well in larger as in smaller sections; but, after having been exposed to the air for ten or twelve days in a warm room, the liver became fluid and rather soft, and easily broken by the pressure of the finger, to which it imparted a greasy feeling. The microscope showed the liver-cells much distended by large fat-globules and granules and more or less round, and in some places the application of iodine and sulphuric acid, on the fresh liver, caused a violet tinge, especially in the reddish (*i.e.*, central) portion of the lobules,—a reaction, which was, however, not obtained in the same manner at a later period, after the liver had been kept in spirits for some days. Neither the cold infusion nor the decoction of the fresh liver yielded more than a trace of saccharine reaction, while the cold infusion contained a considerable amount of albumen.

The left lobe appeared somewhat shrivelled, as in commencing atrophy.

The spleen was small and rather hard; the kidneys were of normal appearance, but the cortical substance, when treated with iodine and sulphuric acid, assumed a violet tinge, especially the Malpighian bodies. The small and large intestines were very pale, but presented no other morbid appearance.

The changes in the liver may be regarded as consisting in advanced fatty degeneration with commencing atrophy, slight traces of peri-hepatitis, and some indications of the so-called amyloid degeneration. The fatal diarrhœa was probably in some way due to this state of the liver. These changes, which are different from those described by Gubler,* and by Wilks,† have occurred in an unmistakably syphilitic infant, but this fact in itself does not entitle us to call them syphilitic alterations. It will first be necessary to see whether they occur frequently in infants dying from hereditary syphilis, and, further, whether they are not found in children free from syphilitic taint.

It appears, at first sight, rather curious, that of twin children,

* Mémoire sur une nouvelle affection du foie, liée à la syphilis héréditaire, chez les enfans du premier âge. Par le Docteur Gubler. *Gaz. Méd. de Paris*, 1852.

† Syphilitic cirrhosis of the liver from an infant. Dr. Samuel Wilks. *Transactions of the Pathological Society*, Vol. xvii. p. 167.

nursed by the same syphilitic mother, one is taken ill with symptoms of syphilis after the first fortnight and dies at the age of eleven weeks, while the other continues to thrive; but it requires to be seen whether this child will remain well, or show symptoms of hereditary syphilis at a later period.

Dr. HERMANN WEBER, 15th of January, 1867.

Report on the liver from Dr. Weber's case of infantile syphilis.— We have examined the liver from Dr. Weber's case, submitted to us at the last meeting of the Pathological Society, and find it extremely fatty, but, so far as we could ascertain, free from all trace of amyloid or lardaceous degeneration. We examined the liver, with the microscope, by the iodine and sulphuric acid test, and by iodine alone.

Dr. J. S. BRISTOWE.

Dr. W. H. DICKINSON, 5th of February, 1867.

29. *Yellow atrophy (?) of the liver, apparently consecutive to a diffused change in the organ, due to constitutional syphilis.*

Frances A., aged 23, was admitted into Guy's Hospital under the care of Dr. Wilks, January 4th, 1867. She stated that six months ago a rash appeared on her body, and had been gradually spreading up to the time of her admission. She had not any sore-throat; her hair had been falling off very much during the last few weeks. She has one child, aged 10 months; she has had no miscarriages. She has had no discharge of any unusual kind, either before, or since her confinement.

Three months ago she became jaundiced. Since then she has suffered greatly from sickness. The jaundice was not preceded by any pain in the abdomen. The bowels have been regular. She has not menstruated since her confinement.

"On her admission," the report goes on, "she is well-nourished; her skin and conjunctivæ are of a deep yellow hue; the pupils are dilated; the arms are covered with a scaly, slightly red, eruption. It consists of scattered maculæ, not raised above the surface; it produces no itching. On the body and lower limbs are stainings left by a rash of the same kind. She complains of thirst, and of sickness coming on directly after meals. The chest- and heart-

sounds are normal. The urine is high-coloured, giving a play of colours with nitric acid. Its specific gravity is 1017. It contains no albumen."

The eruption was regarded as unquestionably a macular syphilide, and she was ordered Pot. Iodid. gr. x., Liq. Hydr. Bichlor. ʒj. ex aq. ʒj. t. d. Wine ʒvj.

On the 12th it was noted that "she is very sick: the bowels are slightly relaxed, the motions being very light-coloured; she feels extremely weak; the pulse is 100, small. The tongue slightly coated. The rash is much thicker than it was."

On the 13th:—"She says she is very ill. She is drowsy and complains of headache. The pupils are dilated, scarcely acting to the light. Pulse, 100. The dulness over the liver is of normal extent. The edge of the organ can be felt beneath the ribs. Hyaline casts containing epithelial cells stained with bile exist in the urine; but no leucine or tyrosine can be found in this secretion on rough examination. Ordered Empl. Lyttæ nuchæ: Calomel. gr. iij. statim: postea Haust. Sennæ ʒiss."

On the 14th, at 10 A.M.:—"She is perfectly unconscious, and her lips are covered with foam. She moves her head in a restless manner. The pupils are widely dilated, insensible to light; there is slight tremor of the muscles. The respiration is sighing and irregular. Pulse, 140. The liver cannot be felt to-day. The pulmonary resonance extends down to the 6th rib; the colic resonance begins below the eighth rib." At 4 P.M.:—"Her breathing is stertorous, 43 per minute. Her limbs seem to be paralysed. Pulse, 132, small and fluttering; saliva frothy, and of the colour of bile."

She died in the night.

The following account of the appearances found on *post-mortem* examination is taken from Dr. Moxon's report. The inspection having been objected to, only the abdominal viscera were examined.

"On opening the abdomen, the only part of the liver visible was part of the left lobe, just below the ensiform cartilage; the right lobe was two inches above the edges of the false ribs. The organ had an opaque bright yellow colour and dense consistence: it weighed forty-six ounces; its surface presented a mottled appearance, some parts being of a reddish-liver colour, others bright yellow. On section it presented similar characters, but the yellow substance (of which the colour was nearly as bright as that of gamboge) preponderated near the surface, the red in the interior. The liver-coloured parts showed

the natural lobulation, but this was absent in the yellow patches. The Spigelian lobe in particular was very soft. The left lobe presented a very peculiar appearance; its condition resembled very closely that of the infantile syphilitic liver exhibited to the Society in 1866 by Dr. Wilks (vol. xvii., p. 167.) It was pale and semi-pellucid, so that it looked almost as if it might be lardaceous, but iodine had no effect on it. Fine sections showed an entire absence of the secreting cells, their place being taken by a pellucid nucleated matter, which might be included under the general head of "fibroid tissue." In the yellow material, besides particles of fat, there were numerous free nuclei, but no cells anywhere, and no augmentation of the natural fibre-tissue.

The gall-bladder was small, containing about 2 drachms of a peculiar tenacious, greenish matter, made up of columnar epithelium and mucous corpuscles.

The stomach was ecchymosed.

The spleen weighed eleven ounces and was of a dark colour.

The cortical substance of each kidney was swollen and discoloured with bile; the tubules were crammed with opaque epithelium."

Remarks.—When this patient was first admitted into the Hospital, her case attracted considerable interest from the association of jaundice with what appeared to be undoubtedly a syphilitic eruption. A few months before, the same coincidence had been observed in a case under Dr. Rees. In this case the patient was a young man, in whom jaundice came on between three and four weeks after the primary sore. It was followed within a fortnight by a rash consisting of large, raised, flat papules. The jaundice lasted about a month; after it subsided the cutaneous affection became very severe. At a later period in the case, albuminuria came on; the urine contained blood and casts of the tubules, and the face was puffed. Ultimately, however, this also subsided. When he left the Hospital, nearly five months after his admission, the urine contained only a trace of albumen.

This association of jaundice with secondary syphilis has been noticed by several writers. Portal is said to have described jaundice as an early effect of constitutional syphilis. Ricord published two cases of it. In 1853* Gubler drew especial attention to the occurrence of jaundice in syphilis. He supposed the liver to pass into a congested state, analogous to the hyperæmic condition which consti-

* Mém. de la Soc. de Biol., V., 1853, p. 235.

tutes the exanthem upon the cutaneous surface. In his important work on syphilis, Lancéreaux publishes three cases of this kind, and refers to twenty-one such as having been recorded by different writers. He states that the stage at which jaundice most commonly occurs is at the commencement of the secondary period, but that it may also accompany a new outbreak of the rash during its course. It does not last more than twenty to thirty days. He attributes it generally to a congestive affection of the liver; but he thinks that it may be due to pressure on the ducts by swollen lymphatic glands. He says that in some cases the liver has been noticed to be enlarged.

It is a common opinion that the jaundice in these cases is due to the undue administration of mercury. This view is stated by Dr. Graves,* who says that "when mercury has been used by a patient in excess, jaundice is by no means an uncommon occurrence." Lebert,† however, who gives syphilis as one of the causes of "icterus typhoides," expressly states that in three of his seven cases no mercury had been given. There is no reason to suppose that F. A. had undergone a course of mercurial treatment before her admission into the Hospital. The connexion of syphilis with yellow atrophy of the liver existed in a case brought before the Pathological Society in 1866 by Dr. Andrew.‡

The great interest of the present case, however, is not in the mere association of constitutional syphilis with jaundice and with yellow atrophy of the liver, but in the fact that the organ appeared to be infiltrated with a nucleated "fibroid" material, closely resembling that which has been described by Gubler and others, as occurring in infantile syphilis. I have quoted Dr. Moxon's description of the microscopical characters of the organ, but I may say that I independently observed the presence of this nucleated substance. Within a few days after the occurrence of this case, a patient died in Guy's Hospital of ordinary acute atrophy of the liver; and we were able to assure ourselves that this nucleated substance is no necessary element of that disease. I think, therefore, that there is every reason to suppose that it was the result of the syphilis in the case of F. A. It is probable that the same new material may be found to exist also in other cases in which jaundice is associated with secondary syphilis.

* *Lectures on Clinical Medicine*, ii., p. 475.

† *Virchow's Archiv.*, 1854, 1855.

‡ *Path. Trans.*, vol. xvii., p. 158.

Lastly, I think it most likely that the yellow atrophy which destroyed the patient was a more or less accidental occurrence supervening upon the earlier morbid changes.

Dr. C. HILTON FAGGE, *5th of February, 1867.*

30. *Villous cancer of gall-bladder.*

The specimen exhibited was a liver and gall-bladder, the latter distended to the size of a child's head, and the former occupied by secondary tumours. It was taken from the body of a brushmaker, a man of intemperate habits, who died in Guy's Hospital under Dr. Moxon's care, on February 17th. He was admitted on January 23rd, and then said that he had been six months ill "off and on" when he had a fall, a week after which he became jaundiced. The jaundice passed away in 10 weeks, and left him with pain in the abdomen, and a swelling which he said was at times soft and at other times hard; he was harassed by vomiting, and for some weeks had taken no solid food. There was no account of cancer in his family history. On admission he was emaciated, with sallow, yellowish skin, but scarcely jaundiced. In the abdomen was a round tumour of the size of a child's head, situated chiefly in the umbilical region, but extending into the surrounding regions, and lying more to the right than to the left of the middle line; above it the liver could be felt much enlarged and continuous with the tumour. Elevations were plainly palpable on the surface of the liver. While in the Hospital the man suffered more or less pain in the tumour, which was tender on pressure around the umbilicus; he had no rigors, but he was in a state of moderate pyrexia. On the 28th of January he had an attack of vomiting; after this the tumour became softer and more prominent about the umbilicus. He got slowly weaker and sank gradually.

The inspection was made thirty-four hours after death. The brain was healthy. The costal cartilages were not ossified. In the upper lobe of the left lung was a large patch of agglomerated tubercles with grey, thin, pellucid matter between them. The lower lobes were soft in their dependent parts, and had muco-pus in the small tubes in great quantity. On opening the abdomen the tumour was found to be an enlarged gall-bladder adherent to the parietes over its anterior part. On the left of the umbilicus was a faecal peritoneal abscess communicating with the interior of the enlarged gall-bladder; this

abscess showed a tendency to discharge through the parietes, as it had extended into the deepest layers of the rectus muscle. Beneath the gall-bladder lay the duodenum and neighbouring part of the stomach; these were closely connected with it, but there was no direct union and no invasion of their walls by cancer. The colon also passed below the tumour; at its hepatic flexure was a hole an inch in width, having raised, thickened, vascular edges. This hole led into the gall-bladder, whose contents were in a horribly fœtid state; indeed, on cutting through it no more than a fœcal-looking mass of pultaceous consistence appeared. On washing the section these contents resolved themselves into masses of various sizes growing from the wall of the gall-bladder: some of them, small and recent, were soft pink coloured flocculi; others were large, pedunculated masses, yellowish, brown, and utterly putrefied; but the majority were in states intermediate between these extremes. One mass extended into the cystic duct distending it to the size of one's middle finger, yet not adherent, and projecting into the commencement of the common duct, so as to partly close that also, thus leading to a distention of the right and left hepatic ducts, which would admit one's finger. Except for the growth of these villous masses into its interior, the wall of the gall-bladder was little altered; between the villi the characteristic areolar mucous membrane could be seen in places. The cancer did not extend directly through by continuity into the liver, but numerous secondary masses were present in that organ. These masses, like those in the gall-bladder, showed a disposition to hasty decay, being soft, opaque, and dead-looking at the centre when of any size. The other organs were healthy.

Microscopic examination showed the recent villi to be composed of loops of blood-vessels, clothed with epithelial elements, whose nuclei were of large size and had many corpuscles within. The other villi showed the like elements in a state of decay.

Dr. MOXON, 19th of February, 1867.

Report on Dr. Moxon's case of malignant disease of the gall-bladder.—From the state of the parts given to us for examination, we are not able to express any opinion as to the original seat of the disease. A large irregular growth of a somewhat cauliflower appearance projects from the lower part of the liver, while numerous nodular masses exist in other parts of the organ. We confine our report to the microscopic character of the formation.

The irregular growth, which projects from the lower surface of the liver, is composed of cells which are embedded in a delicate semi-transparent matrix. The cells are irregularly scattered, most of them being distinctly surrounded by the translucent tissue. The cells themselves are nucleated. They are variously elongated and flattened, as if by pressure. They vary much in size; they are mostly somewhat opaque, probably from *post-mortem* change. Globules of oil are scattered over the section, lying chiefly in the inter-cellular substance, which itself has a delicate fibrillated structure.

The detached rounded masses are similar in most respects. The cells which they contain are larger and more rotund; but, like the cells in the other portion, are variously elongated, and are present in a great variety of shapes. The inter-cellular substance is distinct but in these separate masses there is a tendency to the collection of cells in circular nests, which was not observed in the part first described.

There can be no question as to the malignant nature of the growth. The formation, which projects from the lower surface of the organ, approaches the epithelial type; the rounded masses, though essentially the same, approach the encephaloid form.

So far as our opportunity for observation allows us to speak, we concur in the description laid before the Society.

Dr. W. H. DICKINSON,

Mr. J. W. HULKE, *2nd of April, 1867.*

31. *Fibroid nodules in the liver, apparently independent of syphilis.*
Chronic peritonitis.

P. D., aged 67, was admitted into the Middlesex Hospital under my care, on the 17th of January, 1867. He was a labourer, had been married for twenty-three years, and was the father of seven children. His oldest child was twenty-two; all were in good health, and none had died; his wife had never had any miscarriages. A brother had died of consumption, but the patient himself had always enjoyed good health, except for about three months three or four years previously, during which time he had been in Hospital for a fracture of the arm and other injuries. He never had suffered from syphilis, rheumatic fevers, dropsy, jaundice, vomiting, or hæmorrhoids. His habits had been temperate. Six weeks before admission, a heavy weight fell

upon his head, which wounded the scalp, and stunned him for a few seconds. For four days after this he gave up his work, and complained of pain in the region of the liver. On the fifth day, he returned to his work, but after a few hours, he was obliged to give it up.

A week after the accident, he noticed that the abdomen was swelling, and a fortnight after, he began to vomit his food, as soon as it was swallowed. Between this date and that of admission, he had become greatly emaciated.

At the time of admission, the patient was greatly emaciated and his countenance was expressive of suffering. The tongue was moist and coated with a yellowish fur. He had no appetite, but complained of thirst, although he was afraid to drink, as everything he took was rejected within a quarter of an hour. He distinctly stated, however, that he had no pain between swallowing and vomiting. The abdomen was considerably distended, the girth at the umbilicus measuring thirty-three and a-half inches, and there was unmistakable evidence of fluid in the peritoneum. The hepatic dulness in the right mammary line measured only three inches; there was no jaundice. The splenic dulness was not increased, and there was no enlargement of the subcutaneous veins of the abdomen. Immediately above and below the umbilicus there was an obscure induration, with no defined margin, and, at some parts, yielding clear percussion.

The abdomen generally was slightly tender, but by no means acutely so, and there was fair movement of the abdominal muscles in respiration. The patient stated that he was not in much pain, but that he was always easier when lying on his back with his legs drawn up. The bowels were regularly open. The pulse was 96 and regular; the cardiac dulness was less than natural, and the sounds were normal. The respirations were 26, and there was coarse crepitus over the bases of both lungs, without any dulness or tubular breathing. There was not the slightest œdema of the legs, trunk, or face, and the urine was free from albumen.

All efforts to relieve the vomiting proved unavailing. The size of the abdomen remained stationary. On the 20th of January, hiccup came on, and, notwithstanding the frequent exhibition of nutritious enemata, the emaciation rapidly increased until the 28th of January, when the patient died from exhaustion.

At the *autopsy*, one gallon of turbid fluid was found in the abdominal cavity in front of the small intestines, which were firmly

matted together, forming a globular mass pointing towards the umbilicus, and accounting for the obscure tumour felt during life. The peritoneum was everywhere coated with a thick layer of reticulated lymph, and the great omentum was greatly thickened and indurated, but nowhere about the bowels or mesenteric glands was there any indication of tubercular or cancerous deposit.

The stomach was much contracted, and its mucous membrane for several inches from the pylorus was reddened and thrown into folds, and under the microscope presented a remarkably villous appearance. The pyloric end of the stomach was surrounded and pressed on by greatly thickened omentum; but nowhere in the coats could any appearance or structure resembling those of cancer be discovered. The liver was small, weighing only forty ounces. Its capsule was at some places thickened and adherent to surrounding parts, and over its surface were several cicatrix-like depressions. Scattered through the substance of the liver were numerous rounded opaque-yellow deposits, the largest about the size of a cherry. Such of the deposits as were immediately beneath the capsule were not at all raised above the general surface, while others were situated at the bottom of the cicatrix-like depressions. On section they presented a firm, fibrous-looking appearance, and yielded no milky juice. On microscopic examination they were found to be made up of white fibrous tissue, with nuclei and small fibre-cells and granular matter, but to contain nothing typical of cancer. The spleen was small; the lungs were congested and œdematous at their bases; and the kidneys were slightly granular. The heart was small, but healthy. No deposits like those in the liver could be found in any other organ, and no cicatrices could be discovered on the penis, in the groins, or on the legs.

Remarks.—The diagnosis during life, in this case, was that the symptoms were due to sub-acute—probably cancerous—peritonitis. But the chief pathological interest of the case lies in the fact that the appearances found in the liver after death, corresponded in every way with those which have been so often described of late years as constituting one of the lesions of constitutional syphilis; and yet that the evidence was as strong as negative evidence can well be in such a matter against the view that the patient had ever suffered from syphilis.

DR. MURCHISON, 5th of March, 1867.

32. *Cancerous liver weighing fifteen pounds ten ounces.*

This specimen was taken from a male subject, aged 45, in the dissecting-rooms of St. Bartholomew's. Nothing is known of the history of the patient from whom it was removed.

On opening the body, the pylorus was found to be surrounded by a firm cancerous mass which had ulcerated through the mucous surface of the stomach and duodenum. The liver, though so greatly enlarged, retained its normal shape, and was studded most plentifully with firm cancerous nodules of various dimensions; it weighed two hundred and fifty pounds avoirdupois.

Mr. THOMAS SMITH, 19th of March, 1867.

33. *Case of suppurating hydatid tumour projecting from the under surface of the liver, with secondary gangrenous abscesses in the liver.*

The preparation exhibited was taken from the body of a man aged 27, who was admitted into the London Fever Hospital on February 23rd, 1867, and died on the following day.

The man was so ill that he could give little account of himself, but what was ascertained was that he was a soldier, and had been in the West Indies for about seven years. His health, however, had been good until about a month before admission, when he was seized with pain in the epigastrium and right hypochondrium, accompanied with nausea and vomiting. About the same time, he first noticed a tumour below the right ribs, the pain in which made it difficult for him to button his tunic over it.

On the following morning the prostration had increased, and, in addition there was noted slight jaundice of the conjunctivæ, and a peculiar, very fœtid odour—*sui generis*—which appeared to proceed from the entire body, and not from the breath in particular. This was noted in the case-book before the patient's death, which took place on the same day.

At the time of admission the patient was extremely prostrate, although his mind was clear. He lay on his back with his legs drawn up, the abdomen was full and tender all over; friction could be heard distinctly over the liver, which appeared large, extending downwards to the crest of the ilium, and upwards to the lower border of the third rib. The tongue was dry and brown, and there was frequent vomiting; but there was no jaundice, and the bowels were stated to

be regular. The splenic dulness was increased; the pulse was 132 and feeble; the heart's sounds were normal; the respirations were quick and thoracic; there was dulness on percussion near the back of the right lung, and moist sounds were heard over the greater part of both lungs. The skin was hot, the face pale, and the features pinched.

On *post-mortem* examination, which was made on the day after death, there was found to be considerable evidence of recent peritonitis, particularly in the neighbourhood of the liver. Projecting from the under surface of the right lobe of the liver, and but slightly embedded in it, was an hydatid cyst larger than a cocoa-nut. The wall of the parasite was opaque, tough, and cribriform from the presence of numerous large openings, and its interior was filled with dirty brown purulent fluid having a very offensive odour. The entire liver was studded with numerous softened masses from the size of a nut up to that of a small orange, in which the hepatic tissue was softened, and consisted of a spongy material, corresponding to the fibrous stroma and vessels, saturated with a greenish, extremely foetid pulpy fluid. Embedded in the substance of the liver, near the anterior edge of the right lobe, was a healthy hydatid cyst about the size of a chestnut, containing clear fluid and echinococci. The lungs were congested, but were nowhere inflamed or gangrenous.

Remarks.—At a former meeting during this session (p. 124), I brought forward a case in which an hydatid tumour of the liver suppurated and induced secondary purulent deposits in the liver, with symptoms of general pyæmia. In the present case the secondary deposits in the liver took the form of gangrene rather than of suppuration.

The anatomical character presented by the liver in this case agreed with those of "Gangrene of the Liver," as described by Rokitansky.* The disease, however, is so rare that experienced observers have denied its occurrence, and Frerichs makes no mention of it. Rokitansky himself had only met with one example, where it was associated with pulmonary gangrene. Only two instances are recorded in the previous volumes of the *Pathological Transactions*, one in Vol. X. (p. 177), by Dr. Leared, where the gall-bladder ruptured in consequence of obstruction of the common duct by a gall-stone, and where a considerable portion of the gall-bladder and the adjoining part of the liver had sloughed; and the other in Vol. XIV. (p. 270), by Mr. Gay, where some doubts existed as to whether the gangrene had

* *Path. Anat. Syd. Soc. Transl.*, vol. ii. p. 136.

originated in a large abscess of the liver, or had spread from the abdominal wall. Considering the rarity of such cases, the remarkably fœtid odour observed during life in the case now recorded is a point of considerable clinical interest.

Dr. MURCHISON, *2nd of April, 1867.*

34. *Biliary calculi discharged through the abdominal wall.**

The patient, a lady, aged 60, single, first consulted Dr. Taylor, of Anerley, in 1864, with pain in the abdomen, having the character of slight attacks of biliary colic.

In April 1865, a swelling, the size of a small orange, appeared below and to the right of the navel; it was very hard, and was evidently connected with the liver, as it could be traced upwards to that organ. The superficial veins of the abdomen were distended, and there was some œdema of the right leg and foot; after a few months, the swelling diminished and the patient went to the sea-side. On her return she had a slight attack of jaundice, and the swelling near the navel again increased; this was poulticed, and in May 1866 a profuse glairy discharge from the navel followed. The poultices were continued, and a fluctuating point was discovered in the swelling one inch below the navel. Dr. Taylor punctured this in June 1866, and let out a fluid similar to that discharged from the navel, and under the microscope presenting the appearances of broken down hepatic tissue. Jaundice returned in February, 1867, and continues (March 19th).

On the 11th of March, 1867, Dr. Taylor detected some moveable bodies at the bottom of the swelling, and by enlarging the opening first made, extracted the calculi exhibited. Three more have been extracted since.

The calculi exhibited were nine in number. They presented the ordinary appearance of biliary calculi, and the largest were about the size of a very large pea.

Dr. MURCHISON for Dr. TAYLOR, *16th of April, 1867.*

[The wound healed; but the patient continued to get more jaundiced; anasarca was developed rather rapidly, and the patient died on the 19th of May. A *post-mortem* examination was not permitted.—*Letter from Dr. Taylor, June, 1867.*]

[C. M.]

* See also p. 120 of this volume.

35. *Syphilitic (?) Disease of liver, dura mater, and arachnoid.*

These specimens were forwarded for exhibition to the Society, by Mr. Harry Leach, of the Seamen's Hospital-Ship, "Dreadnought," who furnished the following account of them:—

"They were taken from the body of a man, aged 44, who died on Sunday last (May 5th), in the 'Dreadnought' Hospital-Ship. He had been for some weeks an out-patient, but was admitted on the 29th of last month, suffering from much pain in the lumbar region, with great general debility. No other symptoms were then observable, but ptosis of the left eyelid came on three days after, with signs of cerebral congestion, and he eventually died comatose.

"The *post-mortem* appearances were as follows:—

"Dura mater thickened and very adherent to the skull, particularly on the left side, where it was glued to the bone by recent deposit; blood was effused between the dura mater and arachnoid, both of which were torn off together in removing the skull-cap; there was considerable serous effusion in the sub-arachnoid spaces and lateral ventricles.

"Liver studded with yellowish masses throughout its entire thickness, such as are commonly seen in so-called cancer of the liver.

"Lumbar glands enlarged and occupied by similar deposits.

"No change was observable in any other organs, beyond congestion of the lungs and some slight atheromatous deposits at the root of the aorta.

"A casual microscopic examination of the deposits found on the surface of the dura mater and in the substance of the liver failed to detect cancer-cells."

The appearances presented by the dura mater and portions of the liver forwarded to the Society were similar to those which so often occur in persons suffering from constitutional syphilis. A very similar case was recorded by me in the 13th volume of the *Pathological Transactions* (p. 250).* The thickened dura mater, when examined under the microscope, was found to consist of white fibres, and fibrillated tissue with oily and albuminous granules. The white deposits in the liver were less dense than ordinary "syphilitic nodules," probably because they were of recent formation. Their cut-surface was smooth and pale-yellow, and exuded no juice, and their minute structure was found to be made up of shrunken hepatic cells,

* See also p. 121 of this volume.

much granular matter, fibrillated tissue and fibre-cells. I find on communication with Mr. Leach, that no mention of syphilis is recorded in the history of this patient's case. He adds, however, that "presumptive evidence is strong in its favour, as seven-eighths of the patients admitted into the 'Dreadnought' Hospital-Ship have at some time or other been the subject of one or other form of Venereal Disease."

Dr. MURCHISON for Mr. HARRY LEACH, 7th of May, 1867.

36. *Cancerous tumour compressing the cœliac axis and simulating aneurism.*

B. S., aged 45, a porter, first came under my care as an out-patient at Middlesex Hospital on the 12th of February last. He then complained of severe and constant pain at the epigastrium, from which he had suffered for about seven weeks. Finding that there was a pulsating tumour at the seat of pain, about an inch below the extremity of the xyphoid cartilage, I advised him to come into the Hospital, where he remained under my care until his death on the 12th of May. During the first month there was no symptom worthy of note, excepting the pain already referred to, which was so severe, especially at night, that it was necessary to inject morphia daily under the skin, gradually increasing the dose. At this time I believed the case to be one of aneurism, (1) because there were no symptoms which could be referred to cancerous disease of the liver or pyloric end of the stomach; (2) because the pulsation of the tumour was distinctly expansive; and (3) because, on applying the stethoscope, I heard a systolic bellows-sound at a point a little below the impulse, but not further down, in the course of the aorta. My judgment was further influenced by the exact coincidence as regards the position of pulsation between this case and another which I had observed a few weeks before in which aneurism of the cœliac axis was ascertained to exist after death.

As time advanced, the pulsation became less and less expansive and the bruit disappeared; while, on the other hand, the tumour became larger. About the middle of March the patient began to complain of deep-seated pain in the left flank, penetrating to the back. As there was no other indication of pulmonary disease, it attracted less attention than it ought to have done; but, three weeks later, I

noticed that the movement of the left side of the cheek was much diminished, and that the pain, still complained of, was associated with dyspnoea and acceleration of the pulse. I therefore examined the chest, and found that the presence of liquid in the left pleura was indicated by dulness with defect of vocal resonance, extending to the spine of the scapula and to a corresponding height in front. A blister was ordered, which gave considerable relief. Towards the end of the following week, however, the chest-symptoms became worse, and it became more and more evident that the case was assuming an aspect entirely different from that which it had previously presented.

On the one hand, the tumour increased rapidly in size and took up a lower position. A nodulated mass, not before existing, could be distinctly felt in the epigastric and umbilical regions, the movements of which downwards and to the left in inspiration and upwards and to the right in expiration clearly indicated that they were governed by the right half of the diaphragm. On the other hand, the effusion in the left pleura increased, and the difficulty of breathing arising from it became more and more urgent, insomuch that, on the 28th of April, recourse was had to paracentesis in order to prolong the patient's existence. After this, however, no further treatment was attempted, and the patient died on the 12th of May.

The *post-mortem* examination was made on the 13th, when it was ascertained that cancerous growths existed in the cellular tissue behind the peritoneum, in the lymphatic glands occupying the small omentum, in the left pleura, in the liver, and in one kidney (a minute nodule), but not in the peritoneum itself, in the right pleura, nor indeed, in any other organ. A cancerous mass about as large as an orange was found to occupy a great part of the epigastric region. On more careful examination, it appeared that its position was nearly identical with the head of the pancreas, and on cutting into it the section showed that the lower part of it was composed of pancreatic substance, while the upper consisted of cancerous matter, from which milky juice exuded abundantly. The preparation shows its relations to surrounding organs to be as follows:—The upper part of the mass is firmly adherent to the anterior surface of the aorta in the neighbourhood of the origin of the cœliac axis, the last-named vessel being so completely embedded in the tumour that it cannot be got at without cutting through a considerable thickness of cancerous matter. From the circumstance that the oldest part of the morbid growth, that in

which alterations of colour which indicate fatty degeneration of its structure is, that which immediately surrounds the branches of this artery, there seems reason to suppose that the deposit commenced in its neighbourhood.

When in position, the tumour was placed behind the smaller curvature of the stomach, and projected forwards below the pylorus and to the left of the commencement of the duodenum. It is remarkable in how slight a degree it is united with the surrounding organs. It adheres to the duodenum about an inch and a-quarter below the pylorus, and is incorporated with the head of the pancreas, so as to form one mass. It also extends upwards towards the diaphragm, being apparently continuous with the deposits which occupy the posterior mediastinum; but it adheres neither to the stomach, nor to the liver, nor to the transverse portion of the duodenum, nor does it extend downwards in front of the aorta, the superior mesenteric artery being entirely free, even at its origin.

The whole of the left costal and diaphragmatic pleura was beset with nodules of soft cancer, which projected into the pleural cavity. Of these, some appeared to be limited to the membrane itself, while others extended into the soft parts but not into the bones. The cancerous deposit was most abundant in the neighbourhood of the vertebral column. The pleura was everywhere thickened, and could be detached with some difficulty from the wall of the chest, along with the cancerous masses embedded in it.

The case presents two points of interest. 1. It shows how impossible it may be, under certain circumstances, to discriminate between an aneurism and a malignant growth; and 2. It affords an example of a remarkable and exceptional distribution of cancer. It can scarcely be doubted that the primary deposit took place in the neighbourhood of the aorta, at a point immediately below its entrance into the abdominal cavity; that it extended upwards through the diaphragm to the posterior mediastinum, and forwards towards the epigastrium. It is not easy to explain why, on the one hand, the peritoneum and right pleura were entirely free from cancer, while, on the other, the left pleura was beset with cancer over its whole surface, all three serous membranes being alike in immediate contact with the original deposit.

Dr. J. B. SANDERSON, 21st of *May*, 1867.

37. *Cases of chronic atrophy of the liver illustrating the pathology of cirrhosis.*

The two livers now submitted to the Society appear to me to illustrate certain differences of opinion still entertained respecting the pathology of cirrhosis. On the one hand, it is stated that in cirrhosis there is an increase of fibrous tissue, the result of a chronic inflammatory process, and that the secreting tissue becomes atrophied from the pressure exerted on it by this fibrous tissue; while, on the other, it is contended that the secreting tissue is simply atrophied, and that the fibrous tissue is not absolutely, though relatively, increased. The former view is the one advocated by Dr. Budd, in his excellent work on Diseases of the Liver, and the latter has been put forward by Dr. Beale, who has found the interlobular tissue in cirrhosis intimately permeated by blood-vessels and minute bile-ducts. A third class of pathologists, among whom may be mentioned, Förster, believe that there are two forms of cirrhosis, one in which the fibrous tissue is increased, and another where it is not. In one of the two livers now before the Society, the structure is extremely dense, and the fibrous tissue appears greatly increased, not only to the naked eye, but on microscopic examination. In the second liver, although the atrophy is extreme, so that the weight is little more than one-half that of the first, the tissue is extremely soft and friable, and there is no evidence of any increase of the fibrous tissue, either to the naked eye or on microscopic examination. If the increased density and apparent increase of fibrous tissue in the former case be due merely to the disappearance of a portion of the secreting tissue, it would be difficult to account for the fact that in the second case, although the atrophy is much greater than in the first, the consistence of the organ is much less than in health, and there is no apparent increase of the fibrous tissue. Both of the patients exhibited during life the ordinary phenomena of portal obstruction met with in cirrhosis; but there was this difference between the two, that the patient with the dense fibrous liver had led a very intemperate life, whereas there was no history of intemperance in the other patient. I am unable to throw any light on the etiology of the disease in the latter case; but the absence of a history of spirit-drinking, which is almost universal in the dense fibrous cirrhotic liver, is worth noting.

CASE I.—*History of spirit drinking and symptoms of portal obstruction. Dense fibrous granular liver.*

Thomas B., aged 52, a butcher, was admitted into the Middlesex Hospital, under my care, on April 30th, 1867. His father and mother had lived to an advanced age; a brother and sister had died of consumption. He was a large, stout man, had always enjoyed good health, until about two years ago, when he began to suffer from flatulence, and during the last year he had also complained of shortness of breath, disturbed sleep, chilliness, and occasional palpitation; at the same time he had noticed some swelling of his legs and abdomen. He thought that this swelling had gone away after two or three weeks, but about four months ago it had reappeared, and had since increased considerably. He said that it had first reappeared in the left leg, but possibly it was not greater in this situation than elsewhere, and his attention had been more directed to it, owing to a vesication which appeared over the left ankle. He had never been troubled with hæmorrhoids, but on several occasions during the last two years he had vomited about a teacupful of black blood. His habits had for a long time been intemperate; he had drunk freely both spirits and beer.

On admission, the patient exhibited an emaciated, sallow countenance, with a slightly jaundiced tint of the conjunctivæ. There was very great œdema of the lower extremities and scrotum, and evidence of a large accumulation of fluid in the peritoneum, the umbilicus being quite obliterated, and the girth of the abdomen at this part measuring forty-six inches. There was also considerable enlargement of the subcutaneous veins of the abdomen, especially on the right side. The hepatic dulness was diminished, in the right mammary line being less than three inches; the splenic dulness was slightly increased. There was no jaundice, except the slight icteroid tint of the conjunctivæ above referred to. There was no tenderness of the abdomen, nor vomiting; the tongue was moist, with a white fur; the bowels were very costive, often not acting for a week; the heart's action was feeble, but the dulness and sounds normal. Pulse, 120. Crepitus, at some places rather fine, was audible over the lower half of both lungs, back and front, but there was no decided dulness, nor tubular breathing; respirations, 36. The urine was acid, it contained no albumen, but yielded a decided reaction of bile-pigment; specific gravity, 1032.

The patient was treated with purgatives and diuretics, but no im-

On *post mortem* examination, both kidneys were found to be contracted and granular, with numerous cysts in their cortical substance. There was considerable hypertrophy of the left ventricle of the heart, and atheroma of the aorta, but the valves were healthy. The lungs were slightly emphysematous, but otherwise normal. The peritoneum contained about a gallon of clear straw-coloured serum. The intestines had a fleshy appearance (from maceration) and there was slight ecchymosis in the mucous membrane of the cæcum, but in other respects they were normal. The spleen was of natural size; with the exception of a small fibrous tumour, the uterus was healthy.

The liver was extremely small, weighing only 25·5 ounces avoird., and measuring 7·75 inches from right to left, 5·5 inches antero-posteriorly, in right lobe, and 4·75 in left. Its capsule was not at all thickened, and was not adherent; but its outer surface was coarsely nodulated and granular, exactly as in cirrhosis. The margin of the organ all round, but particularly in front, had a winged appearance, from the total disappearance of the secreting tissue between the capsule on the upper and under surfaces. At the anterior margin of the right lobe, this attenuated rim was nearly an inch in width, and only about a third of an inch thick. On section of the organ, there was no evidence of any increase of the fibrous tissue; on the contrary, the consistence was extremely soft and friable. The cut surface presented a yellowish-brown colour, and a coarsely granular appearance, from the aggregation of the lobules into small masses. The outline of the individual lobules was not well defined; but on microscopic examination the secreting cells were found in abundance, though loaded with oil; there was no leucine or tyrosine. The attenuated rim presented a smooth grey appearance on section, and was made up for the most part of fibrillated tissue and vessels, with here and there a few collapsed secreting cells. Projecting from this rim were a few isolated nodules, of yellowish-brown hepatic tissue, about the size of peas.

Dr. MURCHISON, 21st of May, 186

V.—DISEASES, ETC., OF THE GENITO-URINARY ORGANS.

A.—KIDNEYS, BLADDER, ETC.

1. *Urine from a case of paroxysmal hæmaturia.*

Dr. Pavy exhibited a specimen of urine from a patient labouring under an affection which he had called *Paroxysmal Hæmaturia*. Only a few cases, he remarked, of this affection had as yet been placed on record. He had met with three cases of it—two in private practice and one in an hospital patient, and this specimen of urine was from one of them. The patient, a middle aged gentleman living in Suffolk, from whom the specimen was derived, was in the enjoyment of ordinary health and passed urine perfectly normal in character during the intervals of the attack. Exposure to cold was almost sure to bring on a fit of shivering, which was followed by the passage of urine of a more or less porter-like colour. This condition of urine remained for a few hours, or it might be for a day or two, when the urine would resume, until a fresh attack, a perfectly natural appearance. The patient had been subject to these attacks for the last three or four years. He could always trace their origin to exposure to cold. There was no periodicity about their recurrence of the character belonging to ague, and he was comparatively free from them during the summer. Riding or driving on a cold day, if his feet got cold, sufficed to bring them on. Going out of doors and standing for a few minutes in the cold air although well clad, had been sufficient to bring on an attack. If he could only keep his hands and feet warm, he felt safe; but if these parts got cold, he was almost sure to have an attack. Sometimes he had averted an attack by going in doors directly he had felt it coming on, sitting before the fire and drinking something warm.

The specimen of urine before the Society was of a deep brownish-red colour and contained a dark-coloured sediment, consisting principally of hæmatin. It had been passed during one of the usual attacks coming on after exposure to cold, the urine of the patient having since returned to a natural state. It coagulated strongly upon the application of heat, and also threw down a copious precipitate upon the addition of nitric acid. Examined microscopically, a number of coloured granules (hæmatin-granules), a few blood corpuscles, some casts of tubules, and crystals of lithic acid and oxalate of lime were brought into view.

On *post mortem* examination, both kidneys were found to be contracted and granular, with numerous cysts in their cortical substance. There was considerable hypertrophy of the left ventricle of the heart, and atheroma of the aorta, but the valves were healthy. The lungs were slightly emphysematous, but otherwise normal. The peritoneum contained about a gallon of clear straw-coloured serum. The intestines had a fleshy appearance (from maceration) and there was slight ecchymosis in the mucous membrane of the cæcum, but in other respects they were normal. The spleen was of natural size; with the exception of a small fibrous tumour, the uterus was healthy.

The liver was extremely small, weighing only 25·5 ounces avoird., and measuring 7·75 inches from right to left, 5·5 inches antero-posteriorly, in right lobe, and 4·75 in left. Its capsule was not at all thickened, and was not adherent; but its outer surface was coarsely nodulated and granular, exactly as in cirrhosis. The margin of the organ all round, but particularly in front, had a winged appearance, from the total disappearance of the secreting tissue between the capsule on the upper and under surfaces. At the anterior margin of the right lobe, this attenuated rim was nearly an inch in width, and only about a third of an inch thick. On section of the organ, there was no evidence of any increase of the fibrous tissue; on the contrary, the consistence was extremely soft and friable. The cut surface presented a yellowish-brown colour, and a coarsely granular appearance, from the aggregation of the lobules into small masses. The outline of the individual lobules was not well defined; but on microscopic examination the secreting cells were found in abundance, though loaded with oil; there was no leucine or tyrosine. The attenuated rim presented a smooth grey appearance on section, and was made up for the most part of fibrillated tissue and vessels, with here and there a few collapsed secreting cells. Projecting from this rim were a few isolated nodules, of yellowish-brown hepatic tissue, about the size of peas.

Dr. MURCHISON, 21st of May, 186

V.—DISEASES, ETC., OF THE GENITO-URINARY ORGANS.

A.—KIDNEYS, BLADDER, ETC.

1. *Urine from a case of paroxysmal hæmaturia.*

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The specimen of urine before the Society was of a deep brownish-red colour and contained a dark-coloured sediment, consisting principally of hæmatin. It had been passed during one of the usual attacks coming on after exposure to cold, the urine of the patient having since returned to a natural state. It coagulated strongly upon the application of heat, and also threw down a copious precipitate upon the addition of nitric acid. Examined microscopically, a number of coloured granules (hæmatin-granules), a few blood corpuscles, some casts of tubules, and crystals of lithic acid and oxalate of lime were brought into view.

Dr. Pavy had tried a variety of remedial measures, but no medicinal agent had been found to exercise any controlling influence over the attacks. By wearing fur gloves and over-boots, and avoiding exposure to cold, the patient could avert them, but they were not to be checked in any other way.

Cases of intermittent hæmaturia had been recorded by Rayer in his '*Maladies des Reins*,' but these seem evidently to have been cases of intermittent fever accompanied with hæmaturia as one of the concomitants. The class of cases under consideration was not of that kind. There was no evidence of any existing ague, and, as far as Dr. Pavy's experience went, a cure was not to be effected by the administration of quinine. Drs. Harley and Dickinson had narrated some cases in the '*Medico-Chirurgical Transactions*,' for 1865, which belonged to the description of case Dr. Pavy was referring to.*

The pathology of the case was involved in conjecture. It might be assumed, Dr. Pavy considered, that there was no organic disease of the kidney, seeing that the urine, except during the attack, was perfectly healthy. An alteration in the quality of the blood or the state of the blood-vessels must constitute, it might be said, the immediate precursor of the morbid condition of the urine that was noticed. The rapidity with which the elements of blood appeared in the urine after the fit of shivering or feeling of chilliness brought on by exposure to cold scarcely left ground for the belief that an altered condition of the blood could be set up to occasion it. As regards the blood-vessels, physiology taught us how rapidly and readily impressions might act through the nervous system and modify the vascularity and nutrition of a part. It was a matter of common observation to find exposure to cold producing an altered state of the circulation in various parts. Through getting damp feet, for instance, coryza, or perchance, bronchitis, pleurisy, pneumonia, nephritis, and so on, might be set up. Now, in the case to which the attention of the Society had been drawn, it was not, Dr. Pavy thought, an unreasonable hypothesis to advance that an unnatural susceptibility of the kidney to temporary congestion from exposure to cold appeared to exist, and that from this temporary congestion the morbid condition of the urine resulted.

Dr. PAVY, 6th of November, 1866.

* See also cases in '*Pathological Transactions*,' by Dr. Harley, vol. xvi., p. 168 by Dr. Dickinson, vol. xvi., p. 174; by Dr. Murchison, vol. xvi., p. 183; and by Dr. Wiltshire, at p. 180 of this volume.—Ed.

2. *Cancer of the bladder, ureter, and other organs.*

J. H., aged 28, admitted into St. Mary's Hospital on October 5th, 1866, under the care of Dr. Sibson, was much emaciated and presented an extremely anæmic and cachectic appearance. He dated his illness, more particularly, from about three months before admission, when he had exerted himself one day very much. Since this time he has notably lost flesh and become weaker, being troubled with profuse perspirations, and palpitation of the heart even after the slightest exertion. When admitted, the extent of the heart's impulse was found to be considerable. It could be detected over the whole cardiac region, and the apex impinged on the sixth space, below the nipple. The urine was found to be slightly acid, with a specific gravity of 1020. It contained no albumen, neither were any casts detected. Afterwards the urine did contain traces of albumen, and a few days before the patient's death an abundance of lithates. The weakness continued to increase, and on the 15th the pulse was 140, and the respiration 32 per minute. On the 23rd his breathing was very quick and irregular, and he passed his motions and water unconsciously. He died on the next day at seven P.M.

At the *post-mortem* examination, both lungs were found to be congested and extremely œdematous throughout the whole of the lower and part of the upper lobes, and each pleura contained about five ounces of serum. Beneath the parietal pleura on each side were a number of flat, slightly prominent, opaque-white patches, varying in diameter between that of a large pin's head and an ordinary sized marble. No spots of cancer similar to these were found in or on the surface of the lungs, but beneath the peritoneum on the under surface of the diaphragm, a number of growths of a similar kind, though larger, were met with. The base and anterior walls of the bladder were thickened and infiltrated with a cancerous growth, apparently involving the prostate. The mucous membrane of the bladder was entire and healthy, though raised and irregular on the surface from projections of the cancerous growth beneath. The upper and posterior walls of the bladder seemed quite healthy. The walls of the left ureter were completely infiltrated with cancerous matter, so as to form a thick, white, irregular mass, about half an inch in diameter throughout its entire extent: its canal was pervious. The growth extended upwards in the walls of the ureter as far as the pelvis of the kidney, and below, it was directly continuous with the morbid mass at the base

of the bladder. The kidney on this side was large (weighing nine ounces) and very pale. The capsule could be stripped off freely, so as to expose a smooth pale surface, and three or four patches of white cancerous matter, about the diameter of a pea or of a small marble. These were uniform with the surface of the kidney, but were of a hemispherical shape from extension inwards into the organ. A few smaller white patches were seen deep in the substance of the kidney. The organ on the opposite side was one ounce lighter, and extremely congested, so that the difference between the two kidneys was very notable. No distinct masses of cancer were seen in it similar to those in the one of the opposite side, though on close inspection small patches of white matter were seen here and there, and many other parts of the organ undoubtedly had a ground-work of the same colour apparently due to an infiltrating growth of the same cancerous material. Microscopic examination also supported this view. Both suprarenal capsules contained several small bead-like patches of cancer, and the liver contained many masses, varying in size between a small pea and a filbert, some of which were situated deeply in the substance of the organ, whilst others, and mostly the larger ones, were partly superficial. Stomach and intestines healthy. Brain healthy, though extremely anæmic. The heart was generally enlarged, weighing thirteen ounces and a-half, and its cavities were almost empty. The walls of the left ventricle were somewhat pale, and the surface of the papillary muscles presented a strikingly mottled appearance, owing to the presence of small light fawn-coloured patches arranged closely together somewhat after the manner of fish-scales. On section of the largest papillary muscle this mottling was seen throughout its entire substance, and microscopical examination showed it to be due to extreme fatty degeneration of the muscular fibres. Other portions of the walls of the left ventricle were found to exhibit an early stage of fatty degeneration. All the valves of the heart were quite healthy. The abdominal glands were free from cancer, or at all events were not enlarged.

On microscopical examination of the cancerous growth in the walls of the ureter it was found to contain a few fibres, but to be made up principally of a number of small cells or nuclei, only slightly larger than pus-corpuscles, and a quantity of granular matter. The cells were by no means typical in appearance, and were more like the nuclei of cancer-cells. Some contained a dot or nucleolus, whilst in others only granules could be seen. They varied somewhat in size, and more considerably in shape.

Remarks.—In this case it would seem most probable, from the appearance presented by the kidneys, that there was some antecedent renal disease, followed by enlargement of the heart, and that then, owing to the existence in the highest degree of that constitutional state or predisposition known as the cancerous cachexia, a more or less simultaneous and rapid growth of cancer occurred in many organs and parts of the body. With this was associated extreme weakness and fatty degeneration of the heart. The feeble and rapidly beating organ, being at last inadequate to drive the deteriorated blood through the lungs with sufficient force, ultimately gave rise to congestion and extreme œdema, so that the patient sank from sheer exhaustion and deficient aeration of blood. The notable congestion of the right kidney was, doubtless, due in great part to the extensive growth of cancer, which seemed beginning to infiltrate the entire organ.

Dr. H. CHARLTON BASTIAN, *6th of November, 1866.*

Report on Dr. Bastian's case of cancer of bladder, ureter, &c.—The parts submitted to the Committee were the urinary bladder, with the prostate and the lower ends of the ureters, one supra-renal capsule, a piece of the liver, and a piece of the diaphragm.

The Committee confirms Dr. Bastian's account of the rough and minute characters of the morbid growth contained in these parts.

In all of them it consists of small round and roundly-oval cells, averaging $\frac{1}{1500}$ inch in diameter, closely packed in a scanty inter-cellular substance, rarely exhibiting a distinct nucleus, but always holding a few minute granules. The intercellular substance is homogeneous, or finely granular, or imperfectly fibrillated.

The bladder and left ureter are the parts most affected. The growth occurs here in much greater quantity than in any other situation, and it pervades all the coats, not excepting the deeper part of the mucous coat.

In the diaphragm the morbid growth is situated in the peritoneum and sub-peritoneal tissue, the deeper part of the latter being less affected, and the muscular tissue only exceptionally and to a very slight extent.

In the liver the growth dips about two inches and a-half from the surface into the parenchyma, into which it merges without a definite limit. In the supra-renal capsule it involves the cortical tissue.

In all these organs the histological elements of the new growth are infiltrated amongst the normal tissues, and the direction in which the growth is extending is indicated by the decrease and diminution of the natural structures.

In all the parts given us to examine the elements of the morbid growth appear to be evolved out of the corpuscular elements of the connective substance. This is especially evident in the diaphragm. (See Plate III., Figs. 1 to 4.)

We are disposed to regard the bladder as the primary seat of the disease, and the other organs as secondarily affected; and we consider the disease to be malignant.

Dr. W. CAYLEY,

Mr. J. W. HULKE, 4th of December, 1866.

3. *Epithelioma of bladder.*

A gentleman, aged 62 years, applied to me on March 28th, 1866. His history was as follows:—

In 1845, after an attack of typhoid fever, he had passed much blood in the urine. It completely ceased after a short time.

In 1857 there was bleeding for the first time since the occurrence just named; there was no pain. Since this period he has been subject to occasional bleedings with very little intermission. He went to Vichy, and was greatly improved by his stay there.

In 1861-62 the bleeding was more severe than usual. Undue frequency of micturition had slowly appeared and increased; there was pain also accompanying it.

In 1865 he went to Vichy again and with some benefit. The bleeding disappeared for a time, but not the pain, or the frequency of making water. He had retention once or twice, which was relieved with some little difficulty.

The symptoms in March, 1866, were the following:—The patient passes water every hour and a-half, night and day. There is pain in the act, above the pubes and in the back, worse at the close; no pain in the penis. Blood appears in the urine after any exercise, even from walking up stairs.

Urine.—Cloudy, acid, no albumen. Little pus only under microscope.

Examination by rectum.—No notable enlargement of prostate, or but slight.

Examination by urethra.—No. 7 gum-catheter passes, if well curved. There is no urine left after passing water. Sounded; no stone, but it is difficult to turn the sound in the bladder without giving unnecessary

DESCRIPTION OF PLATE III.

Figures 1, 2, 3, and 4 illustrate the microscopic appearances in Dr. Bastian's case of Cancer of the Bladder, Ureter, Liver, &c. (p. 159). From drawings by Mr. J. W. Hulke, magnified 240 diameters.

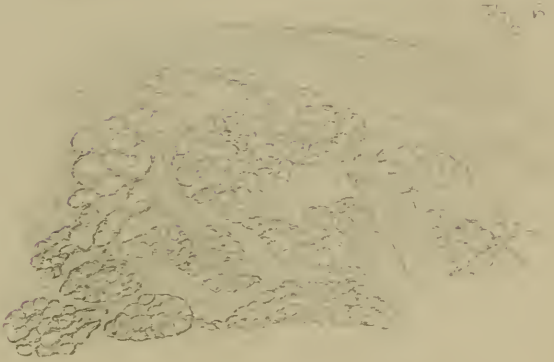
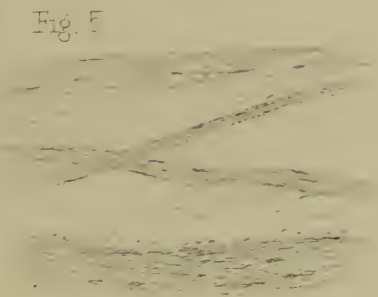
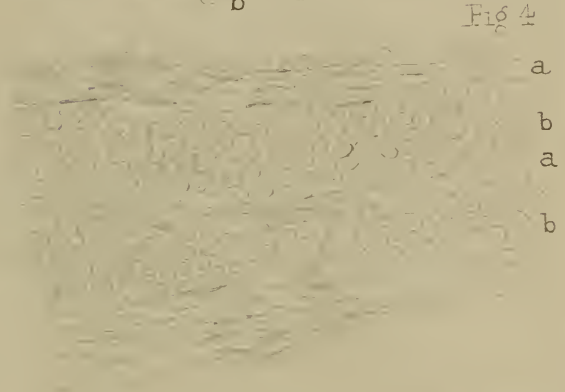
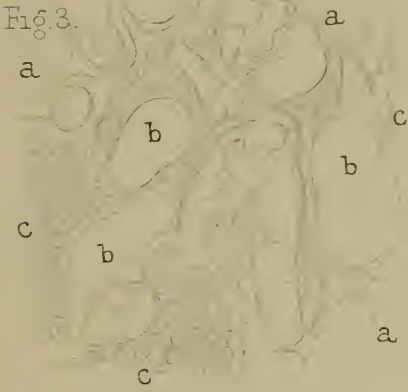
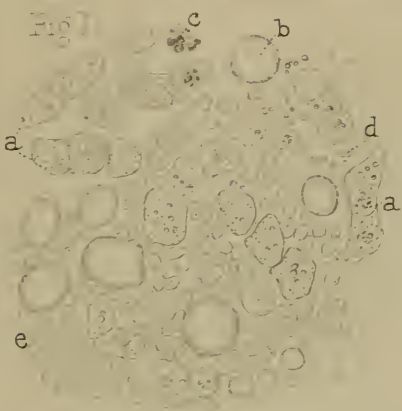
- Fig. 1. Section of a nodule on surface of liver. *a*, liver-cells; *b*, same distended with oil; *c*, biliary pigment; *d*, free oil-globules; *e*, morbid growth.
- Fig. 2. Peritoneal and sub-peritoneal tissue of diaphragm. *a*, white fibrous tissue; *b*, elastic fibres; *c*, fat-cells; *d*, morbid growth.
- Fig. 3. From sub-peritoneal surface of diaphragm. The section runs across white fibrous bands. *a*, net of connective tissue corpuscles and elastic fibres in which new growth is enclosed; *b*, spaces occupied by bundles of white fibrous tissue; *c*, new growth.
- Fig. 4. Section of muscular coat of bladder. *a*, bundles of smooth muscular fibre; *b*, new growth.

Figures 5 and 6 illustrate the microscopic appearances of Mr. J. B. Brown's case of Fibro-cystic disease of the Uterus (p. 196). From drawings by Mr. A. Bruce, magnified 100 diameters.

- Fig. 5. Fibrous bands and membrane forming the wall of a cyst. A few scattered nuclei lie along the bands.
- Fig. 6. Groups of cells and nuclei, interspersed through fibrous tissue, and forming the greater part of that portion of the tumour described as presenting a pancreatic appearance.

Figures 7 and 8 show the microscopic appearances in Dr. Greenhow's specimen of Cancer of the Supra-renal Capsule (p. 262). From drawings by Mr. J. W. Hulke, magnified 240 diameters.

- Fig. 7. Fibrillated reticulum, composed of exceedingly slender, delicate, soft fusiform cells of great length, and enclosing in its meshes cells and an intercellular substance.
- Fig. 8. Isolated cells, containing either a single nucleus, or more generally a few fine granules.



pain. On making water, the first portion passes clear and the latter becomes tinged with blood; at the close almost pure blood passes.

He took full doses of gallic acid and had morphia-suppositories which relieved him very much at night, and I injected the bladder with nitrate of silver in solution every day, for about five or six times, commencing with a quarter of a grain to the ounce and carrying it up to one grain to the ounce of distilled water.

About the 7th or 8th of April he left for the country very much relieved, passing no blood, and walking two or three miles without any appearance of it.

He returned to Town on the 23rd of April. No blood had been seen since he left, but the pain had increased, especially at the end of passing water. The injecting treatment was resumed, and in three or four days he was much relieved.

On the 28th of April he took a walk and was exposed to bad weather, the day being very cold and rainy. On returning he had a chill and on the next day a marked attack of cystitis.

In two or three days blood appeared in the urine in large quantities; the act of micturition was more painful and frequent. He was much relieved by tying in a vulcanized india-rubber catheter, which permitted the urine to pass constantly, and spared him the expulsive act; very little blood was passed for a time. Subsequently he became weaker, the cystitis increased, and he gradually sank on the 28th inst.

The *post-mortem* examination revealed a large mass of very soft and broken-down material in the bladder, loosely attached to a growth of wide base, circular in form, about three inches in diameter, occupying the floor and part of the right side of the bladder. There was no induration of the base, nor of the parts around; the mass was so soft that no physical sign of its presence was discoverable from the rectum. The mucous membrane around showed the usual appearance of chronic inflammation. The right kidney was studded with small growths of a similar kind. It is remarkable that no enlargement of the lumbar, iliac, or inguinal glands existed.

A careful examination was made by Dr. Michael Foster, late curator to University College Museum, the result being that the growth was clearly and distinctly epithelioma springing from the mucous membrane. Dr. Foster's report is as follows:—

Dr. Foster's report.—The portion of tumour sent was very friable. A section made in spots where it was somewhat firmer presented,

under a low power, an irregularly glandular appearance. This was seen to be due to the substance being made up of a general matrix in which were embedded, without (as far as one could trace) any distinct arrangement, portions of a rounded or irregularly tubular form, and of peculiar structure.

The general matrix consisted of a fibrillated stroma in which were embedded nuclei and nucleated cells of very variable size and appearance.

In some places the fibrillation was very distinct; in others, very little could be seen but the nuclei and cells. On the whole these cells seemed to bear most resemblance to those of the deep layers of the skin.

The rounded and tubular masses were formed of groups of much larger circular or oval cells surrounded by a capsule, as it were, of irregularly concentric layers.

These cells were remarkable for a very distinct and highly refractive nucleolus; in many a large nucleus was visible, and in most cases the contents (or substance) of the cells were granular and very dark, giving an appearance somewhat like nerve-cells. Very often two or more cells were seen within a larger cell.

These masses were coloured brownish-red on the addition of iodine, either with an alkali or with an acid. They seemed to be identical with the laminated bodies (*perles épidermique*) of epithelioma.

Separate cells were also observed presenting such characters as the following:—1, a small cell with obscure lamination of its walls; 2, a cell with two bright nucleoli (probably belonging to two cells) and an appearance as of a process attached to one; 3, an oval cell with lamination of its walls; 4, cells with obscure lamination containing several nuclei. Transition cells from the smaller cells of the matrix to those of the laminated masses were also observed.

In many instances the groups presented a peculiar appearance, which seemed to be due to a degeneration or hypertrophy of the bright nucleolus, so that the group seemed to contain bright, highly refractive, circular, oblong, or irregularly-shaped masses, as large or larger than the ordinary nuclei.

In many parts there were large crystals of triple phosphates, and brush-shaped groups of acicular crystals, soluble in potash. An alkaline extract of the tumour gave distinct evidence (*murexide test*) of uric acid.

In all parts of the tumour there was at the time of examination a very large quantity of fatty and other granular debris.

MR. HENRY THOMPSON, *4th of December, 1866.*

4. *Encephaloid disease of bladder and left kidney, &c.*

J. P., suffered four or five years from symptoms strongly suggestive of stone in the bladder, for which he was sounded several times by myself and others. The symptom of which he next complained was pain in making water, referred to the end of the penis and to the neck of the bladder. He lost blood often in small quantities, and passed water with extreme frequency; all his difficulties were much aggravated by exercise.

During the last year of his life, being aged 71, the bleeding increased considerably, and his pain a little. By rectal examination the prostate and bladder presented a mass to the finger, irregular in form, and hard in consistence. About two months before death, a tumour formed in the left malar region, and rapidly increased in size; there was no question now, whatever there might have been before, that the disease was malignant.

At the *post-mortem* examination, the bladder presented marks of long standing and severe inflammation. At three or four places the walls were sloughing. In the substance of the bladder were two or three masses of encephaloid. No part of the left kidney could be found, but a mass of encephaloid occupied its place. The right kidney was apparently unaffected by the disease, but a large mass of it lay in the surrounding fat close to the organ.

Mr. HENRY THOMPSON, 4th of December, 1866.

5. *Case of double moveable kidneys; living specimen.*

The rarity of well-marked specimens of moveable kidneys, and the scepticism of some members of the profession as to the existence of such cases have induced me to bring forward this instance as a small contribution towards the pathology of the subject, and as corroborative of the able observations made by Dr. Hare in his well-known Lectures on Abdominal Tumours.

Mrs. Ward, aged 30, came under my care at the Islington Dispensary, in March, 1866. She then complained of dysuria and dysmenorrhœa, and of a bearing down pain on defæcation. The woman looked thin, and confessed that her diet had of late been both poor in quality and insufficient in quantity.

On examination, I found both kidneys to be extremely mobile, the

left being the more so of the two. Both organs were somewhat larger than natural. The urine was normal. On examining per vaginam, I found the vulva red and tender, and that the cervix uteri was elongated and of a conoid shape. The woman had also leucorrhœa and piles. The painful symptoms of which she complained on first presenting herself were relieved by the remedies prescribed. I kept her under observation for some months, and endeavoured as far as I could to improve her general health. During the whole of this period, however, she complained from time to time of pain in the loins and down both groins. Her means of obtaining nourishment became less, and in consequence she grew thinner. At the present time her kidneys can be very easily felt; even the hilus of the left organ being perceptible to the touch. The account the woman gave of her case was as follows:—Six years ago she fell across a tub, the left side being struck in the fall; she felt very much upset after this; she is sure she did not pass blood with her water soon after the accident. She says, however, that she passed bloody urine about two years afterwards and without any apparent exciting cause; and also that she has had several falls since the first, and notably two years ago over a brick; on this occasion the parish doctor was called in, who thought she was suffering from cancer of the womb, and advised her removal to Guy's Hospital, where she remained a month under the care of Dr. Wilks, who discovered the left kidney to be moveable. Dr. Wilks sent the woman to Dr. Hare, who found the right kidney to be moveable also. Both these physicians, she says, were of opinion that she was not suffering from cancer of the uterus. The woman says that ever since the last fall—two years ago—she has suffered from piles, and pain on passing water varying in intensity from time to time; she says too, that her memory is so bad that she cannot recollect all about herself. (I might, perhaps, here mention that she presented herself at the Society's rooms on the day of her exhibition at eight A.M., instead of eight P.M., although she had full instructions given her.)

It will be observed that there are some points of interest in this case, and they are briefly these:—In the first place, there is a satisfactory history of falls on several occasions. It has been remarked by Rayer that falls and shakes are, occasionally at least, causes of the abnormality in question. Then, secondly, contrary to the rule which usually obtains in cases where both kidneys are moveable, the left is the more mobile organ of the two: and, thirdly, as mentioned by Dr. Hare and by Dr. Gueneau de Mussy, there is the postero-lumbar depression, especially

well-marked on the left side. Such cases are not without an important practical bearing, for, although it must be granted that any mode of treatment at present known can confer but little real benefit upon the unfortunate patients who are the subjects of this condition, they may, as one result of a correct diagnosis, be spared much mental and bodily torture.

Since the exhibition of this case, my colleague, Mr. Heckford, Surgeon to the Islington Dispensary, has informed me that he has recently met with two specimens of moveable kidneys in the dead-house of the London Hospital. I believe Mr. Heckford purposes publishing reports of these cases. DR. ALFRED WILTSHIRE, 18th of December, 1867.

6. *Cystoid enlargement of the kidneys.*

Both kidneys were brought before the Society. The left kidney had been enlarged so as to form a considerable tumour, which was mistaken for a cyst of the left ovary. Mr. Wells gave the following account of the case:—

On the 10th of October, 1866, a married woman, forty-three years of age, called upon me with a letter from Dr. M'Donnell, of Stoke Newington, containing a very full and accurate history of her case. She had been married twenty-five years and had nine children, the eldest being 23 and the youngest 4 years old. She had also had one premature birth and two abortions, the last in 1861. Dr. M'Donnell wrote as follows:—"In April, 1862, she sought my advice for a hard swelling situated in the hypogastric and left iliac regions, the size of an infant's head. Examination externally and *per vaginam* convinced me it was an ovarian tumour. Mr. Solly confirmed this opinion on the 8th of May, 1863. In 1854 and 1855 a swelling was complained of, and had been the subject of conversation between husband and wife, but no advice was asked for at the time. Its situation was much as in 1863. Aching pain was felt, from time to time, in the tumour, without causing any alarm, from the time when it was first noticed by the patient herself. It had increased so much in the early part of 1863, as to suggest the question of pregnancy. Some pain has, at times, been complained of in the lumbar region and lower part of the abdomen, relieved by leeches, fomentations, &c. Leeches have been applied several times; the first time in November, 1863. In the summer of 1863, the patient began to attend the Hospital for Women, in Soho Square, and became an in-patient in January, 1866, with a view to

operation ; but no operation was performed. She remained in hospital twelve weeks, her general health being then very bad, and she was much reduced in flesh and strength. After she left the hospital, the tumour increased in size, extended to the epigastrium, and encroached so much on the chest as greatly to impede the breathing and even prevent her moving about in bed. Assisted by Mr. Forman, of Stoke Newington, on the 4th of August, 1866, I withdrew, by tapping in the linea alba, two gallons of dark discoloured fluid, of the consistence of pea-soup. The opening was made midway between the umbilicus and pubes. The operation was well borne ; the abdomen was entirely freed from fluid, the resonance being tympanitic everywhere and no solid tumour to be felt in the pelvis. She recovered very favourably and has been frequently out of doors since that time. The appetite, which had been entirely wanting for months previously, became, for a short time, very good. Her strength and spirits have improved, though the cyst has re-filled."

It was rather more than two months after this tapping when I first saw the patient, and I then advised her to come into hospital before she became as much distressed as she had been before the tapping. She was admitted on the 17th of December, 1866. The tumour then filled nearly the whole abdomen ; but the right iliac and hypochondriac regions were free ; the tumour extended backwards into the left lumbar region. At the upper and central part there was a patch of crepitus, giving the feeling of adhering omentum ; and all down the front of the tumour, about an inch to the left of the umbilicus, was a cord-like ridge, which was taken by some who examined it for intestine, though it felt very like a large, long, and thick Fallopian tube. The measurements were :—Girth at the umbilical level, thirty-six inches ; from umbilicus to ensiform cartilage, nine inches ; to symphysis pubis, seven inches and a-half ; to right ilium, nine inches ; and to left ilium, nine inches and a-half. There was some mobility in the tumour, both vertically and laterally. Fluctuation was distinct across the whole tumour, in all directions. The left loin was dull on percussion ; the right, tympanitic. The uterus was high ; the os, hard and fissured, admitting the tip of the finger ; the cervix, short. No part of the tumour was below the brim of the pelvis. The catamenia were expected in a few days. They recurred regularly every three weeks, lasting five days. Dr. Junker examined the urine, and reported :—“ No albumen ; deposits of urates, mucus, and epithelium.” She was subject to occasional nervous attacks, during which she was partially unconscious. She said they be-

gan by palpitation. She had four while in hospital; but they were regarded as hysterical, and attracted little attention. The heart and lungs appeared to be healthy. The catamenia came on and lasted a week, ceasing on December 29th; and on the 3rd of January, 1867, chloroform having been administered by Dr. Junker, I made an incision five inches long, extending downwards along the linea alba, from one inch below the umbilicus. On opening the peritoneum, I at once found that the hard roll, or ridge, observed running down the front of the tumour, was part of the transverse and descending colon, adhering closely by means of the meso-colon and omentum, both to the cyst and to the abdominal wall. I separated some of these attachments, in order to tap the cyst safely. On introducing the trocar, about fifteen pints of fluid escaped. It had the appearance of pea-soup. When the cyst was empty, I made some further separation of omentum and intestine; and when passing my hand round the right side of the cyst, what appeared to be another cyst gave way, and between one and two pints of clear fluid escaped. I then found that the deep attachments of the cyst were too close to admit of separation; and, after tying three vessels which were bleeding in the separated omentum and cutting off the ligatures short, I closed the wound.

The patient rallied slowly from the chloroform and complained of pain, which was relieved by an opiate. Two other opiates were given at night—the total quantity amounting to fifty minims of laudanum. Three hours after the operation a small quantity of clear urine was drawn off by the catheter. After this not a drop of urine entered the bladder. At ten P.M., the temperature was $98^{\circ}4$; pulse, 116; respiration, 28. The next morning the pulse was 120, and very feeble; skin, dry; temperature, 98° ; respiration, 30. She was comatose, but easily roused, and answered questions sensibly. The coma gradually became more profound, and she died thirty hours after the operation.

On examining the body seventeen hours after death there was no *rigor mortis*. The wound had united well. There were about four pints of blood-red serum, and a small tea-cup full of blood-clot in the peritoneal cavity. The right kidney was enlarged and very soft; the cortical substance was very friable and pale yellow in colour. The calices and pelvis were much dilated, and the thin sac formed by this dilatation had given way longitudinally. A calculus, weighing forty grains, was in one of the calices, forming a perfect cast of the calyx. The bladder was contracted and empty. The uterus and ovaries were healthy. The left kidney formed the cystic tumour, which is described as follows by Dr Junker:—

“ The left kidney formed a cyst larger than an adult head. It presented one large cavity, composed of several wide pouches, arranged vertically at one side of the principal cavity. The stroma which formed the external wall was of varying thickness; thicker and stronger at the base of the pouches; thinner and less dense around the main cyst. It had a serous external coat; at some places hypertrophied, at others atrophied. Next was a fibrous structure (fibrous capsule of the kidney). This was followed by what appears to have been the cortical substance of the kidney, and from which portions could be traced into the septa (the former columnæ Bertini) which separated the pouches (the expanded calices.) The main cyst (the original pelvis) was formed by the peritoneal and fibrous capsules. The medullary portion could not be well distinguished by the naked eye from the thickened lining membrane. Thus the tumour appears to be a good specimen of genuine hydronephrosis, in which pelvis and calices expand into a large cavity, and produce, by pressure, atrophy of the original structures of the organ. The peritoneal coat was rough with shreds of the broken down, extensive, and intimate adhesions. Some of the neighbouring organs, or portions of them, were so intimately connected with the tumour that their separation was impossible, and portions had to be cut off in order to remove the cyst. Such connexions existed between the spleen, the head of the pancreas, the great curvature of the stomach, principally at the pyloric end, the duodenum, a part of the left lobe of the liver, coils of the small intestine, the omentum and mesentery, and along the entire extent of the vertebral column, as low as the second lumbar vertebra, uninterruptedly, to these bodies and their left transverse processes, and to the right transverse processes of most of the dorsal vertebræ. No adhesion, however, existed between the tumour and the bladder, uterus and its appendages, or the rectum.”

After the information obtained by the *post mortem* examination, I made further inquiry into the history of the case, especially as to the state of the urine, and I learned from Mr. Scott that while the patient was under his care in the Hospital for Women, in January, 1866, the urine contained pus and albumen, was alkaline, and of low specific gravity, about 1005. He had “no doubt of the tumour being ovarian, but considered the case an unfavourable one for operation, believing the front of the tumour was crossed by a loop of intestine which would, in all probability, be firmly adherent throughout its course; from the certainty of considerable adhesion, in consequence of the repeated attacks of inflammation; and from the presence of pus and albumen in

the urine, with a feeble circulation. The quantity of pus varied considerably during her stay in hospital; albumen was pretty constantly present." Dr. M'Donnell has ascertained that, when twelve or fourteen years old, she was struck by an iron shovel with great violence on the abdomen, near the left ilium. "She was felled to the spot, and remained insensible for some (indefinite) time. She was ill afterwards, and attended at St. Bartholomew's and other hospitals for eighteen months as an out-patient. She told her husband that during all this time she 'suffered much from the urine,' but did not explain more precisely the nature of the suffering; for four or five years subsequently to the first period of eighteen months, and for a like period during the first years of married life, she suffered pain and distress referred to this injury. Her pregnancies were always attended with distress—indeed, during her whole married life, twenty-six years, she repeatedly suffered from deep-seated pain in the abdomen where the injury had been inflicted.

Mr. SPENCER WELLS, 15th of January, 1867.

7. *Case of a very large calculus, pouched in the neck of the bladder, and blocking up one of the ureters.*

The specimen was composed of the kidneys, ureters, bladder, rectum, and the pubes and genital organs of an adult male, with a large stone of the uric acid variety placed *in situ* in the neck of the bladder above the prostate. The bladder was firmly contracted, with walls three-fourths of an inch thick, and the cavity was small and funnel-shaped from above downwards, sloping and narrowing uniformly so as to leave no trigone or "basfond." Its mucous membrane was much thickened and altered in structure, and covered with cystoid developments and irregular projections. The prostate was very much atrophied, being not more than half an inch in depth below the urethra. Immediately above it, in the neck of the bladder, was a deep depression on each side, which received and fitted upon the ends of a large hard stone. On the right side the normal structure of the bladder had been entirely removed in this situation, forming an irregular circular perforation of about an inch and a-half in diameter. In the areolar tissue investing it, immediately outside, was an abundance of hard, gristly, fibrinous effusion, dark and discoloured, which was found to surround and enclose the end of the stone when lodged in the pouch, and to be closely adherent to the pubes. The boundaries of the opening were

dark-coloured from congestion, irregularly bevelled and jagged, with a projecting tongue of thickened mucous membrane behind it, which lay in the cavity of the bladder. On the opposite side, the depression did not pass entirely through the coats of the organ. The stone had been laid across the neck of the bladder, above the inner opening of the urethra. Its shape was a flattened oval, very large, hard and smooth. At the right extremity, however, it was rough and as if worm-eaten, with sharp projecting edges, which had fitted into the larger pouch on the right side, where it had pressed upon and obliterated the opening of the right ureter. Both ureters were enormously thickened and dilated. The right kidney was wasted to about one-third of its normal size and converted into a single-chambered sac, with a thin layer of secreting or cortical substance in its walls. The left kidney was hypertrophied to about three times its normal size, with several cysts developed in its thick cortical substance. The prostate was divided clean through on its left side, in the usual place of the lateral operation. In its right lobe was a smaller notch, passing from the centre of the incision. The recto-vesical pouch of peritoneum was healthy and uninjured, with no signs of inflammation around it or the rectal fascia. A lateral incision, three inches long, was present in the site of the ordinary lateral operation of lithotomy, passing, however, a little to the right side of the median line behind the bulb.

At the *post-mortem* examination the sheath of the rectus, from the pubes to the umbilicus, was found filled with a brownish fluid with no urinous smell. It had evidently been the seat of repeated inflammations, as shown by the hard and firm adhesions which bound the surface of the muscle to its sheath, and the atrophy and softening of the contractile fibres. The morbid changes here found were continuously connected with the deposit behind the pubes and around the right pouch of the bladder, and with serous effusion in the false ligaments of the bladder. There were also some signs of recent peritonitis. The heart was much hypertrophied and the upper part of the right lung slightly emphysematous.

The calculus weighed somewhat over four ounces; its largest circumference was seven inches and a-half; its smallest, six inches. On the flatter side of the oval a few layers of the deposit had shelled off in the shape of the blade of the lithotomy forceps, and its right extremity, as before mentioned, was rough and irregular. The history of the case was as follows:—

M. M., aged 46, a single man, of enormous muscular development

and healthy appearance, was admitted into King's College Hospital, on November 17th, 1866. He stated that he had suffered from difficulty in micturition ever since childhood, with all the usual signs of stone in the bladder. The discharge of blood after micturition, and the sudden and entire stoppage of the stream of urine had of late years much increased, the straining being so violent as to bring on copious bleeding at the nose. A year ago, also, a rupture had appeared in both his groins. He had suffered so much of late from continual pains in his back, groins, perineum and end of the penis, as to be totally incapacitated for work, and he was in constant misery from dribbling of the urine, over which he had only a slight control. He had had a slight cough for some time before but with no expectoration. He was otherwise in fair health. Under the stethoscope the heart's action was found to be rather slow and very strong. No abnormal sounds were heard either in the lungs or heart; pulse 60, full. Abdomen soft, but a degree of tenderness was felt on pressure over the hypogastrium. The urine was constantly dribbling, pale in colour, acid in reaction, and of normal specific gravity. There was a slight cloudy deposit of salts, but no albumen could be detected during the week he was under observation, except an occasional faint trace, which was accounted for by the presence of some pus-corpuscles in the urine. No casts of the uriniferous tubules, nor any appearance referable to the kidney could be found by the microscope.

On first using the sound, the stone lay far up in the bladder, but could readily be struck, yielding a hard metallic sound. At one end of it a rough spot could easily be felt; but the impression of its being of the mulberry variety was dispelled by its uniform smoothness in every other part. On a subsequent occasion, the sound could be felt to pass below the stone which grated on its upper surface and along its concave curve. On drawing backward the instrument suddenly, it could plainly be felt to strike the hinder border of the stone with its point. By depressing the handle, the stone could be slightly lifted in the bladder. From this it was inferred that the stone lay usually across the neck of the bladder, above the urethra, over which it was placed like a bridge, and that its size and weight were unusually large, and its composition of the uric acid variety. It was also concluded that the condition of the bladder, and possibly of the kidneys also, was so much deteriorated from the long duration of the disease, and that the size and hardness of the stone were such, that no relief could reasonably be expected from lithotrity. The patient being exceedingly importunate for something to be done

to relieve his intolerable sufferings, Mr. Wood decided upon performing a modification of the lateral operation of lithotomy, as affording the best chance of relief.

On November 24th, 1867, under chloroform, the operation was performed, with the able assistance of Sir William Fergusson. After the introduction of a full sized staff, with a lateral groove, a free external incision, commencing considerably to the right of the median raphe, just behind the bulb of the urethra, and ending between the anus and ischium, was first made, and the knife was then carried along the staff into the bladder, dividing freely the left lobe of the prostate. The left forefinger was then carried into the neck of the bladder. In effecting this some difficulty was experienced, on account of the great depth and narrowness of the perineum, and the great elevation and backward position of the convex curve of the staff. This was afterwards seen to have been caused by the great thickening and unyielding nature of the connections of the neck of the bladder with the pelvis, and the narrow funnel-shape of the cavity, consequent upon the morbid changes which had blocked up the right ureter. The complete introduction of the finger, indeed, could not be accomplished until the staff had been entirely withdrawn.

A probe-pointed lithotomy knife was then carefully passed along the finger, and made to divide the right lobe also of the prostate, so as to give more room for extraction, thus converting the internal incision into a bilateral opening into the neck of the bladder. The stone lay very deep and could not be touched by the finger. It was evidently placed in its abnormal position, high up behind the pubes, and firmly grasped by the contracted bladder. It was seized very readily by the forceps, in a position favourable for extraction end-ways. But on traction being made it was found that, notwithstanding the free incisions, the size and position of the stone were such that great force was necessary to dislodge it. Under the grip of the instrument the smooth, slippery, superficial layers of the calculus shelled off, and caused the forceps to slip twice just as the stone made its appearance at the perineal surface. By the careful application of a larger pair, which completely enclosed the stone, used with a slow, twisting, and dilating traction, downwards towards the coccyx, and aided by firm pressure upon the hypogastrium, the stone was, at the next attempt, successfully removed, a distinct sucking or flapping sound accompanying its extraction. Immediately after it followed a quantity of film-like fibrine and some pus. Not more than eight ounces of blood were

lost during the performance of the operation, and this chiefly from the superficial arteries. A morphia-suppository was then passed into the rectum, and the patient removed.

At ten P.M. he complained of much pain in the abdomen, and was very restless and intractable. Tongue slightly furred. Pulse 120. He had much tenderness on pressure over the hypogastrium. Urine passing freely by the wound. No bleeding whatever since the operation. The bladder was washed out thoroughly with tepid water. No clots were seen. A full dose of Battley's *Liquor Opii Sedativus* was administered. Next day he was reported to have passed a tolerably quiet night, but he had vomited once or twice in the morning. The abdomen was somewhat tympanitic, and very tender on pressure below the umbilicus. Pulse 130 and somewhat jerky. Tongue covered with white fur. The urine passed freely by the wound which looked healthy. At nine P.M. he began rather suddenly to get worse, and throughout the night suffered much from pain, vomiting, and tympanitic distention, with quick, small and intermitting pulse. Towards morning he sank and died at ten A.M.

In the foregoing case the signs in the urine before the operation were not such as to lead to the suspicion of so much kidney-disease as was found to exist, though the length of time he had been ill rendered it probable that there was some degree of renal alteration. The pain and tenderness in the lower part of the abdomen were fully explained by the inflammatory changes in the superior false ligament of the bladder and sheath of the rectus, which had, no doubt, been going on for some time, and had been occasioned probably by small exudations of urine from time to time occurring through the opening in the right wall of the bladder, caused by the rough pressure of the stone. The constant dribbling of the water was accounted for by the unusual position of the calculus, and the limited capacity of the bladder. The difficulty experienced in extracting the stone had evidently been produced, in addition to its large size, by the partly encysted lodgement of the ends, jammed across the narrowed cavity of the neck of the viscus, and the hard and unyielding nature of the consolidated inflammatory deposit surrounding it on all sides and binding it firmly to the pubic bones.

Mr. JOHN WOOD, 5th of February, 1867.

8. *Case of extroversion of the bladder covered with transported flaps.*

Mr. Holmes exhibited to the Society a boy, aged 11, in whom he had succeeded in covering the herniated mucous membrane of the bladder, in a case of congenital extroversion, by flaps of transplanted skin, in a series of plastic operations performed after the method detailed by him in a paper in the *Lancet* for June 27th, 1863. The first operation in this case was performed in April, 1865, and resulted in the formation of a thick and wide bridge, consisting of two layers of apposed skin over the exposed mucous membrane; as this bridge did not entirely cover the cleft, but allowed of some protrusion of the mucous membrane above it, it was reinforced by the formation of similar flaps from either side of the abdomen. This second operation was performed in October, 1865. In the latter part of 1866, the openings which existed between the two bridges, and between the upper bridge and the abdominal wall, were closed by successive small operations, and when the patient was exhibited to the Society, the whole cleft was completely closed and the abdominal wall perfect, without the smallest fistula or deficiency. The urine escaped by an opening above the pubes, about as large as a shilling. This was defended by a urinal.

In the subsequent treatment of the case, Mr. Holmes made an attempt to convert the rectum into a cloaca for the urine, the result of which attempt he hoped to communicate to the Society at a future opportunity.

Mr. HOLMES, 5th of February, 1867.

9. *Villous tumour of the bladder.*

This patient had suffered from derangement of the urinary functions since 1858, the earliest sign having been a little blood mixed with the urine, varying in quantity, but rarely absent. This condition continued getting slightly worse for about three years. During all this time there was no pain, but sometimes there was a little uneasiness when driving and more blood was passed then.

May, 1861.—The patient was now 52 years of age; prostate on being examined was found to be of normal size. Urine drawn off without obstruction, and when examined contained no albumen, but under the microscope were seen numerous masses of small epithelial cells.

In 1862, blood increasing, often coming before urine. Passes water more frequently than natural, and had an attack of retention for first

time. It is stated in the note made at this time "that there is probably a tumour beyond the prostate, as there is a sensation of fulness there."

In 1863, bleeding increased; unable to empty bladder without catheter. Occasionally on drawing off the water, Mr. Thompson found a small flocculent mass, which, when examined under the microscope, was seen to be made up of full sized, spindle-shaped cells, with very distinct nuclei, and arranged in layers which could be dissected apart; doubtless a very vascular growth of some kind in the prostate or neck of the bladder, and probably not malignant.

In 1864 patient weaker with continual loss of blood. No pain.

In 1865 severe attacks of bleeding occurred from time to time; greater frequency of passing water. Large quantity of limpid colourless urine frequently passed.

In 1866 passed almost all urine by catheter. Blood varied much in quantity. Examined by rectum prostate appeared natural, but some thickening felt prolonged backwards on right side. He gradually got weaker and died from exhaustion in January, 1867.

The points of interest in this case are:—

1st. The rarity of the disease itself.

2nd. It is seldom one can obtain such a complete history as is attached to this case.

3rd. The length of time that the symptoms were present, viz., nearly nine years, and

4th. The remarkable absence of pain, which in the other cases reported in the '*Transactions*,' has been an almost unvarying symptom. There can be no doubt that this case fully carries out Mr. Thompson's theory, that the disease is not of a malignant character.

Mr. JOHN B. FOSTER for Mr. HENRY THOMPSON, 19th of February, 1867.

Report on Mr. Foster's specimen of villous disease of the male bladder.

—The growth consists of a principal mass placed transversely above and close to the urethra in the front part of the neck of the bladder, and of numerous small scattered portions growing from the hinder wall. The larger mass, of the size of an ordinary strawberry, is made up of a fold of mucous membrane projecting about half an inch from the surface of the bladder, overhanging the orifice of the urethra, and surmounted by clusters of compound villi, sprouting out on all sides in a polypoid way. The scattered detached portions are composed of similar structures, with raised stem-like bases and sprouting compound

villous tufts. These are implanted chiefly upon rugose ridges of the muscular coat, unusually well marked in the viscus in consequence of the presence of numerous small saccular depressions of the mucous membrane, formed upon the hinder wall in the interstices of the muscular fibres. Few and minute villi only exist near the ureters, the vesical orifices of which are commonly the principal seat of such growths; and there are none within the ureters, ducts, or prostate.

Under the quarter-inch object-glass of the microscope the membrani-form bases of the villi exhibit a fibrillated appearance, with cells and nuclei interspersed. Two or more small and freely anastomosing vessels enter the base of each of the larger villi. The apices of the secondary villi show a pouch-like limiting membrane, full of cells and nuclei, with comparatively little fibrillated structure, and a few anastomosing loops of capillaries. The contents, when dispersed, show oval and elongated cells with single nuclei, and with numerous fat-globules here and there. The whole structure, both to the naked eye and under the microscope, bears a close resemblance to the specimens of villous disease of the bladder and colon described and figured by Mr. Sibley, in Vol. viii. of the Society's *Transactions*, pages 256 and 214.

In Vol. xi., p. 153, is another specimen from the female bladder, discharged during life, described and figured by Dr. Braxton Hicks. In Vol. viii., p. 262, is a report of a like instance from the male bladder, exhibited by Mr. Thompson, which, like that of Dr. Hicks was rather more fibrous in structure than in Mr. Sibley's. In all which occurred in the bladder, much dysuria and bloody urine have, as in the case under consideration, been prominent symptoms. This disease seems to be considered by Rokitansky as a variety of cancer. But the long duration of the disease in the present case, viz., nine years, as in that of Mr. Sibley, viz., three years, and that of Dr. Hicks, viz., two years,—taken together with its microscopic structure, and with the absence of glandular or secondary deposits, leads us to acquiesce in the view expressed by Mr. Thompson and Mr. Sibley as to its *non-malignant character*:

Mr. JOHN WOOD,

Mr. CHARLES H. MOORE, 5th of March, 1867.

10. *Case of calculus in the bladder and urinary infiltration.*

H. W., aged 6, was admitted into the Norfolk and Norwich Hospital, under Mr. Cadge, on February 16, 1867, with urinary infiltration. Penis

and scrotum immensely swelled, red at most parts, gangrenous and black over the front of the testes. The child was in a comatose almost convulsed condition when admitted; but rallied soon after a free incision was made into the scrotum and the foetid ammoniacal urine drained from the tissues and freely flowed from the bladder.

The child had had symptoms of stone for three years, viz: painful, difficult, and frequent micturition; nocturnal incontinence; pulling the prepuce, and wet sodden fingers. Two days after admission a calculus, weighing twelve grains, oval, with pointed extremities, was picked out with detached sloughs from the scrotal wound.

Opium freely used had a marked effect in relieving the convulsive delirium; and this, with ample feeding and cleanliness, soon brought the child into a better condition; the sloughing spread somewhat after the removal of the stone, apparently from the constant dribbling of acrid urine and a very enfeebled constitution; but it soon ceased, and the child is now (March 4th) convalescent.

Mr. HENRY THOMPSON for Mr. CADGE, 5th of March, 1867.

11. *A vesical calculus exhibiting the form of the bladder.*

Mr. Jordan was requested by a medical friend to see in consultation, on the following morning, an old man with vesical calculus. He died a few hours before the time appointed to see him. On examining the body the bladder appeared a little thinner than normal and contracted closely around the calculus now exhibited.

The calculus is of the "triple phosphate" variety; in the phosphatic substance two or more lithic acid calculi are embedded, and, doubtless, constituted the original nuclei. It forms a complete cast of the bladder—showing the apex, base, elongated conical body, and surfaces of that viscus. It does more than this:—The smooth triangular trigone is seen; an elevation represents the internal orifice of the urethra; and two depressions, one extremely well defined, the other less so, in consequence of the proximity of the lithic acid nucleus, show the openings of the ureters. The depressions were probably produced by the solvent action of the urine, which was acid on first entering the bladder. The calculus also shows the position of the recto-vesical pouch by becoming suddenly larger posteriorly, where the bladder loses its rectal attachment. A circular depression running round the concretion a little above the middle, and especially marked at the back and sides, was caused, pro-

bably, by the projection of a circular, hypertrophied, fasciculus of muscular fibre.

Mr. HENRY THOMPSON for Mr. FURNEAUX JORDAN, 5th of March, 1867.

12. *Parts removed after median operation for lithotomy in a child.*

Mr. Henry Smith showed the parts concerned in the median operation for stone, taken from the body of a boy aged 2, who was enormously fat, and in whom the operation was rendered thereby exceedingly difficult. A very small stone was removed, and the patient died from shock twenty-four hours afterwards.

Mr. HENRY SMITH, 2nd of April, 1867.

13. *Urine from a case of intermittent hæmaturia.*

The specimen of urine exhibited to the Society was passed by a child aged 7 months, who came under my care at the Islington Dispensary for a slight attack of bronchitis, on the 9th of March. A few days after the child's first visit to the Dispensary he began to pass bloody urine, and continued to do so at intervals (especially after exposure to cold) from the 12th to the 20th of March. The greater part of the urine passed during this period, however, was perfectly normal. Perhaps, I might here mention, that the weather at this time was particularly inclement.

During the whole of this time the child appeared lively and well, the bronchitis having readily yielded to treatment.

The mother stated that the child's skin occasionally turned yellow (the colour, however, speedily disappearing), and that she had observed more than once "a kind of goose-skin appearance." She added that her child had been vaccinated a few days before his first visit to the Dispensary. Two healthy cicatrices were visible on the left arm.

The specimen in question possessed all the characters of the urine of intermittent hæmaturia, as mentioned by Drs. Harley, Dickinson, Murchison, and Pavy*—viz., amorphous yellow deposit, non-deposition of the red colouring matter, prolonged resistance to decomposition, and absence of blood-corpuscles.

Dr. ALFRED WILTSHIRE, 16th of April, 1867.

* See *antea*, page 157.—Ed.

14. *Renal calculi from a large renal tumour.*

These calculi were seven in number and varied in chemical composition:—The largest was an inch and a-half in its long diameter; the smallest was as large as a hazel-nut; two were smooth; five were rough and very irregular in outline, being moulded to the enlarged pelvis and calices in which they were found, with the mucous membrane closely adhering to them. The left kidney, in which they were found, had been enlarged so as to form a considerable abdominal tumour, in a single lady 59 years of age. She first consulted Mr. Wells, in June, 1865, who then thought the tumour, which filled all the left side of the abdomen and extended upwards under the left false ribs, was a mass of soft cancer. The mother of the patient had died of cancer, and she herself had been subject to hæmorrhage from the rectum. The tumour had been observed for nearly two years, but its increase had only been rapid for about six months. In August, 1866, fluctuation was detected in the upper part of the tumour, and five to six pints of yellowish pyoid fluid, with mucous flakes floating in it, were removed by tapping. A roll of intestine adhered to the upper part of the tumour on the right side. Relief followed the tapping for a time; but a second tapping was necessary in November. The true nature of the tumour then became apparent. The presence of intestine in front of the tumour, and the limitation of the tumour to the left side of the abdomen, while the uterus was freely moveable, were the chief guides in diagnosis, as the urine was normal and there was nothing characteristic in the fluid removed by tapping. In April, 1866, the patient fell when out walking and ruptured the cyst. She died twenty-eight hours afterwards; and Dr. Morton, of the Abbey Road, found a large quantity of turbid fluid in the peritoneal cavity, corresponding with similar fluid found in a large ruptured cyst of the left kidney. The renal tumour filled all the left half of the abdominal cavity. Its lower end dipped down into the pelvis, but was quite free. Its upper end adhered to the spleen. The ruptured cyst contained, besides the fluid, a quantity of very thick viscid mucus. One of the calculi was loose in the cavity, as well as a quantity of lithic acid gravel. The other calculi were embedded in the pelvis and dilated calices. The ureter was completely occluded, and no communication could be found with the bladder. The right kidney was slightly enlarged. The uterus and its appendages were healthy.

MR. SPENCER WELLS, 7th of May, 1867.

B. MALE GENITAL ORGANS.

15. *Prostate of enormous size.*

J. B., aged 81, suffering from chronic prostatic retention, had passed No. 9 elastic catheter for himself every four or six hours, for several years; catheter fourteen inches long, and had to be passed to its full extent before reaching bladder. On one occasion he appears to have made a false passage, which was followed by rigors, fever, dry brown tongue, nausea, exhaustion, and death after three or four weeks' illness.

Post-mortem examination.—Bladder reached nearly up to umbilicus, not because of distention, for it was half empty, but it lay high and superficial, owing to the large size of prostate beneath: it was not thick in its walls, nor unhealthy in any respect; the mucous membrane was sacculated in many places.

The prostate was of enormous size; it occupied nearly the whole floor of the pelvis, and Mr. Cadge could only just pass the finger between the posterior border and the promontory of sacrum. It weighed just *twenty ounces*; its extreme length was five inches; width, four inches; vertical depth, three inches and a-half; prostatic urethra three inches and a-half long; it was firm in structure and apparently consisted of ordinary hypertrophy, but no section was made. Both lateral lobes of about equal size; median portion not apparent. A false passage commenced about the middle of the floor of prostate and emerged at the extremity of the left lobe. A catheter (No. 8) is seen in it. There was a small abscess below the urethra in the course of the false passage. The specimen is in the Norfolk and Norwich Hospital.

MR. H. THOMPSON for MR. CADGE, 4th of December, 1866.

16. *Cystic disease of the testicle.*

The specimen was removed from a patient in the Middlesex Hospital on the 7th November. He was a groom, 35 years of age, generally healthy. Eight months ago he bruised the testicle against the pommel of the saddle. This was immediately followed by great swelling and ecchymosis, which subsided in two months; but the right testicle continued hard.

A week after the accident the testicle was tapped, but only blood came away.

At the end of two months the testicle began again to enlarge. It was again tapped, and "a sort of matter and congealed blood" escaped. Six weeks after it was again tapped, and thin fluid and liquid blood was discharged; then a seton was introduced, but without diminution of the swelling.

Two months ago the testicle was laid open; blood and thin fluid came away. The wound healed except at its upper and lower end where there remained sinuses leading into a cavity, from which blood escaped after the introduction of a probe. During all this time he had no pain.

On his admission into the Hospital on the 2nd November, there was an elastic sub-globular swelling, about five inches and a-half in its longer diameter. He could not distinguish the situation of the testicle when pressure was made, nor was there pain or tenderness.

The history and the appearance of the cicatrix of the incision led me to regard the tumour as one of hæmatocele. Before extirpation an incision was made which revealed its true nature, and it was at once removed.

The tumour presents the characters commonly found in this somewhat rare disease. It contains numerous cysts, of sizes varying from that of a small pea to that of a walnut; some of the cysts contain small solid in-growths, others sub-cysts. In some there is a clear straw-coloured fluid; in others the fluid is dark but moderately limpid; while in others it is thick, the colour varying from that of pus to that of dark blood. In the walls of the cysts are one or two small deposits of cartilage; but there is no bone in the existing section.

At the posterior, and especially its upper part, the normal tissue is spread out upon the surface of the diseased mass, with which it is intimately connected.

The cavity of the tunica vaginalis is obliterated posteriorly. At the anterior part its layers are separated by thick adherent coagula and fibrine layers.

The septa enclosing the cysts are composed mainly of connective tissue, the cysts having an epithelial lining.

The cyst-contents are granules, granular corpuscles, delicate corpuscles like those of mucus, nuclei, oil-globules, and blood-corpuscles.

Apart from the structure of the tumour the interest attached to this

case is the confirmation it gives to the opinion that cystic growths are often the direct result of local injury.

MR. C. DE MORGAN, 4th of December, 1866.

17. *Case of carcinoma fibrosum of the left testicle.*

Mr. J. C., a farmer, aged 64, was admitted into Guy's Hospital, under my care, on December 11th, 1866, with a disease of his left testicle.

He was a healthy man and had had two wives and ten children. His right testicle had been always very small; the left was of the natural size, although placed somewhat higher in the scrotum. A year ago he first observed his left or healthy organ to enlarge; it was also painful, the pain shooting up the cord. The enlargement gradually increased, but for the last four months it had been more rapid.

On admission the organ was the size of a good fist, placed high up in the scrotum; it was of a stony hardness and somewhat tender, with a smooth external surface. The cord was short. There was also some slight enlargement of the inguinal glands, but no evidence of disease in any other part.

The testis was excised on December 15th, and turned out to be a splendid example of that rare form of disease, the hard cancer of the organ. The body of the gland, the rete testis and epididymis were all apparently involved. A section measured four inches and three-quarters by two and three-quarters. To the naked eye, and under the microscope, all the ordinary features of the hard cancer were to be seen.

MR. THOMAS BRYANT, 18th of December, 1866.

Report on Mr. Bryant's case of hard cancer of the testis.—From a careful examination of the sections taken from different parts of the testis and epididymis, we find that in some situations the fine structure exhibits a frame of fibrous connective tissue, the alveoli of which are filled with masses of cells of an epithelioid type, without a true intercellular substance, and with a great preponderance of the fibrous tissue. From an anatomical point of view, we regard the parts of the tumour showing this structure as hard cancer.

In other situations, however, small roundish cells are closely packed in the intercellular matrix, intersected by interstitial bands of connective tissue—characters marking one variety of the group of sarcomata (as defined by Virchow in '*Die krankhaften Geschwülste*'). We

are, therefore, of opinion that the tumour is a mixed one, containing side by side cancer *stricto sic dictum* and sarcoma.

MR. T. B. CURLING,

MR. J. W. HULKE, 15th of January, 1867.

18. *Chronic enlargement of the testicle from inflammatory infiltration.*

J. S., a twine-spinner, aged 36, was admitted into Guy's Hospital, under my care, on November 29, 1866, after having been under observation for some months with an enlargement of the right testicle. It appeared that fifteen years previously he had gonorrhœa, and at this time the testicle first inflamed. He recovered completely from this attack and remained well till nine years since, when, after lifting a heavy weight, the same testicle began to enlarge, and since that date it had been "always bad." During the nine years many abscesses had formed in the organ and had discharged themselves through the scrotum. He had never had syphilis. On admission the testis was much enlarged, being as large as a good sized egg; it was hard and tender, although the absence of the true testicular sensation on pressure was very marked. Several sinuses existed leading into the organ, and the scrotum was firmly glued to the gland by inflammatory product. It was clear that the organ was not worth preserving, and that excision was the best practice. The operation was performed early in December.

On examining the testicle it was evident that the body of the gland was completely infiltrated with inflammatory fibrinous material, and that large masses of yellow fibrous tissue existed in the centre of the gland dividing its substance. Some small portion of the organ appeared to be healthy and to be spread out over the diseased part, but the bulk of the gland had been evidently destroyed. The epididymis appeared also to be involved in the disease.

The specimen must be regarded as a good one illustrating the effect of chronic inflammation of the organ. It measured three inches and three-quarters by two and three-quarters in its two diameters.

MR. THOMAS BRYANT, 18th of December, 1866.

19. *Recurrent fatty tumours of the spermatic cord and scrotum.*

In May, 1863, I exhibited at a meeting of the Society a large lobulated fatty tumour, weighing upwards of a pound, which I had removed in that month from the left side of the scrotum, lower part of the abdomen, and inner part of the left thigh of a gentleman, who had undergone three previous operations—the first by Mr. Lawrence, in 1845, the others by myself—for fatty tumours in the same part of the body. I then stated that in all my operations I had been careful to remove every portion of fat, so that none might remain to form the nucleus of a fresh growth. About eighteen months after this last operation the patient, a lean man, who had attained the age of 56, noticed a small swelling at the inner part of the left thigh. This steadily increased, and, in May 1866, he called and showed me a pendulous tumour, about the size of a hen's egg, growing from the inner part of the thigh near the cruro-scrotal fold, and another swelling beneath the old cicatrix near the pubes. A fifth operation was performed on May 29th, 1866. After removing the pendulous growth, I found and excised a well-defined oval fatty tumour, the size of a hen's egg, embedded in the muscles of the thigh beneath the pectineus. Some troublesome dissection was required to remove this as well as the fatty mass attached to the pubes. Dr. Richardson deadened the parts with the ether-spray during the whole of the operation, which was necessarily somewhat tedious. The tumours, after removal, weighed about three-quarters of a pound. The patient was afterwards attacked with erysipelas and pleurisy, and his urine became albuminous. The wound nearly healed, but he did not regain health, a bed-sore formed, and after lingering fifteen weeks he died.

This case presents several features deserving of notice, and its previous history is fully recorded in my book on the '*Diseases of the Testes,*' &c. (third edition, p. 522). The chief point of pathological interest is the persistent tendency to the formation of adipose growths on the site of the original tumour and in the adjacent part of the thigh. I know of no similar case of recurrent fatty tumours.

Mr. T. B. CURLING, 15th of January, 1867.

Report on Mr. Curling's specimens of recurrent fatty tumours of the spermatic cord and scrotum.—The specimens present for the most part the appearances met with in ordinary fatty tumours. There are, however, certain peculiarities in their mode of growth and in their struc-

ture. In place of being separated from the structures in which they are embedded by a sheath of connective tissue, so as to permit of their complete enucleation, or attached to them by a neck consisting of the same elements as the tumours themselves, they originate in a pedicle which has in all instances been cut through. This pedicle contains a large amount of delicate fibroid tissue, which towards its root is arranged in the form of bundles; these spread out and form at first small and then larger areolæ, in which the fat-vesicles are deposited. At the root the fibrous tissue constitutes a large proportion of its thickness, and here it presents some resemblance to foetal connective tissue, particularly in the presence of numerous minute immature connective tissue corpuscles amongst the fibrous bands, while towards the remoter parts the characters are simply those of ordinary fatty tumours.

In the larger tumour there is this further peculiarity:—The greater part of it consists of a globular mass of fat, containing but a very small amount of connective tissue, and is enveloped in a capsule which spreads over it from the pedicle. This capsule becomes thinner and thinner the further it is removed from the pedicle, and in some places has disappeared.

The constant occurrence of a peduncle and the evidently active growth of connective tissue in this case are in harmony with the recurrence of the tumours *in loco*.

MR. CAMPBELL DE MORGAN,
MR. J. W. HULKE, *5th of March*, 1867.

20. *Remarkable out-growth from the prostate.*

A gentleman, aged 84 years, had first noticed difficulty in making water for about five or six years previous to his death. During the latter two years of his life he rarely passed any urine except by aid of the catheter. His urine was alkaline and contained muco-pus and phosphates.

He occasionally passed blood, although not in large quantities, and complained of shooting pains along his urethra, with a sense of weight in his perineum. The pain and uneasiness were increased by exercise, and more especially by riding in any vehicle. There were no distinct symptoms of stone in the bladder, and indeed its presence was not even suspected, until one day a hard substance was felt to grate against

the silver catheter, the tumour of the prostate seemingly preventing the stone pressing upon the neck of the bladder. There was little or no difficulty in the introduction of the catheter.

His appetite failed and he gradually sank from exhaustion, dying in the beginning of March of the present year.

At the *post-mortem examination* the following conditions were discovered:—On opening the bladder a pear-shaped fibrous tumour of the size of a chestnut was found, evidently springing from the median portion of the prostate by a pedicle, and projecting into the bladder. It contained within its substance exceedingly well-developed, small, prostatic, fibrous tumours, about the size of large peas. From its position and its moveability, it evidently acted as a valve, the orifice of the urethra being completely closed to the exit of urine from the bladder. Behind the tumour was lying a triangular, phosphatic calculus, measuring 1.75 inch in length, 1.68 inch in breadth, and 1 inch in thickness. The mucous membrane of the bladder did not show evidence of any large amount of inflammation.

On the surface of the calculus a smooth surface is evidently seen, leading to the conclusion that it was at that point in contact with the tumour, or that it was caused by the introduction of the silver catheter, as the stone latterly was always felt on the introduction and withdrawal of that instrument.

MR. HENRY THOMPSON *for* Dr. R. RATTRAY, 16th of April, 1867.

C. FEMALE GENITAL ORGANS.

21. *Case of cystic tumour of the ovary opening into the rectum.*

Elizabeth C., aged 37, was admitted into the Middlesex Hospital under my care on August 23rd, 1866. She had been married twice, but only had one child still-born (1852) and never any miscarriages. The catamenia were regular, the last period having ceased the day before admission. At the age of 16 she had been laid up for six weeks with scarlet fever, but she did not know if she had dropsy. Ever since she had suffered from pains in her back, and for the last eight years she had been liable to general dropsy and attacks of erysipelas of the face. About eighteen months before, she had first noticed a swelling in the lower part of the abdomen which had been slowly increasing.

On admission, the abdomen was found considerably distended by a tumour rising above the pubes and reaching to the umbilicus. It appeared to occupy a middle position in the abdomen, but could be traced more readily into the left inguinal region than into the right. The tumour was dull on percussion and distinctly fluctuating; behind the tumour, in either flank, percussion yielded a tympanitic sound. Both lower extremities were much swollen, œdematous, and tender, and the face was slightly puffy. The cardiac and respiratory signs were normal, but the areas of hepatic and splenic dulness were increased. The urine contained a considerable amount of albumen, and deposited epithelial and oily casts; its specific gravity was 1016; the pulse was 96 and feeble and there was occasional vomiting. On August 25th the patient began to suffer from diarrhœa; the motions contained blood; and there was considerable tenderness of the abdominal tumour.

On August 31st the diarrhœa continued; there was no pain in defæcation; the tongue was clean and too red and the breath was very offensive.

On September 10th there was no abatement of the diarrhœa, notwithstanding the free exhibition of astringents. The tongue was dry and brown and the breath extremely offensive. The patient was entirely prostrate, drowsy (from opium?) and occasionally delirious. There had been no rigors or sweating, and there was no diminution in the size of the tumour, the girth of the abdomen being the same as at the time of admission (thirty-six inches).

On September 11th the motions were observed to contain a quantity of pus which continued to be passed for three days, and on September 17th all signs of the tumour had disappeared, the percussion sound above the pubes being equally tympanitic as in the flanks.

After this there was little diarrhœa, but the patient continued to sink, and died on September 19th.

At the autopsy a thick layer of fat was found beneath the skin (half an inch over the abdomen). The heart and lungs were healthy. The liver weighed fifty-three ounces; the right lobe was much atrophied and deeply lobulated; but the left lobe was enormously increased, being nearly three times the size of the right; its structure appeared healthy. The spleen weighed twenty ounces, was very firm, and presented the typical characters and reaction of waxy degeneration. The two kidneys weighed together eighteen ounces and a-half; both were pale and smooth, pale-yellow and opaque; their cortex was greatly hypertrophied and their secreting cells loaded with oil.

On first opening the abdomen, no tumour was visible. The intestines came down to the pubes; but on raising a few coils, a collapsed cyst about the size of a cocoa-nut was seen in the situation of the uterus. On further examination, this was ascertained to be a cyst of the left ovary, which had emptied itself by an opening the size of a four-penny piece into the rectum four inches above the anus. Its walls were fibrous and about half an inch thick, and it contained a little dirty, very foetid pus. The sigmoid flexure of the colon took a turn transversely to the right side across the upper part of the tumour to which it was firmly adherent. The free end of the appendix vermiformis also adhered to it. There was no ulceration of the mucous membrane of the rectum round the opening into the ovarian cyst.

Remarks.—This case illustrates a very rare mode of termination of ovarian tumour. No similar case is recorded in any previous volume of the '*Pathological Transactions.*' In the fourteenth volume (p 201) Dr. Bristowe records a case where there was a communication between an ovarian cyst and the rectum; but in that case there was extensive tubercular ulceration of the bowel, and the perforation advanced from the bowel to the ovary.

Dr. MURCHISON, 16th of October, 1866.

22. *Dermoid ovarian, and many piliferous cysts. Spontaneous opening of the former at the navel.*

A married woman, aged 28, had an abdominal tumour for ten years, which commenced low down on the right side. Three years ago she bore a small child, at the full period. The tumour at that time was of half its present size. A month ago she felt pain and swelling about the navel. Nine days ago the navel opened, and a good deal of pus came away.

April 30th, 1866.—She was admitted into the Middlesex Hospital, under the care of Mr. Moore. The abdomen was larger than at the full period of gestation, prominent and uneven. The lower part of the swelling was firm and fixed; the upper two-thirds of it, particularly on the left side, were soft. At this point it could be impressed with the hand, and would retain the impression, as if it contained pultaceous matter. She felt ill, and had tenderness at the navel and upper left side of the abdomen. The pulse was rather accelerated, the skin dry

and scurfy, the tongue rather dry, and she complained of thirst. She was ordered a linseed-meal poultice on the abdomen, and an effervescing saline.

May 1st.—After a restless night she was found hot, feverish, haggard, and in pain. Pulse 120. Tongue dry, though clean. Skin harsh, hot and dry. The abdomen was very tender at the upper and left part. A probe, passed through the opening at the navel, entered freely in every direction except downwards. It could be felt directly under the abdominal parietes on the right side. Pus escaped from the navel in a stream when the abdomen was pressed. It was mixed with pultaceous lumps, of the colour of pus, and showing the appearance of pus under the microscope. The symptoms appeared to be partly due to peritonitis, and any attempt to extirpate the cyst whilst they continued was deemed improper.

After chloroform had been administered, Mr. Moore enlarged the opening at the navel by an incision in the linea alba, three inches in length, and opened a cyst, but not peritoneum. This opening disclosed a vast quantity of pultaceous epidermal secretion of a cyst, mixed with hairs. Here and there a little bone grew in or from the cyst-wall. A little below the incision an incomplete septum could be felt, partly dividing the cyst into two parts, and in the lower part could be felt a fixed fleshy mass, riddled with openings, and containing tooth-like projections of bone. About seven pounds of the putty-like stuff were scooped out of the two compartments of the cyst; and, with the view of preventing the offensive fœtor which was likely to arise, the cavity was washed out with about three pints of a tepid lotion of the chloride of zinc, of the strength of twenty grains to the ounce.

The progress of the case was at first satisfactory. She had occasional subcutaneous injections of morphia, and after a little vomiting her condition improved. On the second day after the opening of the cyst the pulse came down to 104, the abdominal pain subsided, though not the tenderness, and she moved over in bed with little discomfort from the effort. On the third day, however, she was pale and very low, the pulse rose to 132, and she vomited every eight or ten hours. This last symptom became more frequent, and a noisy gulping hiccough came on, in which air seemed to be swallowed. With increasing exhaustion she lived on till the 8th of May. Some remaining contents of the cyst escaped daily, and two days before death they were fœtid; but the offensiveness was corrected by renewed injections of a lotion of chloride of zinc.

May 9th, 1866. Post-mortem examination.—Body moderately nourished. Some red stains of the skin over the course of the veins of the arm. A dark brown vertical wound, two inches and a-half in length, near the navel.

The disease consisted of one vast cyst, adherent at almost every part of its surface. The abdominal parietes were firmly bound to it, except below, where a circumscribed cavity of the peritoneum still existed for a few inches above the flattened bladder. The membrane at that part was acutely inflamed, and contained pus and shreds of lymph. Two small and similarly isolated spaces existed behind the lower part of the cyst, and these also were acutely inflamed. In all other parts the connections of the cyst with the adjoining structures were old, exceedingly tough and close, and free from inflammation. The edge of the liver was inseparably bound to the cyst, and the diaphragm and liver were firmly adherent to one another. The small intestines also were bound to the cyst and to one another, by thin and extensile although complete adhesions. The great omentum was distinguishable above and behind the cyst; it was shrunken, and not completely adherent to the cyst, and it contained fat.

The wall of the cyst was tough, and in parts cretaceous. In some situations it resembled the section of the intervertebral substances, being disposed in compact white fibrous layers; and it was from an eighth to a quarter of an inch thick. Its lining membrane was of a dull pink hue, glistening, entirely free from lymph and pus, slightly rugous. In some parts the general smoothness of the interior was broken by shallow depressions, which were bordered by so abrupt an edge as to appear to have been produced by a rent of an originally continuous surface, or else by the rupture into the principal cavity of small cysts in the wall, which, as they were subsequently flattened out, contributed to the enlargement of the main cyst. These depressed portions only of the inner surface were covered with adherent hair. Other loose hairs lay in the cavity, mixed with the pultaceous matter. The cavity of the cyst was partly divided into an upper and lower moiety by a septum a little below the incision, but on the right of this septum there was a free and large opening. In the upper part of the cavity was about half-a-pound of pultaceous matter and hairs, almost free from offensive odour. The space below the septum was loosely filled with a soft, solid, red, and irregular mass, containing fragments of offensively smelling pultaceous matter and loose hairs. The solid growth adhered posteriorly to the wall of the cyst, and by a few thin

bands and cords to its side, but was not attached in front. It was a fleshy mass, largely riddled with holes and spaces, and covered in parts with a thin red texture, indistinctly resembling porous skin. It contained very perfectly formed small teeth, like incisor and bicuspid milk-teeth, of which some were in rows and others single; some were implanted by their fang, and one or two, though possibly by handling, were dislodged. This whole mass could have been easily removed from the cyst by continuing the incision down the linea alba and through a part of the septum behind it.

In dissecting below and behind the cyst, the right ovary and Fallopian tube were found a little enlarged, containing fluid and bound by adhesions to one another and to the main cyst. The uterus was healthy but elongated, sloping to the left and wholly adherent to the cyst. The left Fallopian tube, unaltered in size and pervious for two or three inches at its uterine extremity, was at its other part not traceable in the adhesions and in the wall of the cyst. The natural left ovary was likewise not discovered.

Among the peritoneal adhesions were many small cysts, some of which were attached by slender pedicles to the main cyst; whilst others were entirely unconnected with it, but, like it, contained soft, cheesy, yellow epithelium mixed with hairs. One was in the great omentum. Two, which were in or near the right broad ligament, and of the sizes of a nutmeg and a walnut, had ossified or chalky walls. Many small ones were in situations where they might have been supposed to be diseased absorbent glands, as in the pelvis and mesentery; but, as perfectly healthy glands were found near them, and there was no trace of enlargement of any lymphatic vessels, they were probably all external to the absorbent system. The largest of the loose cysts lay among the adhesions of the small intestines. It was completely separated by the bowels from the principal cyst, and it was rather larger and longer than a hen's egg.

In most of the occurrences related in the foregoing report there is nothing unusual, or which might not be expected from the known peculiarities of dermoid cysts. The cyst grew to a great size; it acquired very close adhesions with adjoining structures; it contained a solid fleshy mass, which, in producing teeth, skin, and hair, had reached the utmost limits of resemblance an unimpregnated bears to an impregnated ovum; it secreted, not the usual liquids of ovarian cysts, but a thick paste of shed epidermis; and, having supplicated, it opened at a convenient place for the discharge of the pus.

There appears, however, a distinctive interest of the case in the vast number of the smaller, but somewhat similar cysts, which were found loosely attached to the principal mass, or were even completely separate from it and growing in structures entirely unconnected with the ovary. And it is the strange isolation of these cysts that provokes some inquiry into their origin.

They were either formed from the principal ovarian cyst, or they sprang up in the places in which they were found. Either supposition is reasonable. For dermoid cysts are found in situations which make it inconceivable that they should have first sprung from the ovary; in the brain, for instance, or beneath the peritoneum of the rectum, or, as in the present instance, in the great omentum.

But, inasmuch as dermoid are like other ovarian cysts in being sometimes multiple, and as the majority of the tumours in the present case were connected, however loosely, with that to which the Fallopian tube and ovarian ligament were attached, it is probable that those which were quite separate at death had yet sprung from the original cyst.

Of what nature was the original connection between them?

Either the cysts, now separate, were once parts of the primary cyst, and loosening themselves by the lengthening and then by the rupture of their pedicles they started in independent life, nourishing themselves at the expense of the adhesions in which they were lodged; or, though formed in the wall of the main cyst, they were cast loose at their first extrusion from it.

Now, an inspection of the interior of the large cyst shows that secondary or, more correctly, smaller cysts had burst into it. Others likewise may have burst outwards into the peritoneum. The rupture of an ordinary ovarian cyst usually causes a fatal peritonitis; but a dry cyst, such as these, would produce mischief in its bursting, which might be limited and consistent with recovery. Such peritonitis had occurred in the present case.

Dr. Woodham Webb defined two ovarian tumours, removed by Mr. Spencer Wells, to be growths in excess of true ovarian structure, distinguishing in them clusters of ovisacs of various sizes, in the smaller of which were ova and other natural contents, whilst the larger enclosed repeated generations of imperfect ova. This explanation of the nature of a multilocular ovarian cyst appears to justify the opinion, that the main cyst in the present case was the overgrown ovary, and the attached smaller ones ovisacs; and that, as some of the latter burst

into the great cyst, discharging their contained ova into the innutritious soil of hair and epidermal secretion, others burst outwards, the ova of which, falling into the lymph produced by their own irritation of the peritoneum, acquired adhesions and nourishment after the manner of an extra-uterine foetation. The extent of their development fell short of that of the main cyst. In it alone were teeth and flesh produced, and that only near the entering blood-vessels: the separate cysts being nourished only from adhesions were stunted in their growth and produced only skin, epidermal secretion, and hair.

In connection with the above case I may relate the following:—

Unconnected dermoid and ovarian cysts. Probable detachment of a growth from the interior of a cyst.—In the body of a woman who died in the Middlesex Hospital was found a tumour, of immense size and sub-globular form, incorporated with the left ovary. The structure of the original organ could not be made out. The posterior five-sixths of the mass consisted of two cysts, each capable of holding many quarts. The principal cyst, that, namely, next the stalk of the tumour, had on its inner surface two kinds of projections:—1. Secondary cysts, of various sizes, containing liquid; and, 2. Greenish-grey solid masses, two or three of which were each larger than an egg, of irregular form, and exhibiting on section a reticulated structure, the meshes of which contained either red or decolorized fibrine, or else a colloid substance intersected with fibres. Two of these masses were free, one attached by a stalk. This cyst was ruptured, and the peritoneum was acutely inflamed. A vein had also burst on its inner surface, and much blood had escaped. The mass of the tumour in front of the two large cysts consisted of innumerable conglomerate cysts, some containing grumous and some gelatinous matter.

In the retro-uterine pouch, and in relation with the front of the rectum, was a flattened sub-triangular mass of bony hardness, measuring an inch and a-half by an inch. It lay in the sub-peritoneal cellular tissue, but was not in direct connection with the rectum. Its contents were a mass of felted hairs; in fine, it was a dermoid cyst. *Post-mortem Register*, Middlesex Hospital, 1861, No. 1594.

Mr. MOORE, 6th of November, 1866.

23. *Specimen of ruptured Fallopian tube from which an early ovum had escaped into the peritoneal cavity.*

The patient, aged 30, the mother of four children, expired four hours after a sudden attack of syncope, which was accompanied by intense abdominal pain. She had menstruated seven weeks before her death, and had enjoyed good health up to the time of her attack.

The abdominal cavity was found at the *post-mortem* examination to contain about five pounds of coagulated blood. In the right Fallopian tube, near its uterine extremity, was a rent three-quarters of an inch in length filled with coagulum; and at the torn spot the walls of the tube were thinned and dilated to the size of an almond.

MR. JESSOP, 20th of November, 1866.

24. *Fibro-cystic disease of the uterus.*

The subject of this tumour, Mrs. R., aged 47, was seen by Mr. Isaac Browne early in March last, in consultation with Mr. Grewcock, of Pershore.

The lady had been twice married, and had borne two children by her first, and one by her second husband. The tumour had been observed for nearly seven years, but had probably been even longer in its formation. The monthly periods had been increased, but not to the extent of excessive menorrhagia. The prominent symptoms, for which relief was sought, were continual sickness unallayed by any remedy and most obstinate constipation, almost amounting to obstruction. The pain in the tumour was at times considerable.

The patient had been seen by Mr. Cooksey, of Malvern, and by many other Surgeons from Birmingham, Worcester, &c., and the opinion was that she suffered from an ovarian cystic tumour. On examination there was found an enormous abdominal tumour, freely moveable, and communicating on percussion, not exactly fluctuation so much as an impulse; the tumour, however, evidently contained fluid.

In front of the tumour, situated about a third of the distance between the os pubis and umbilicus, was a round moveable body, which was at the time suggested to be the uterus, although on touching the os with the finger per vaginam, and pressing this body externally, no impulse or sense of *ballotement* was felt.

The uterine sound showed the uterus to be about three inches and a-half in length and anteverted.

In the specimen before the Society it would be seen that the cavity of this organ was nearly an inch longer than the measurement made during life. This difference might be accounted for by the fact that at the fundus was situated a polypus, which, combined with the anteversion and the impaction of the uterus by the tumour, would not allow the sound to travel further. The tumour appeared to be free from adhesions in every direction.

The diagnosis was, that the exact nature of the tumour was doubtful, but Mr. Browne inclined to the belief that it was rather a uterine fibrocystic than a pure ovarian tumour. This opinion was explained to the patient, and she was distinctly given to understand that it was impossible to be quite sure of its nature until an incision was made. She, however, was most anxious for its removal; saying that in her present state life was an intolerable burden, and that she would sooner run the risk of the operation than continue in her miserable condition.

It was therefore determined to operate, and arrangements made so that, in the event of the doubts as to the nature of the disease being verified, the uterus and appendages should if possible be removed entire. The operation was performed on March 22nd; the operator being assisted by her medical attendant, Mr. Grewcock, Mr. Cooksey, of Malvern, Mr. Martin Woodward, of Pershore, and Dr. Ord Mackenzie, late of the King's Own Hussars, who kindly administered chloroform.

As soon as the abdominal incision was made, the truth of the opinion given before the operation was commenced was at once confirmed. The uterus was seen lying in front of the tumour with the ovaries on each side quite free, although each had small cysts developed on it. The tumour consisted of one enormous cyst and seemed to spring from the posterior wall of the uterus; it was composed of one large sac, of which a portion descended to the pelvis occupying its entire cavity; there was a constriction at the brim, and then the cyst continued upwards into the abdomen. This latter portion was twice the size of that in the pelvis. On passing the hand around there did not appear the least difficulty in removing the tumour, and although the operator was at first inclined not to proceed, it was on consultation unanimously decided to make an effort towards completion of the operation. The tumour was therefore tapped and about four pints of clear and thin fluid drawn off. To obtain this, it was, however, necessary

to thrust the trocar in various directions, as the tumour was so closely reticulated by strong fibrous bands. The broad ligaments were divided on each side by the actual cautery, on the right the hinge-clamp of Mr. Baker Brown was used, on the left the parallel clamp of Mr. Chambers; both answered equally well. It was, however, now found that the tumour was attached low down to the rectum and to the iliac fascia in such a manner that it was perfectly impossible to separate it without injury to the bowel, and if a portion were left behind no means suggested themselves to arrest the hæmorrhage which would inevitably ensue. Further efforts were, therefore, though reluctantly, abandoned, and the wound was closed. The patient had been very faint at the end of the operation, but by administration of stimuli, recovered and regained her consciousness. She never, however, quite rallied, and died the next morning.

At the *post-mortem* there was not the least evidence of hæmorrhage, but the tumour was so tightly bound down to the rectum and pelvis that it was not separated without most considerable—and what during life would have been a quite unjustifiable—amount of violence.

It was a condition made by the friends that no other organ except those directly implicated should be disturbed.

On examining the specimen it would be found that in the centre of the sac was a tumour the size of a large orange, which, on section, appeared to be composed of pure fibrous tissue; the remainder of the sac bore the characters of ordinary fibro-cystic tumours. The whole mass weighed eight pounds and a-half.

The great interest attaching to this communication was that, in addition to the rarity of the case, of all similar instances exhibited to the Society, two by Mr. Spencer Wells and one by Mr. Nunn,* the disease had been mistaken for ovarian dropsy, and in each death had ensued shortly after operation. Another case had lately been reported to the Obstetrical Society, by Dr. Routh, in which he, Dr. Rogers, Dr. Savage, Dr. Greenhalgh, and Sir William Fergusson were all of opinion that the tumour was multilocular ovarian. In the present instance, although there had been a doubt suggested in favour of the disease being uterine, the prevailing idea had been that it was ovarian.

Mr. ISAAC BROWNE, 16th of April, 1867.

* See also a case by Mr. Holmes in vol. xvii., p. 189.—Ed.

Report on the tumour of the uterus exhibited by Mr. I. B. Browne.—

The tumour, which is about the size of a child's head, springs from the back of the body and neck of the uterus, and appears to have originated in, and to have been evolved out of, the substance of these parts:—

The external parietes consist of two perfectly distinct layers, one evidently belonging to the peritoneum, the other to the tumour itself; the latter is dense and tough, and varies from one fourth to one eighth of an inch in thickness; its cut surface exhibits the orifices of numerous vessels of considerable size.

The substance of the tumour presents different appearances in different parts, and these may for convenience be grouped under three heads; firstly, there are masses of opaque, whitish, solid material, which is tough, elastic, close-grained, and on section appears very nearly uniform in structure, but presents on closer examination radiating, or wavy bands of an opaque, greyish fibrous tissue. This solid material is most abundant in the neighbourhood of the uterus, and is in fact continuous in parts with the substance of that organ; it constitutes, moreover, the greater part of the proper parietes of the growth. In the interior of the tumour it appears in the form of irregularly lobulated masses, which are more or less closely connected together. Secondly, there is a considerable amount of material, also in great part solid, but which instead of being of uniform texture has a certain resemblance to pancreatic structure, and appears to the naked eye to consist of small masses of solid matter embedded in the substance of a loosely areolated tissue. This material intervenes between the lobular masses of the former structure, and comes everywhere into close proximity with it.

Thirdly, the remainder of the tumour is composed of cysts or cyst-like cavities of various sizes, the parietes of which seem to consist for the most part of laminae, bands and filaments of a somewhat delicate fibrous material arranged without any apparent regularity; none of the cysts present the smooth shining wall so common in ordinary cystic tumours, and they appear to communicate with one another so freely in all directions, that it seems to us that the cavities (although in many places sufficiently defined to receive the name of cysts) are in reality merely dilatations of freely communicating areolar spaces.

These three types of structure above described (which pass insensibly into one another) give us the impression of being the results of different stages in the development of the tumour, the order of the stages being that of the description.

Microscopic examination.—The solid substance included under the first head consists of ordinary fibrous tissue, with an abundance of involuntary muscular fibres, arranged for the most part in wavy bands like that of the normal uterine wall. These muscular elements are found even in the parietes. A few scattered nuclei are seen lying along the bands of fibrous tissue. In the second group of pancreatiform structures there is also found an abundance of fibrous tissue and a smaller proportion of muscular tissue, but in addition there are in many places rounded, oval, or elongated groups of cells and nuclei (Plate III., Fig. 6). These groups are clustered together at certain spots, and vary in size from about that of the acini of the mammary gland, downward to that of an ordinary glandular epithelium cell. These groups of cells have a considerable general resemblance to glandular structure, but no distinct parietes can be detected, and the groups do not admit of detachment from the tissue in which they are embedded, and no free cell-structures can be seen floating on the field of the microscope. The walls of the cyst-like spaces forming the third group of structures, consist entirely of a delicate form of fibrous tissue; the surface of which presents a few adherent nuclei, and in some spots nuclei arranged in lines along the thicker bands of the fibrous tissue (Plate III., Fig. 5). No epithelium can be seen lining these cysts. The fibrous tissue is partly arranged in the form of a delicate membrane, presenting perforations which resemble on a small scale those observed by the naked eye, and partly in the form of bands and fibrillæ. The appearance on the whole is not unlike what is often seen in specimens of colloid cancer.

Conclusion.—It appears to us that the tumour in its commencement must have consisted essentially of slightly modified uterine tissue, but that as its growth continued the uterine elements gradually disappeared, and irregular groups of cells made their appearance; subsequently, both uterine elements and cells disappeared, and cyst-like spaces were formed, the walls of which consisted of fibrous tissue alone. We do not wish to express an opinion as to the nature or mode of origin of the cell-groups, but we believe that the cyst-like cavities must have re-

sulted from the degeneration and disappearance of these cell-masses and probably also of the muscular elements themselves.

Dr. J. S. BRISTOWE,

Mr. ALEXANDER BRUCE, 21st of May, 1867.

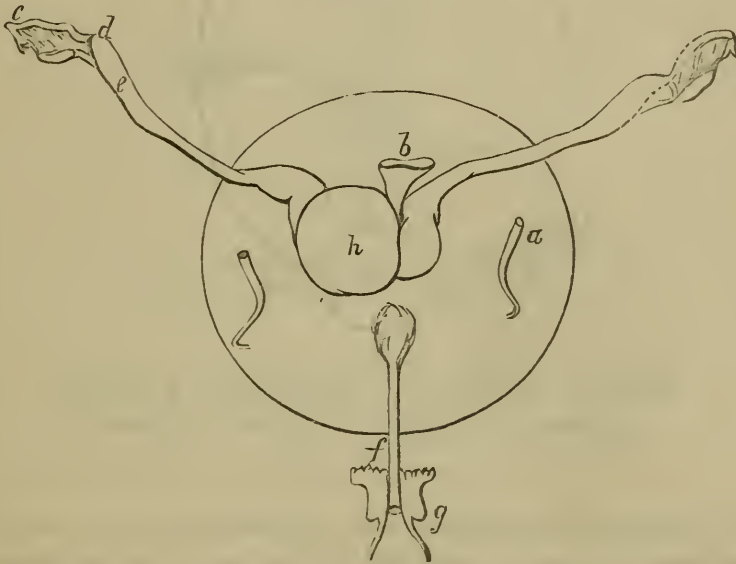
25. *Malformation of the genito-urinary organs.*

The example of foetal abnormality of the genito-urinary organs exhibited to the Society was sent to Mr. Simon by Mr. Engleheart, of Down, and has been very carefully examined by my friend and colleague, Mr. Charles Stewart, Curator of the Museum at St. Thomas's Hospital.

It is apparently an unique case in respect to its malformation; but its interest partly lies in its bearing upon obstetrical practice, and the difficulty it gave rise to in delivery.

The presentation was a normal one, and after an hour's strong labour the head was born, and with some difficulty the shoulders followed.

WOODCUT 8.



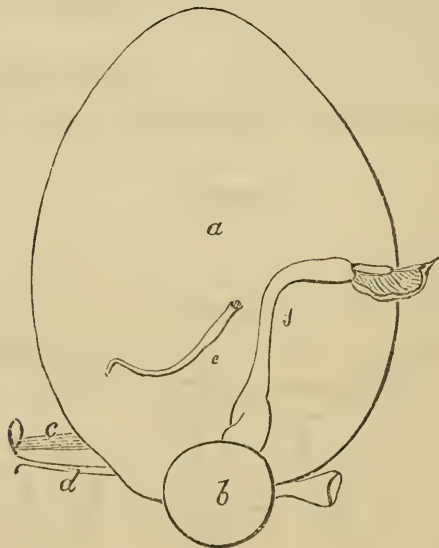
Diagrammatic view of base. *a.* Ureter; *b.* Rectum; *c.* Fallopian tube; *d.* Ovary; *e.* Uterus; *f.* Urethra; *g.* Labia; *h.* Cyst (vagina?).

The child was now dead, although there was proof obtained of its having been previously alive. At this point, delivery was arrested, and

upon examination, a tumour, evidently containing fluid, was found distending the abdomen of the child; this the medical attendant, Mr. Engleheart, determined to puncture; but a strong pain aided by traction succeeded in completing the delivery, without having to resort to the puncture at all.

It was then found that the abdominal enlargement was due to an enormously enlarged bladder, containing two quarts and a-half of fluid. As these parts had to be removed very hastily from the body, they are unfortunately not quite perfect; but the following is the account which Mr. Stewart has kindly given of them, after carefully examining them.

WOODCUT 9.



Side view. *a*. Bladder; *b*. Cyst (vagina?); *c*. Anterior ligament of bladder; *d*. Urethra; *e*. Ureter; *f*. Uterus.

At the fundus of the bladder was a thin-walled cyst, an inch and three-quarters in diameter, containing a fluid which was rendered milky in appearance from the presence of an enormous quantity of squamous epithelium. From each side of this cyst arose a tube communicating with it on the left side, but having no opening into it on the right; the tubes are thin, and dilated at first, but the walls become thick near their free extremities, from which part, a small, thin-walled Fallopian tube is continued and connected with an elongated ovary.

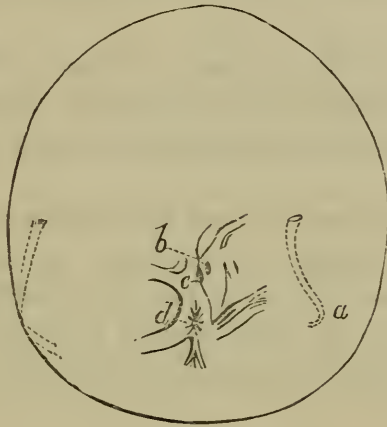
The rectum lies behind the cyst, and opens into the bladder by a small slit about an inch behind the urethral aperture.

To the right of the opening of the rectum is found that of the cyst.

The ureters are not symmetrical. For the last two inches of their course they are closely connected with the walls of the bladder, and ultimately terminate, after making a sharp turn, by a small valvular opening.

The urethra was the only means for the passage outwards of the contents of the bladder, rectum, and cyst with its appendages. Its opening into the bladder was large and dilatable, and surrounded by a thicken-

WOODCUT 10.



Internal view. *a.* Ureter; *b.* Opening of cyst;
c. Opening of rectum; *d.* Opening of urethra.

ing of its muscular coat; it terminated ultimately between the modified labia.

As far as I have been able to trace the homologies of the parts, I have indicated them in the diagrams appended.

Mr. W. W. WAGSTAFFE, 21st of May, 1867.

VI. DISEASES, ETC., OF THE OSSEOUS SYSTEM.

1. *Series of gun-shot fractures.*

The following series of specimens illustrating gun-shot fractures of bones was obtained during the late war in Germany: the particulars of the cases having been published elsewhere, a brief summary only can appear in the *Transactions* of the Society.

1. Fracture of the skull by the combined action of a bullet and water fired from a needle-gun into the left orbit by a suicide. The rending force of the water is very clearly shown by the number of small fragments into which the calvaria is shattered; the course of the bullet is clearly seen from the characteristic appearance of the aperture of exit.

2. Fracture of the sixth cervical vertebra produced by a round ball from a Saxon shrapnel, which remained impacted in the bone. The effects of consecutive inflammation are seen in the neighbouring vertebræ.

3. Fracture of the seventh rib and first lumbar vertebra by a bullet, which in its course through the abdomen penetrated the liver, and left a fragment of bone torn from the inner surface of the rib in the substance of the organ: the bullet lodged in the body of the vertebra, and subsequently escaped by ulceration into the intestine and evacuation per anum.

4. Fracture and complete destruction of the head of the scapula by a bullet, which in its passage had bruised the clavicle and the head of the humerus.

5. Comminuted fracture of the shaft of the humerus by the Prussian bullet, which accompanied the specimen. The bone for the space of two inches is completely shattered; numerous small fragments were carried out of the axis of the limb, and were found lying immediately under the skin on the inner side of the arm.

6. Four specimens of comminuted fracture of the bones forming the elbow-joint: three of these were removed by amputation at the middle of the arm; the fourth was removed after death. The results of secondary inflammation are well seen in some of them. The series illustrates forcibly the evils attendant upon the non-performance of primary resection in cases of severe comminuted fracture of the bones of the elbow-joint.

7. Fracture of the neck and great trochanter of the femur by a

Saxon bullet, in which the bone has been completely split by the ball in its passage from above, outwards and downwards. The ball had previously passed through the sciatic nerve, causing complete paralysis of the parts supplied.

8. Fracture of the lower end of the femur by a Prussian bullet, which entered on the inner and anterior aspect, and escaped from the outer and posterior part. The fracture extended into the knee-joint, the condyles of the femur being completely separated from one another and from the shaft.

9. Perforating fracture of the head of the tibia with but little lateral fissuring of the bone: the direction of the ball had been upwards and forwards, the joint being implicated. This form of fracture not uncommonly occurs in this situation.

The above specimens are now in the museum of University College, London.

MR. A. BRUCE, 16th October, 1866.

2. *Fibula, to show one of the terminations of acute necrosis after periosteal abscess, and the results of subperiosteal resection of the shaft of the fibula.*

The bone exhibited in this instance was removed by subperiosteal resection, from a boy aged $2\frac{1}{2}$ years. He had been admitted originally into the Hospital for Sick Children in March, 1866, on account of acute periosteal abscess, which had commenced seventeen days before admission, without known cause. After the opening of the abscess the whole fibula became exposed for some distance, and necrosed portions of the dead bone were removed, but the whole could not be extracted without a formal excision of about two-thirds of the fibula. The child was accordingly discharged from the hospital after a few weeks' stay in order to await the course of the disease, and take such steps as might seem afterwards advisable. When re-admitted in October there was a large mass of bone exposed of a crumbly and soft consistence. The leg was much swollen; but no bone could be found absolutely dead. There were other openings about; and as the limb was nearly useless, it was decided to remove the diseased bone. Accordingly a long incision was made upon the bone, in which (as before exposure) no sequestrum could be found. It was therefore separated carefully from all the soft parts, divided above and below the disease, and removed entire. The portion so removed comprised the whole fibula from a very short distance above the lower epiphysis

to within about an inch of the head of the bone. It was expanded to somewhat more than the size of the adult bone. The portion removed measured three inches and a-half in length, and from three quarters to one inch in diameter. Its external (or superficial) surface showed a depressed scar, evidently the result of the first operation. On the opposite (or tibial) side was the opening of a cloaca, in which was lodged a long sequestrum, the remains of the old shaft. There were also other cloacæ on the same aspect of the bone, but none of these cloacæ were accessible from the wound. The main sequestrum, which was about two inches in length, was easily removed out of the new bone which surrounded it. The boy recovered perfectly, and when last seen (a year after the commencement of the disease, and about half-a-year after the operation) he walked quite naturally, except that the foot was thought to turn over a little towards the outer side. The cicatrix was quite firm. The lower end of the bone had grown upwards more than an inch, and terminated in a sharp-pointed end; besides which there was a large process going towards (and perhaps to) the tibia. The upper end of the bone seemed to have grown a little downwards, and the two portions were united by a tough, hard cicatrix, almost bony in consistence; but when felt by passing a pin into it, no bony resistance was experienced.

The above case seems of some interest in two points of view: as illustrating a rather rare termination of acute necrosis, viz., that in which the necrosed bone becomes enclosed in a periosteal sheath, but the sequestrum is not accessible. Also it shows the perfect usefulness of the limb after the removal of the fibula, even if the bone is not entirely regenerated; and thus gives encouragement to deal freely with that bone in case of extensive disease, tumour, &c.

Mr. HOLMES, 6th November, 1866.

3. *Mollities ossium, doubtful whether carcinomatous or syphilitic.*

J. T., a man aged 40, had syphilis with constitutional symptoms about fourteen or sixteen years before death, and was in 1864 and 1865 in the German Hospital under Mr. De Méric's treatment for various syphilitic affections, especially condylomata ad anum, which disappeared under mercury and iodide of potassium.

Since the spring of 1865 he became subject to frequent colds and coughs; during the last days of May or the first of June, 1866, he

began to suffer from pain about the middle of the sternum, and was admitted into the German Hospital under Dr. Hermann Weber's care on June 14th, when he was pale, inclined to profuse perspiration, and had the aspect of great suffering. The pain was felt principally behind the middle third of the sternum; it was constant, but usually increased during the night. The middle of the sternum and both margins were tender on percussion or pressure. There was a frequent barking cough, with a moderate amount of almost transparent mucous sputa; there were moist rhonchi over the lower part of both sides, but no other signs of organic disease of the thoracic viscera were detected. A few days after admission the patient had an attack of violent pain in the lumbar region, which, however, entirely disappeared within a week. The aspect of the region of the sternum was at first quite normal, but in the beginning of July the lower part became more prominent than the upper, the latter appearing slightly depressed. In the second week of July a loud, systolic, rough bruit became audible to the left of the sternum between the second and fourth ribs, which rapidly increased in roughness, and was accompanied by a strong *frémissement*; as there was at the same time a diminished resonance on percussion over the locality mentioned, the possibility of an aneurysmal change in the coats of the aorta consequent on the diseased state of the adjacent bones was repeatedly discussed. The depression between the lower and middle third of the sternum became gradually much greater, forming an obtuse angle; and there was a feeling as if any considerable pressure would break the sternum and ribs. At the same time the patient became the subject of increasing dyspnoea, being at last obliged to sit constantly with the head bent forward; the movement of the head either backwards or to one side caused pain in the neck and in the arms, especially the left, the fingers being often tingling. During the last weeks there had been frequent sickness after meals. Death took place from exhaustion and compression of the thoracic cavity on September 11th, not quite three months and a half after the first manifestation of the disease of the sternum.

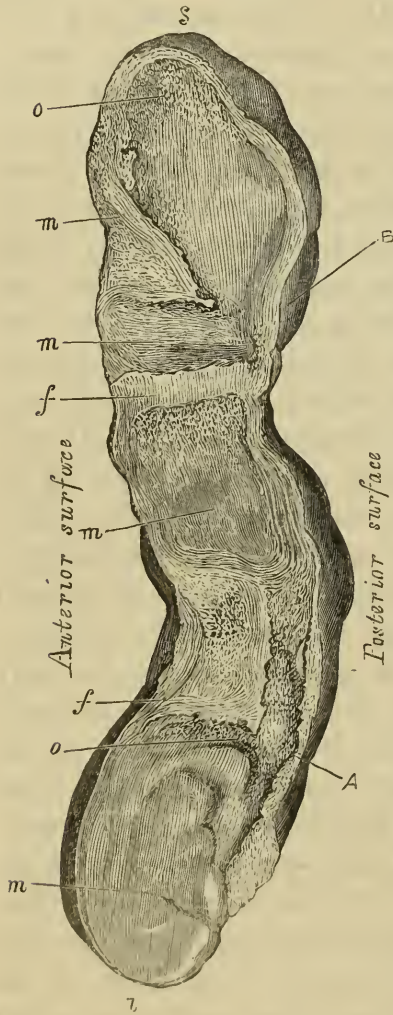
Large doses of iodide of potassium appeared to have no power, and anodynes had only a transitory effect.

*Post-mortem examination.**—The shape of the sternum is much altered (Fig 11), owing to two imperfect spontaneous fractures. It is in several places soft and to some degree flexible; the osseous

* Dr. Baumler and Dr. Hirsch conducted the *post-mortem* examination during my temporary absence, and to these gentlemen I am indebted for the report.

tissue is almost entirely replaced by a greyish red, rather firm substance, of the consistence of sarcoma, yielding no juice from the cut surface, or at all events scarcely any, and exhibiting under the microscope in a fibrous stroma an abundance of small cells,

WOODCUT 11.



Longitudinal section of sternum, three-fourths of natural size, bent and semi-fractured at A and B; s, superior end; i, inferior end; m, morbid deposit; f, fibro-cartilaginous tissue; o, remains of osseous tissue, everywhere invaded by morbid deposit.

partly nucleated, partly in the state of fatty metamorphosis, besides amorphous matter and fat-globules. There are no signs of periostitis on either side of the sternum. Many of the ribs are very soft, and manifest the same change as the sternum, which is also the case with several vertebræ, and some parts of the pelvis; the long bones are quite free, but in the cranium are several roundish spots of the size of a silver three-penny piece, in which the osseous tissue forming the internal lamella and the diploe is replaced by the morbid substance contained in the sternum, ribs, &c. No cicatrix was found in any of the bones, and scarcely any signs of hypertrophy of the osseous tissue in the circumference of the affected portions, except on the cranium, where the tissue of the margin appears somewhat harder and denser than the healthy tissue. (See the drawing of the section of the sternum, Fig. 11.)

The left ventricle of the heart was hypertrophied, but the valves were normal; the aorta was only compressed by the sternum, and its walls were not diseased. The kidneys and spleen were in the state of amyloid degeneration; the other viscera were not materially diseased.

Remarks.—The affection of the bones had during the patient's life been considered as syphilitic; the existence of syphilis during a long course of years, the appearance of symptoms of this disease only a

year before the manifestation of the affection of the bones, and even the character of the pain seemed to point in that direction; but the *post-mortem* appearance renders this diagnosis doubtful and offers points in favour of cancer. It must be confessed that a similar state of the bones, as caused by syphilis, has probably not yet been described. The absence of traces of periostitis is rather against the assumption of syphilis, at all events according to the prevalent views. The microscopic character is, as yet, not sufficient to lead to a decided view; yet it is of importance to note that the cells are not so large and do not contain such large nuclei as is usual in cancer, while recent (*i.e.* not yet retrogressive): syphilitic tumours have a rather similar microscopic constitution to that found in the foreign substance of the bones. The fact that the same disease manifested itself in different bones has analogies as well in cancer as in syphilis, for syphilitic periostitis has occurred at the same time in the bones of the head, arms, and legs, and in the sternum and vertebræ. The absence of juice is more in favour of syphilis than of soft cancer. The presence of amyloid degeneration in the kidneys and spleen adds perhaps not much weight to the syphilitic view, but is probably more frequently associated with what is termed tertiary syphilis than with cancer of the bones. If the disease were to be considered as of syphilitic nature, it might be regarded as *syphilitic osteo-myelitis*; if as cancer, it would be classed amongst the *soft* forms of primary cancer of the bone, running its course in the remarkably short time of less than three months and a-half from the first manifestation of pain. Another point of interest is the remarkably loud systolic bruit and frémissement, simulating the phenomena of aortic aneurysm in the opinion of all those who had examined the case during life, while the *post-mortem* examination manifested an entire absence of disease of the aorta; the bruit and frémissement evidently having been due to the pressure of the semi-fractured sternum on the aorta.

DR. HERMANN WEBER, 4th December, 1866.

Report on Dr. H. Weber's case of mollities ossium, doubtful whether carcinomatous or syphilitic.—We have examined the soft adventitious tissue in the sternum and ribs, and find its minute structure has been accurately described by Dr. Weber. Taking into account the type of the cells, the presence of a true intercellular substance (although in

very small quantity), and the trabecular arrangement of the interstitial fibrous tissue, we are inclined to rank the growth with the sarcomas, and on the same grounds do not consider it a true cancer.

Mr. J. W. HULKE,

Dr. CAYLEY, 18th December, 1866.

4. *An unusual form of fracture into the knee-joint.*

This case occurred in the practice of Mr. Erichsen at University College Hospital, through whose kindness I am enabled to exhibit it to the society.

History.—J. D., aged 12, a strong healthy lad, fell from a second-floor window into a paved yard beneath, and was admitted into the hospital with a compound fracture of the right humerus about one inch and a-half above the elbow, and a fracture of the radius at its lower extremity.

The thighs and knees were noticed to be bruised; no crepitation was, however, perceived on movement of the joints: both patellæ were uninjured, and he could draw up his legs to some extent, but with evident pain.

On the following day both knees were found to be much swollen, and there was evidence of deep-seated ecchymosis, though there was very slight superficial bruising. He died on the second day.

Post-mortem.—Fractures of the humerus and radius as noticed before; no evidence of injury to the head.

Slight ecchymoses on heart and lungs; a little extravasation of blood beneath the liver and around the solar plexus, and also around and into the substance of suprarenal capsules. A slight ecchymosis over the pubes, but no fracture of the pelvic bones.

The knee-joints were much swollen, as if from synovitis; there was, however, deep-seated discoloration, without any appreciable bruising, of the skin over the joints and lower limbs generally. On opening the knee-joints they were found to be both full of blood, mostly fluid; the lining membranes and cartilages were deeply stained, but presented a shining, smooth surface. On the right side a portion of the articulating surface of the tibia, immediately surrounding the insertion of the anterior crucial ligament into that bone, was found to be torn

up, to a depth of about half an inch in one part : a fissure extended laterally through the entire thickness of the epiphysis, and partially separated it from the rest of the head of the bone. On the left side a small piece is found to have been torn away from the surface of the outer condyle of the femur bounding the inter-condyloid notch, and surrounding part of the insertion of the anterior crucial ligament. A deep fissure extends upwards from the cavity thus produced, anteriorly on to the trochlear surface, and posteriorly along the shaft of the femur for about two inches.

On neither side are any of the ligamentous structures torn, except on the right side, where the displacement of the fragment of bone has lacerated part of the insertion of the semilunar cartilages. On extension of the joints the fragments slip easily into place again, whilst flexion, on the contrary, displaces them, especially when combined with rotation inwards.

The fractures were most probably produced by extreme flexion of the knees, although there were no marks of violence on the legs or feet to make it appear that he had fallen upon these parts. From the great injury received by the right arm it is probable that he fell upon that side. I can offer no explanation of the fact, that on the right side the tibia has suffered most, and on the left side the femur ; whilst the cause has evidently been similar on the two sides, viz., the extreme tension of the anterior crucial ligaments.

MR. ALEX. BRUCE, 18th December, 1866.

5. *Fracture of the humerus above the condyles, simulating subluxation of the elbow-joint.*

This specimen was exhibited as an appendix to a cast shown by Mr. Nunn, on November 21st, 1865, of a supposed case of subluxation of the elbow-joint. In the report of that case it was stated that "deformity was only obvious on extension, when the outer line of the arm appeared too curved" (p. 220, Vol. XVII.). The present specimen was obtained from a dissecting-room subject (by the kindness of Mr. Albert Reeves), and in it no *obvious* deformity existed except on extension, when excess of convexity of outline of the fore-arm, as above alluded to, was observable. On dissection, the joint showed no dislocation, but there was found a badly-united fracture of the humerus just above

the condyles, so that the axis of the humerus formed, with the axis of the elbow-joint, a very considerable angle ; but, before *complete* dissection, a false appearance of subluxation inwards was given to the part.

Mr. NUNN, *5th February*, 1867.

6. *Head of the humerus excised for chronic disease of the shoulder-joint.*

The head of the humerus exhibited illustrates the very considerable alteration in shape, effected by the occurrence of the two opposite processes of repair and absorption, at various periods in the history of the case, the essential particulars of which are as follows :—

J. P., aged 25, wheelwright, three years since, viz., in May, 1864, first felt an aching pain in the left shoulder ; he was treated at University College Hospital by issues, &c., which somewhat relieved the pain. In January, 1865, he was admitted into the Middlesex Hospital under Mr. Nunn's care, with abscesses about the shoulder, and had one or two sinuses leading up to the shoulder-joint ; he was treated chiefly by the very extensive external application of iodine, and was discharged with the disease subdued in May. He resumed his employment, and continued to earn his living until the following May (1866), when he was readmitted into the Middlesex Hospital with inflammation about the shoulder ; he remained five weeks, and then discharged himself, but found it requisite to return after two months, abscesses having reformed. In place of improving, after prolonged general treatment, the patient's health threatened to sink under the drain involved in extensive suppuration. The head of the humerus was accordingly excised by Mr. Nunn, in January, 1867. The patient did well after the operation. It is probable that over-fatigue was the cause of the relighting up of the inflammatory action.

Mr. NUNN, *5th February*, 1867.

7. *Necrosis of femur.*

J. D., a carman, 17 years of age, was admitted into St. Thomas's Hospital, under my care, on the 13th December, 1866. He had been ill for five weeks. He was attacked first with inflammatory swelling at the back of the right hand, which after a few days was opened, discharged a good deal of matter, and continued to discharge matter

until a week or two before admission. About a week after the swelling in the hand was first observed, the right thigh and knee became painful, very tender, and swollen. The affection of the thigh and knee have continued to increase. He has been getting thin and weak, has perspired profusely, has had frequent shiverings, and slept little, if at all. He has had no cough, and his bowels have been regular. He was supposed to have been labouring under rheumatism.

At the time of admission he was very weak, much emaciated, had a flush upon his cheeks, a furred tongue, a pulse of 120, and a bad appetite. There was no indication whatever of any visceral disease. The knuckle of the right fore-finger was somewhat swollen, and there was a scabbed sore upon it. The right thigh, especially in its lower part, was exceedingly swollen and tense; and in the latter situation, and over the knee, the skin was marbled with dilated veins. It was evident that the affection was not rheumatic; that the knee-joint was not affected; and that the disease, at the present moment, consisted in a deep-seated abscess of the thigh. This was opened, at my request, by one of my surgical colleagues, when a good deal of thick blood-stained pus escaped; and the femur was found partly denuded of periosteum.

The patient was much benefited by the operation, and that night slept well; moreover, his appetite at once returned. On the 15th it was found necessary to reopen the wound, and more than two pints of foetid pus escaped; and from that time the wound continued to discharge and the patient to improve in health, although he was still exceedingly weak, up to the 19th. On that day arterial hæmorrhage took place in considerable quantity, partly into the cavity of the abscess, partly externally, and was repeated in a less degree once or twice. The patient became excessively anæmic and prostrate, and died exhausted on the morning of the 20th.

Post-mortem examination.—The internal organs were all healthy. All the cavities of the heart contained large decolorized moderately firm clots.

On cutting open the knuckle of the right fore-finger, the joint was found disorganized, the cartilages destroyed, the joint-ends of the bones carious, and the whole bathed in pus.

On examining the thigh, the femur was found to be bare in almost its whole extent; the epiphyses, however, were still healthy, together with the hip- and knee-joints; and along the *linca aspera* portions of

the tendinous structures were still adherent. Everywhere else the bone was denuded and pale: the soft tissues of the thigh were separated from the bone by a large rounded cavity, which contained a considerable quantity of fœtid pus mixed with decomposing blood. The tissues bounding this cavity were much blackened. The vessel from which hæmorrhage had taken place was found near the lower portion of the cavity, at a distance from the incision which had been made during life: it was a small arterial branch, but was not traced to its source.

Dr. J. S. BRISTOWE, 5th February, 1867.

8. *Detached portion of semi-lunar cartilage removed from the knee-joint.*

A gentleman, aged 25, whilst playing at football, six weeks previous to the date of the operation, having kicked at the ball, missed it and fell. He immediately rose from the ground and again endeavoured to kick the ball, but could not. Swelling of the knee soon supervened, and the displaced cartilage could not be discovered. In about five weeks after the accident the swelling had subsided, and the patient was told to consider himself well; but as he could not walk without considerable pain and lameness, he determined to come to London to ascertain if possible the cause of his lameness.

On examination, a loose cartilage was discovered lying on the inner side of the left knee-joint, and it appeared to be moveable under the finger. It was determined, therefore, to remove it. Accordingly, the ether-spray having been used, an incision was made about three-fourths of an inch below the position of the cartilage, and the knife was carried up to and freely around the cartilage itself. The cartilage was then seized with forceps, but it could not be moved. When it was obvious that the removal could not be effected subcutaneously, the cartilage was cut down upon directly, and when seized with forceps it was seen to be detained *in situ* by a small portion of ligament. With a touch of the knife the ligament was divided, and the cartilage, being then entirely detached, was taken away. There was not any escape of synovia.

Neither pain nor swelling followed the operation, and in eight days the wound had entirely healed. In a fortnight after the removal of the cartilage the patient walked easily and well.

On removal, the loose body proved to be the anterior portion of the

internal semi-lunar cartilage, with some ligamentous fibres attached to it. The cartilage, which was thick on one side and thinner on the other, was soft and pliable, and resembled exactly a portion of a semi-lunar cartilage.

The specimen is placed in St. George's Hospital Museum.

Mr. B. E. BRODHURST, 19th February, 1867.

9. *Ununited intra-uterine fracture of tibia and fibula.*

Mr. Henry Smith showed the cast of a leg where there had been a congenital fracture of both bones near the lower third. The patient, a little girl aged 7, had been able to run about fairly on the limb, which, however, was very loose at the point of fracture, and bent at a considerable angle. He had operated two months previously, excising the ends of both bones at the seat of fracture. The leg had become quite straight, and the girl could move about well on the foot with the help of a leathern case fitted to the limb, but as yet the union between the bones was not firm.

Mr. HENRY SMITH, 19th February, 1867.

10. *Parts removed in the operation of excision of the knee.*

The parts exhibited consisted of the bones forming the knee-joint, removed from a young woman who had suffered for several years from disease of the knee joint, which had terminated in ankylosis in the straight position. Nevertheless, there was still excruciating pain, especially at night. True bony ankylosis was found to exist between the tibia and femur, and at the point of section through the femur a cavity as large as a marble, containing a small quantity of thin pus, was seen.

Mr. HENRY SMITH, 19th February, 1867.

11. *Spindle-cell sarcoma of tibia.*

The patient, a married woman, 42 years of age, of healthy aspect, having no history of cancer in her family, gave the following history. She was run over at 3 years of age. At 9 years of age

she first perceived a small growth on the inner side of the left knee, an inch long, flat and painless. It grew somewhat between 9 and 13, and afterwards more slowly; it appeared to cease growing after she was 24, at which age it was about the size of a large walnut, and remained so without the slightest inconvenience until she arrived at 41 years of age. In January, 1866 (fourteen months ago), she fell down some steps, doubling her feet under her, and striking both knees. About five weeks afterwards she felt a pricking pain near the inner ankle of the affected limb, which gradually extended upwards, invading the lump, which became painful and inflamed, and the skin over it red. The last three months have been a period of rapid growth, with general enlargement towards the inner side, and the outgrowth of a large lobe in front.

A large tumour projects from the head of the tibia internally and posteriorly. In front, and on the outer side, the enlargement is but slight. The circumference at the most prominent point is nineteen inches. The surface of the growth is lobulated, with dark congested vessels ramifying over it. The skin over the most projecting lobe has given way by superficial ulceration, but this has not extended nor yet perforated its thickness. There is no prominence or appearance of infiltration at the edges of the ulcer, and the skin, except where dark and discoloured, is otherwise pale and healthy.

There is slight motion in the joint, and the patella is moveable. She walked upon the limb on the last Sunday in April, 1866.

No enlargement of the glands in the groin.

Amputation of the limb above the knee on February 20.—The patient is making up to the present time a good recovery.*

Mr. T. CARR JACKSON, 19th March, 1867.

Report on the above specimen.—This tumour, exhibited by Mr. T. Carr Jackson as an “encephaloid tumour of the tibia,” is composed mainly of spindle-cells, with a minimum quantity of intercellular substance.

The spindle-cells are mostly of large size, and of extraordinary length (Plate IV., Fig. 4), and amongst these occur sparingly, throughout the tumour, a few large, spheroidal, nucleated cells, three or four times the size of a red blood-disc. In the firmer portions of the

* September 14th, 1867.—The patient is now in good health, without any sign of recurrence of the disease.—ED.

DESCRIPTION OF PLATE IV.

Figures 1, 2, and 3 illustrate the microscopic structure of Mr. T. W. Nunn's case of Trabecular Spindle-celled Sarcoma of the Shoulder (p. 238). From drawings by Mr. J. W. Hulke.

Fig. 1. Trabeculæ formed of fusiform cells with very little intercellular tissue. Magnified 200 diameters.

Fig. 2. Fusiform and transition cells, with a granular matrix. Magnified 300 diameters.

Fig. 3. Alveolar structure, the alveoli filled with cells. Magnified 200 diameters.

Figures 4, 5, and 6 show the microscopic appearances in Mr. T. Carr Jackson's case of Spindle-celled Sarcoma of Tibia (p. 216). From drawings by Mr. J. W. Hulke. Magnified 200 diameters.

Fig. 4. Spindle-cells of large size and extraordinary length, and a large spheroidal nucleated cell, three or four times the size of a red blood disc.

Fig. 5. *a*. Fibre-cells arranged in parallel groups; *b*, fibre-cell-tissue, teased open.

Fig. 6. Fibre-cells, and fibrillated intercellular tissue. The latter is shown to the right of the figure.

Fig 1.



Fig 2.



Fig 3.

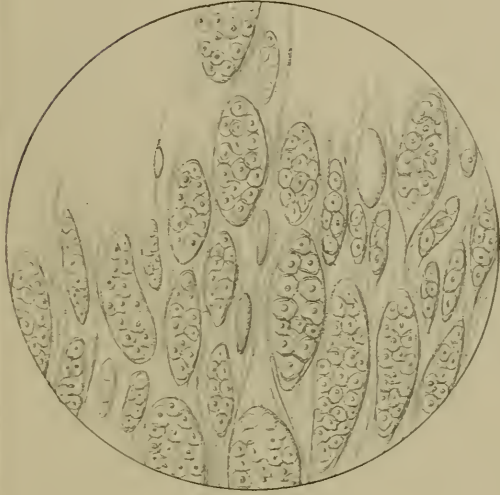


Fig 4.

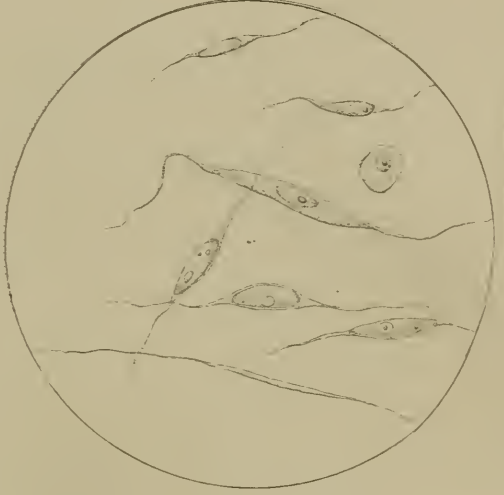


Fig 5.

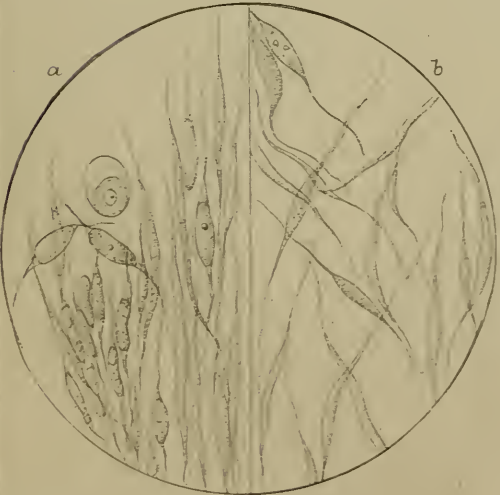
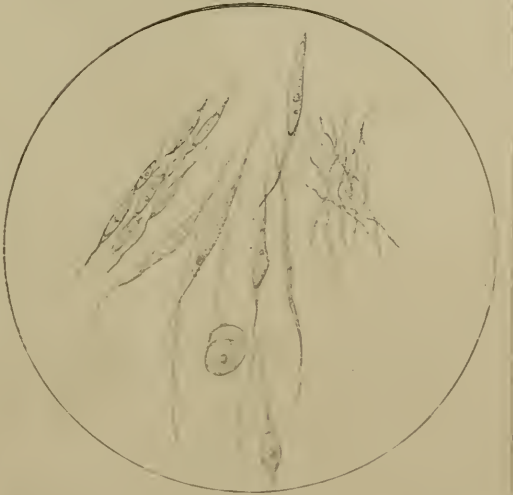


Fig 6.





tumour, as near the bone, the spindle-cells are so long, that they might be appropriately described as nucleated fibres; and here they form bands, which exhibit a parallel grouping of the cells (Plate IV., Figs. 5a and 5b). In the softer portions of the tumour the arrangement of the cells is less regular, the nuclei are more crowded and frequently multiple, showing rapid proliferation.

The intercellular substance is homogeneous, or finely fibrillated (Plate IV., Fig. 6).

The tumour appears to have originated in the periosteum, and regarded from an anatomical point of view, is a *spindle-cell sarcoma*.

MR. J. W. HULKE,

MR. CAMPBELL DE MORGAN, 2nd April, 1867.

12. *Casts from the legs of a boy suffering from the early symptoms of hip-joint disease.*

The casts were taken from a boy aged 16, a patient under Mr. Nunn's care in the Middlesex Hospital, who was admitted with the early symptoms of morbus coxarius on the right side, namely with pain in the knee, flattening of the buttock, limping gait, stiffness of the hip-joint, &c.

Although the duration of these symptoms had been for a few weeks only, and there was an absence of effusion either into or about the hip-joint, a very perceptible difference existed in the nutrition of the two entire limbs, especially in the firmness of the muscles, which was discovered on handling the limbs, the limb of the affected side being flabby. The casts exhibited show that the circumference of the calf of the affected limb is half-an-inch less than that of its fellow, thus affording a visible proof of unequal nutrition or growth. The question is, "What is the relation of this impairment of nutrition of the whole limb to the disease affecting a particular part of it, namely, the hip-joint?" Assuming that it was the current opinion of surgeons that the wasting of the limb in morbus coxæ was a consequence of the interference with the exercise of the muscles by the disease of the joint, that, in short, the atrophy was a result of inaction, Mr. Nunn took the present opportunity of suggesting that the disease of the hip-joint was but a particular manifestation of a general affection of the entire limb. The experience of many years had taught him that

impairment of the nutrition of the whole limb was to be found, as soon as there was any known sign of hip-disease to be detected, and before any period of disuse of the limb had elapsed; he therefore submitted to the Society the proposition that in morbus coxarius the disease of the joint was a part of a general affection of the entire limb, the special phenomena of the joint-disease being due to the anatomical and physiological relations of the head of the femur.

Mr. NUNN, 7th May, 1867.

13. *Chronic osteitis of the femur.*

This specimen was removed by amputation from a girl between 10 and 11 years of age. The disease had been in progress four years: it commenced with pain in the left thigh, which was soon followed by enlargement of the limb. The pain was very severe and was seated chiefly in the lower end of the bone.

Two years after the commencement of the disease, the enlargement having at that time greatly increased, an incision was made down to the front surface of the femur, freely dividing the periosteum. This gave exit to a quantity of bloody lymph, mixed with grits of bone; the femur was found denuded of its periosteum and surrounded by porous, soft calcareous matter, into which one could easily thrust the finger-nail. The knee-joint appeared to be unaffected. A drainage-tube was passed through the limb.

By this proceeding the child was greatly relieved: the pain subsided, the swelling gradually diminished, and at the end of six months the wound had healed.

Very shortly after the closure of the wound, the thigh again began to enlarge and the pain returned. The parents removed the child to the sea side, where she steadily grew worse. In January of the present year she again came under my care, in a state of extreme emaciation and suffering. The lower part of the thigh was a good deal enlarged, and the knee-joint was apparently distended with pus. The limb was at once removed by amputation, and from this the child perfectly recovered.

The specimen shows the effect of the chronic inflammatory process on the bone-tissue. The shaft of the femur is somewhat enlarged, but its texture is greatly condensed and indurated. The cancellous tissue

of the lower end of the bone is plentifully infiltrated with lymph in various stages of disintegration, being apparently purulent about the epiphysial line. This lymph is especially abundant towards the articular end of the bone, where it extends up to and beneath the articular cartilage, which latter is in parts removed by ulceration.

Mr. THOMAS SMITH, 21st May, 1867.

14. *Intra-capsular fracture of the neck of the femur.*

An aged female, over 70, very feeble and spare, was admitted into the Great Northern Hospital with the above injury. Whether the accident had been caused by a fall on the trochanter—a slip from the curbstone to the road, or by a sudden movement of rotation while the limb was fixed, could not be clearly made out. She had been hustled by a gang of mischievous boys while coming out of church, and fell. There was marked shortening of the limb and complete eversion, but no surface-bruising; crepitation could not be detected, and the power of raising the limb remained. She died fourteen days afterwards of exhaustion.

The bone showed the condition frequently met with in this injury. The osseous structure was of a light and friable character, and at the seat of fracture was imperfectly comminuted, some small fragments being detached at the margins.

No laceration of the capsular ligament existed, and the line of fracture was directly transverse and close to the margin of the articular cartilage on the head of the bone, which remained in the acetabulum. The neck of the bone had evidently been altered in direction and shortened from atrophy, so that there was little appearance of the ordinary outline of a neck when the fractured surfaces were placed in apposition.

Mr. T. CARR JACKSON, 21st May, 1867.

VII. DISEASES, ETC., OF THE ORGANS OF SPECIAL SENSE.

EYE.

1. *Sequel to the case of successful removal of a recurrent encephaloid tumour of the orbit—reported in last volume of Transactions (p. 265).*

The patient V., from whom a large recurrent encephaloid tumour of the orbit was removed in November, 1865, and who was shown at the meeting of the society in February last, died on July 11th, 1866.

At the time he appeared before the society he was apparently in good health, but complained slightly of sciatic pains.

As he had had a severe attack in the previous September, from which he had entirely recovered, no great attention was at first paid to this. The pains, however, increased in intensity, and were unrelieved, even temporarily, by anything short of full doses of morphia, injected hypodermically. Shortly after he began to complain of loss of power in the lower limbs—in the left especially, and this went on to total paraplegia. The sensibility was at first in excess, but was ultimately lost entirely below the knees, and was very dull as high as the upper part of the thighs.

There was no reflex action. As these symptoms went on he lost first the power of emptying his bladder, and then came on total inability to retain its contents.

His intellect remained clear, and his complexion good, till within a short time of his death. The only cerebral symptom which he manifested was a loss of vision over the inner half of the retina of his remaining eye. He could not see any object which was to the outer side of the median plane of the eye.

His death took place from exhaustion attendant on the paraplegia and the consequent affection of the bladder and kidneys.

To Dr. Cayley, who made the *post-mortem* examination, I am indebted for the following account. I have omitted all that does not bear on the disease.

“The orbit is empty; there is no cancerous growth within it.

“The dura mater is firmly adherent to the skull-cap. There is a good deal of clear serous fluid beneath the arachnoid, which is itself opaque.

“In the left middle fossa of the skull there is a soft white nodulated

tumour, which seems to grow from the orbital foramen and sphenoidal fissure. The optic nerve, as far as the commissure, is involved in and undistinguishable from it.

“The under surface of the brain is hollowed out by the tumour, and adherent to it at its origin.

“The right optic nerve, as far as to the commissure, and both nerves behind the commissure are of normal appearance. At the commissure the right optic nerve is involved in the growth.

“The brain is normal.

“The upper part of the spinal cord and its membranes are normal. At the junction of the cord to the cauda equina is a bulbous enlargement about one inch and a-half long, and one inch in thickness; and among the nerves of the cauda equina is a nodule of soft white cancer, the size of a horse-bean, adherent to the leash of nerves, and separated by a considerable interval from the bulbous enlargement of the end of the cord.

“On making a section through the bulbous enlargement, the end of the cord is found to be encased, as it were, by a mass of soft cancer, which surrounds it like a sheath, and is separated from it by a distinct line of demarcation.

“The cancerous mass is invested by the arachnoid; the part of the cord so included is softened almost to a pulp, and of a white colour. The cancer is pinkish white, and much firmer than the softened cord. The tumour projects most on the posterior and left side of the cord. The isolated nodule among the fibres of the cauda equina adheres to several of the nerves, but none of them passes through it.

“There are some cancerous glands on the under surface of the arch of the aorta.

“The kidneys and bladder are inflamed.”

Further examination, after the parts connected with the intracranial disease had been hardened in spirit, showed that new bone had formed across the deep part of the orbit; there are no traces of the natural foramina or fissures. The situation of the optic foramen, and of the sphenoidal and spheno-maxillary fissures, appears to be occupied by bone. At a point which corresponds nearly with the natural situation of the optic foramen, but not so deeply situated, is an aperture which leads apparently into some ethmoidal cells. It seems as though the walls of these cells had been extended outwards,

and had formed a connection by new laminae with the deep part of the orbit.

The tumour within the skull springs from a small root corresponding with the situation of the optic foramen and sphenoidal fissure. It speedily expands into a mass about three inches in diameter, which involves completely the decussation of the optic nerves. There is no absorption or change of bone in the interior of the skull.

This patient lived for a year and eight months after the removal of the large recurrent tumour, and more than two years after the original operation. The progress of the case showed that, while I was disappointed in my hope that the disease had been entirely removed, its return was due simply to the presence in the optic nerve, beyond the orbit, of some of the cancer-germs, just as they were found in the orbital part of the nerve after the first operation. It justifies the belief, that, had the operation been done in the same manner at an earlier period, the patient might have remained well; cases which have been similarly treated by two of my colleagues appear to promise the most favourable results.*

To my mind the case is very instructive as bearing on the question of transmission or transplantation of cancer. The tumour within the skull was clearly enough an extension, simply, of the original disease. The only other situation in which cancer was found, except in the lymphatic glands near the aorta, was at the lowest part of the spinal cord. Here it did not begin *in* the cord or the nerves of the cauda equina, but external to them, encasing them in its growth. The presence of the disease in so unusual a situation can be quite readily explained on the supposition that some of the cancer elements set free from the intra-cranial tumour, or possibly at the time of the second operation, took the course which they naturally would take, gravitating downwards in the subarachnoid fluid, until they were arrested at the cauda equina, and in that situation taking root. I have met with no case which so forcibly illustrates the connection between distant secondary growths and primary tumours.

With regard to the cancer found in the lymphatic glands, I need scarcely say that the disease so rarely originates in those organs, that in the face of an already existing cancerous tumour it would be unnecessary to argue in favour of its origin in them by transmission.

Mr. DE MORGAN, 16th October, 1866.

* See case by Mr. George Lawson, at page 233—ED.

2. *Tumour of the choroid.*

J. S., aged 55. was admitted on October 2nd, 1866, into the Ophthalmic Hospital, Southwark. Two years before, the left eye was struck by a piece of timber: the sight of the eye was at once permanently lost; and ever since the man had suffered most violent pain in the eye and head. There was not the slightest perception of light in the injured eye. Latterly the sight of the other eye had begun to suffer. Under these circumstances, Mr. Laurence removed the injured eye-ball. This presented the following pathological appearances:—

To the outer side of the globe was a slate-coloured, globular, tense protuberance (staphyloma of the sclerotic) measuring fifteen millimètres from above downwards, and ten millimètres across. Below the cornea was a similar staphyloma, measuring ten millimètres either way; above, a third smaller staphyloma. The cornea measured only eleven millimètres from above downwards, and nine millimètres horizontally. The anterior chamber was obliterated by the bulging forwards of the iris; the pupil was blocked up by buff-coloured lymph (?). On dividing the globe, a quantity of sanguineous serum poured out. The retina was found completely separated from its attachment to the choroid, traversing the eye-ball from before backwards, in the form of a funnel-shaped cord. Surrounding the optic papilla was a firm, buff, partially black growth, about the size of half of a large pea. This growth exhibited under the microscope cancer-nuclei and cancer-cells -- many of them poly-nucleated -- of the most typically malignant characters.

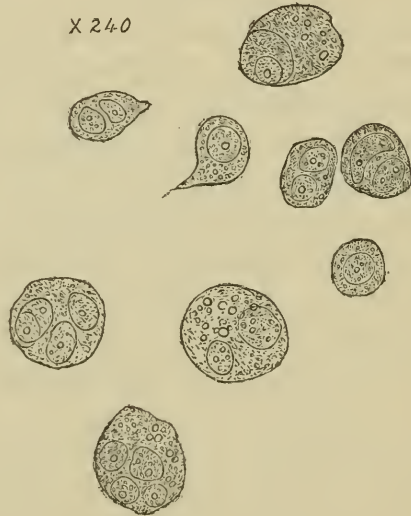
Mr. J. Z. LAURENCE, 16th October, 1866.

Report on Mr. Laurence's specimen of intra-ocular cancer.—The eye-ball submitted to our examination contains a small tumour in the neighbourhood of the optic nerve. It stands out 3''' from the inner surface of the eye-ball, in the form of a small nodule, the base of which slopes away till it has a diameter of 8'', and encircles incompletely the optic nerve, yet without implicating it.

In vertical sections through the tumour and the coats on which it sits, the choroid is traceable over its inner and its outer surface, the polygonal pigment-epithelium and elastic lamina overlying the former, and the loose tissue of the lamina fusca subtending the latter. From this it is evident that the tumour has its origin in the choroidal stroma.

Its fine structure is cellular ; the cells are large, ranging from $\frac{1}{600}$ to $\frac{1}{1500}$ inch, of an epithelioid type, many containing several nuclei in the manner of so-called mother- or brood-cells (Fig. 12). They are massed without any, or with only a very minute, trace of inter-cellular substance referable to the cell-capsules ; and at the outskirts of the tumour the cell-masses intrude into the normal tissues

WOODCUT 12.



and replace them. In the darker parts of the tumour the cells are charged with deep brown granular pigment. On the above anatomical grounds we have no hesitation in referring the new growth to the class of true cancers.

The retina, in its entire extent, is separated from the choroid, and compressed against the lens, being torn across near the optic nerve. The condition of the specimen does not allow us to form a positive opinion ; but we are disposed to think that the detachment of the retina from the choroid occurred during life as a consequence of effusion of serum from the chorio-capillaris. We are not able to say whether the disrapture of the retina near the optic nerve was consequent on contraction of the separated retina, or whether it occurred from violence during the enucleation of the eye-ball, or from accident in dissecting it ; either of the latter suppositions is more probable, since disrapture of a coarcted retina, though not unknown, is very unusual.

Dr. WILSON FOX,

Mr. J. W. HULKE, 6th November, 1866.

3. *Fibroplastic melanoid tumour of the eye-ball.*

The subject of this tumour was a man aged 53. Six or seven years since he received a blow on the eye, accidentally given by a lady's parasol in her endeavour to intimate to him her desire to alight from the omnibus, of which he was conductor. There was no wound, but the eye was much inflamed, and gradually he lost vision. Twelve months ago he had an attack of rheumatic gout, to which he has been subject from time to time. The attack affected the feet in the first onset. Subsequently it passed to the brain; he was delirious for some days. The eye became acutely painful, and the cornea suppurated. He became at this period a patient of Mr. Hart; the eye-ball was painful and inflamed; the cornea partly destroyed; and the remains of it thinned and staphylomatous. He complained that the sight of the right eye was growing dim. Mr. Hart cut down the eye-ball, removing the anterior half, and closing the stump by sutures in the conjunctiva. The man wore an artificial eye with comfort until three months since, when, according to his own account, the posterior portion of the eye began swelling painlessly, and as this grew rapidly he came again to the hospital on the 3rd October, 1866. An irregular but smooth black mass projected from the point of the stump. The posterior part of the eye-ball was therefore extirpated carefully: from the inner lower side an irregular growth of the mass projected into the orbit. The whole was, however, removed without any difficulty with scissors.

The tumour was of rather soft consistence, but did not break up, and could be cut firmly into a smooth surface. It occupied the whole of the segment of the eye-ball, of which it had destroyed the tissues. It had invaded the optic nerve, destroying all the nerve tissue, of which it occupied the place. The sheath was much thickened. It may be seen cut across, and the black matter occupies the sheath of the nerve where cut across, so that a nucleus for further growth was perforce left. The further progress of the case will therefore be of considerable interest.*

The microscopic examination of the substance of the tumour shows it to contain all the elements of the fibroplastic growth. There are to be seen in the section submitted a number of free cells, spherical, and containing a single straight colourless nucleus, partly refractive,

* *September 14th, 1867.*—The patient is well, and there has been no recurrence of the disease.—ED.

without any granular matter. The size of the cell is about $\frac{1}{3000}$ of an inch; that of the nucleus is about $\frac{1}{8000}$ of an inch. This cell may be seen in some places surrounded by amorphous granular matter: elsewhere, it forms itself the nucleus of larger fusiform or caudate cells, from which issue filiform processes. These larger cells contain also granular matter. The cell just described appeared therefore in several phases: sometimes solitary, while elsewhere around it are formed either aggregations of molecules, or larger cells. In some it may be seen to have divided and doubled itself. The pigment is variously disposed, aggregated in some cells so as to form black masses, elsewhere more sparsely scattered; the colour of the tumour is uniformly black. Mr. ERNEST HART, 16th October, 1866.

4. *Microscopic specimens illustrating superficial inflammation of the cornea.*

The preparation, though described as illustrating an inflammation of the cornea, cannot be said to do so if inflammation is understood simply to imply the phenomena of ulceration, suppuration, or lymph-formation. In the case from which the specimen was taken there was no ulcer, no pus, and no lymph-formation. There was, however, as proved by the microscopic examination of the part, an enormous increase of cell-development, chiefly in the epithelium, but also in the proper tissue of the cornea, and, before the extirpation of the eye, it was seen that there were opacity of the cornea and increased vascularity. Probably the condition might be more correctly described as one of increased nutritional changes; but at the same time it illustrates the early stage of inflammation, such as would have gone on to ulceration in a case the circumstances of which were less favourable as regards vitality, local and constitutional.

The patient in this instance was a girl 18 years of age, under Mr. Critchett's care, affected with a tumour of the left orbit, causing extreme protrusion of the eye-ball, of eight or nine years' growth. The effect of the pressure behind the eye-ball had been to cause complete loss of vision in the eye, from stretching of the optic nerve. The cornea, however, was perfectly clear and bright, except at the lower part, which was rough, granulated, and vascular, and with a small whitish patch of the size of a pin's head in the centre of the granulations, as if ulceration were threatening at that point. Numerous blood-vessels were seen passing from the neighbouring conjunctiva into these

granulations of the cornea, which I attribute to the fact that the eye-lids could not completely cover this part in consequence of the great protrusion; and consequently the surface was here constantly exposed to atmospheric influence, and to the irritation of small foreign particles. The appearance of the patient, with the exception of the deformity due to the orbital tumour, was remarkably healthy. The movements of the eye were perfectly free, and there was no sign of any palsy or morbid anæsthesia of the parts surrounding the eye. Mr. Critchett, in removing the tumour of the orbit (on October 16th, 1866), which was of a fibrous or fibroid nature, found it necessary to remove the eye-ball, which he kindly allowed me to have for examination.

I made a section through the granulated portion of the cornea while the eye was quite fresh, and found great thickening of the epithelium, and development of papillæ beneath it. The membrane of Bowman, or anterior elastic lamina, is lost, and in its place is an abundant growth of cells, the product of the nuclei of the superficial layers of the cornea proper. These nuclei are seen to be much more numerous and more opaque in the upper layers than below, and in the deeper parts appear normal in character.

It would seem, therefore, that the corneal epithelium, by constant exposure to irritation, had become converted into a material resembling the mucous membrane of the adjacent conjunctiva, the appearance of which, as described by many, is almost precisely similar.

A healthy border of the cornea with the capillary loops terminating in the usual way offered a strong contrast to the same vessels at the lower and granulated border. I am unable to say what is the exact condition of the cells of the corneal tissue proper, excepting that they are very much multiplied in the upper lamina.

The specimen seems to show the usual effects of exposure of the cornea to irritating influences, when the nutrition itself is not lowered, and is a type of a number of similar cases. Thus in ectropium of long continuance there is often inflammation of the lower part of the cornea, and this, in cases where there is very feeble nutrition, may go on to ulceration. Cases of palsy of the orbicularis, in which there is constant exposure of the cornea, are also sometimes complicated in this way; though as a rule such is not the case. I have notes of the case of a woman, 46 years of age, that came under my observation in March, 1864, suffering from total paralysis of the orbicularis of the left side, in which superficial ulceration of the cornea at the lower part occurred, the ulcer healing rapidly when the lids were

kept closed for a few days by diachylon plaster. In this case there was no lesion of the fifth pair, so far as could be ascertained, and the vitality of the part itself was only lowered with the general lowering of the nutrition of the whole system. Possibly had she been in a more healthy state no ulceration would have occurred; but as she was in a very feeble condition, the vaso-motor apparatus probably was impaired coextensively with the impairment of the rest of the nervous system, and with the impairment of the vaso-motor apparatus the nutrition of the part suffered, and ulceration was the result.

In the case of the patient, from whom the specimen was obtained, suffering from tumour of the orbit and exposure of the lower part of the cornea in consequence, the only effect of the undue stimulation of the cornea was to produce increased action and increased cell-development; it was an instance of the truth expressed by the old adage, "Ubi stimulus, ibi fluxus." Whereas, in the case of palsy of the orbicularis, the stimulus, though at first increasing cell-development, was not met by a correspondingly increased nutrition, so that partial death of the part was the result.

Mr. W. SPENCER WATSON, *4th December, 1866.*

5. *Case of spindle-celled sarcoma of the choroid.*

A porter, aged 46, was admitted into the Royal London Ophthalmic Hospital, on October 13th, 1866, having very faint quantitative perception of light on the nasal side only of the visual field of his right eye. It began, he said, two or three months before as a cloud on his right hand, and gradually growing denser and larger, overspread the entire visual field. The left eye was unaffected.

The right pupil was large and sluggish, and a dull yellow glimmer came through it from a deeply-seated solid object, jutting from the nasal side of the globe far across the axis towards the temporal side. At the nasal side it nearly reached the lens, and in this situation it appeared to spring from the ciliary body; while above, below, and at the temporal side, separating the tumour from the globe-wall, there was a narrow chink, in which, at the temporal side, a wavy fold of retina, detached from the choroid, was visible.

The tension of the eye-ball was normal. The differentiation of the solid tumour from the detached retina was based on:—1. The absence of any communicated undulatory movement of the reflecting surface

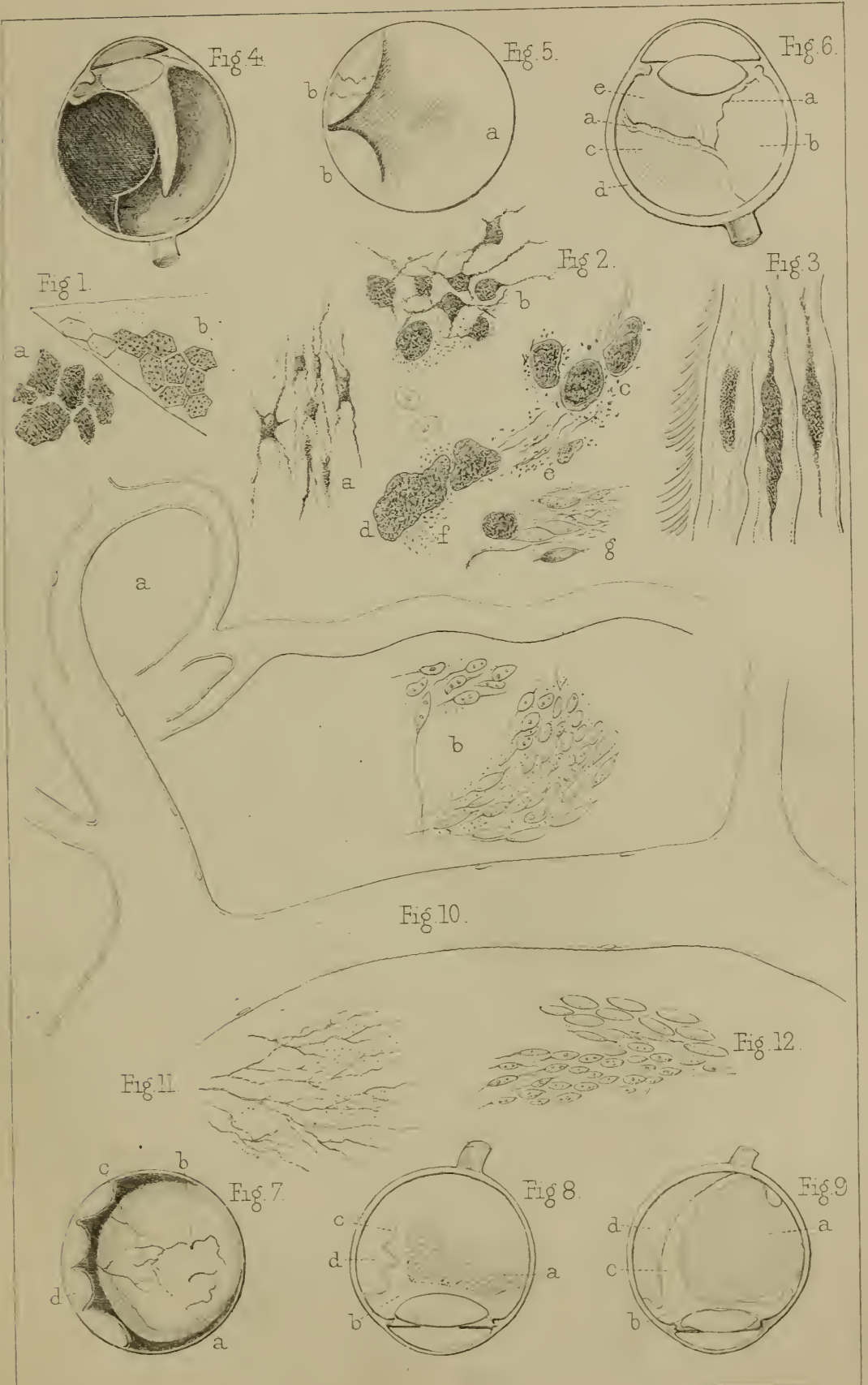
DESCRIPTION OF PLATE V.

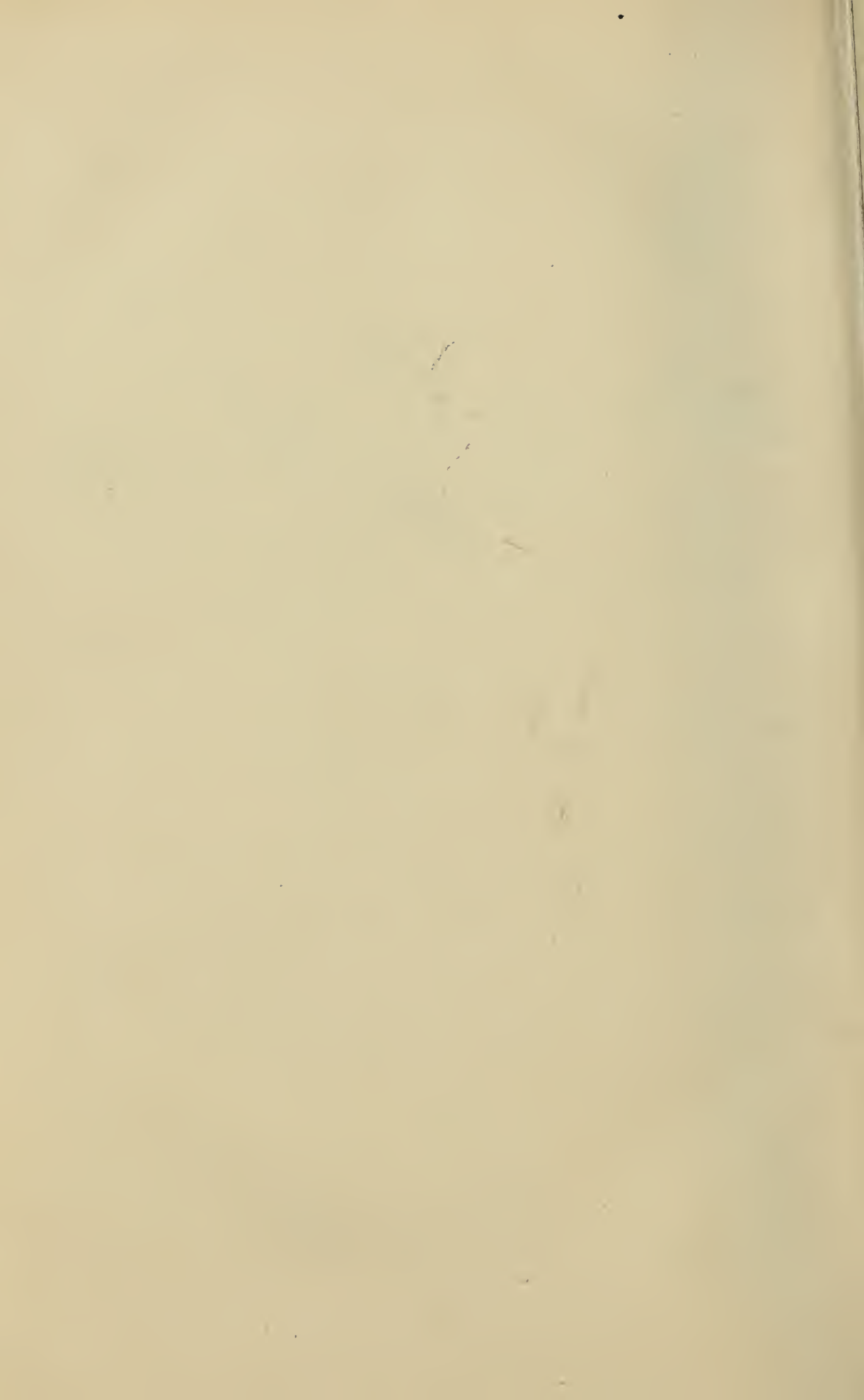
Figures 1 to 6 illustrate Mr. Hulke's case of Infecting Melanotic Sarcoma of the Choroid (p. 231). From drawings by Mr. Hulke.

- Fig. 1. *a.* Normal choroidal epithelium resting on the elastic lamina. *b.* Macroscopic epithelium loaded with pigment.
- Fig. 2. *a.* Normal stroma-cells outside the bounds of the tumour. *b.* Hyperplastic stroma-cells at the edge of the tumour. *c.* Large roundish cells charged with pigment. *d.* Large masses composed of the fusion of two or more cells. *e.* Fibrillated intercellular substance. *f.* Granular pigment. *g.* Fibrillated intercellular substance and fusiform cells.
- Fig. 3. Fibrous tissue composing the inner surface of the sclerotic, with long fusiform corpuscles filled with pigment.
- Fig. 4. A horizontal section of the eye after its enucleation. The detached and coarcted retina passes in the form of a funnel from the back of the lens to the sclerotic foramen; on its left is the melanotic tumour, on its right a space filled by serum.
- Fig. 5. A diagram of the ophthalmoscopic appearances. *a.* The tumour. *b.* The detached retina.
- Fig. 6. A diagram of the supposed relations of the tumour constructed from the ophthalmoscopic appearances, prior to enucleation. *a.* Retina. *b.* Space between retina and choroid full of serum. *c.* Tumour. *d.* Choroid. *e.* Vitreous humour.

Figures 7 to 12 illustrate Mr. Hulke's case of Spindle-celled Sarcoma of the Choroid (p. 228). From drawings by Mr. Hulke.

- Fig. 7. Ophthalmoscopic appearance of the tumour. *a.* Tumour. *b.* Vessels emerging upon its free surface. *c.* Retinal vessels winding forwards round the border of the tumour. *d.* Detached retina.
- Fig. 8. Diagram of a horizontal section of the eye-ball, showing the supposed relations of the tumour, made from the ophthalmoscopic signs before enucleation. *a.* Tumour. *b.* Vitreous humour. *c.* Detached retina. *d.* Space between retina and choroid full of serum.
- Fig. 9. Diagram of a horizontal section of the eye-ball after hardening by chromic acid. *a.* Tumour. *b.* Vitreous humour. *c.* Retina. *d.* Serum between retina and choroid.
- Fig. 10. *a.* Capillary blood-vessels of the tumour. *b.* Cells and intercellular tissue.
- Fig. 11. Finely fibrillated intercellular substance.
- Fig. 12. Organoid buds of spindle-cell tissue at outskirts of tumour.





when the eye-ball moved; 2. The different distribution of the blood-vessels which emerged suddenly at several points on the surface of the tumour, and were larger than those of the retina; and 3. The presence of other blood-vessels, evidently retinal (from their arrangement), winding from behind forwards round the tumour.

It was suggested that the tumour was syphilitic, but no history of a venereal taint could be elicited, and the man's frankness left no doubt in my mind that he spoke the truth. He was married, and had a healthy child. None of his relations, as far as he knew, had had cancers or tumours of any kind.

Having in mind the frequent infectiousness of intra-ocular tumours, whether true cancers or sarcomata, I could not hesitate to urge the removal of the eye-ball; and the patient acceding, I enucleated it, being influenced in selecting this operation by the expectation that, as the mobility of the globe was perfect, the tissues outside it were not yet infected.

The patient left the hospital at the end of a week, when he was able to have an artificial eye fitted, and as yet there is no appearance of a return of the growth in the orbit.

The enucleated eye-ball, which had been instantly placed in strong alcohol to harden, was cut across in its horizontal meridian when sufficiently hard, and a tumour was found in the situation indicated in the diagrams made before enucleation. Its base reached from near the ora serrata to about 3''' distance from the optic nerve (Plate V., Fig. 8). On the face of the section the choroid was traceable as a dark line, both on the free, and also beneath the scleral aspect of the tumour. This had originated in the choroidal stroma, and, bursting through the elastic lamina and epithelium, had prolonged itself upon the inner surface of the choroid. The situation of the rupture was clearly visible, and the elastic lamina and epithelium were rolled back on the neck of the tumour for a short distance from the point of rupture, a thin stratum of serum intervening here between the reflected portion of choroid and that which preserved its normal relation with the section. The retina, tightly stretched over the tumour, was pushed by it across the axis of the globe to the temporal side, where it was separated from the choroid by a stratum of coagulated serum.

The anatomical elements of the tumour were spindle-cells, averaging $\frac{1}{4300}$ " in their short diameter, by $\frac{1}{2150}$ " to $\frac{1}{1433}$ ", and more, in length. These were closely crowded in a scanty fibrillated intercellular substance, in some parts without definite arrangement,

and in others disposed in linear series. Its remarkable feature was the number and the large size of the capillaries. One of the largest of these had a diameter of $\frac{1}{477}$ ". It consisted, like the smaller vessels, only of a structureless tubular membrane, with scattered nuclei. No infection of the sclerotic was detected.

The fine structure of the growth brings it into the class of the sarcomata, and the little departure by the spindle-cells from the connective tissue type, together with the absence of infection of the sclera, are grounds for placing the tumour amongst the less malignant.

The quantitative perception of light by the detached retina is an interesting physiological phenomenon which has also been observed in other cases. The appearances above described are represented in Plate V., Figs. 7 to 12. MR. J. W. HULKE, 18th December, 1866.

6. *Case of Glioma of the retina, affecting the optic nerve, choroid, and sclerotic.*

A little boy, about 4 years old, was brought to the Royal London Ophthalmic Hospital in the spring of this year with blindness of his right eye, in which a yellow nodulated tumour was seen deeply situated in the vitreous humour hiding the optic nerve. In October the eye-ball had become distended and hard, painful and red. The conjunctiva was œdematous. The lens was slightly opaque and pushed forwards towards the cornea. The latter was dull.

From the similarity of the history and of the appearances to those of many other earlier cases, I had no doubt that the disease was a retinal *glioma*—a sarcomatous growth originating in the *neuroglia*, or connective tissue of nerve. Mr. Wordsworth, whose patient the child had been, having transferred him to my care, I sent him into the Middlesex Hospital, as the Ophthalmic Hospital was full, and next day enucleated the eye, preferring this operation in the hope that the orbital tissues were not yet infected, as the eye-ball moved freely. After enucleating the eye-ball the optic nerve was found very much enlarged. It was therefore cut off short at the foramen opticum, and after this the orbit was filled with a ball of cotton-wool smeared with chloride of zinc paste. On recovering consciousness after chloroform he screamed violently, and tore away the bandage. Sharp bleeding directly occurred, requiring the removal of the chloride of zinc dressing, and necessitating the application of perchloride of iron. A sharp

reaction followed, and the eschar separated on the occurrence of suppuration.

The wound healed with a depressed scar, which slightly draws in the lower eye-lid, and prevents him wearing an artificial eye. This is a disadvantage commonly following cauterization of less moment; but it is of little moment because enucleation is done in these cases in order to save life and not merely to relieve pain or to improve personal appearance.

On dividing the eye after hardening it in alcohol, it was firm, and filled with a pinkish-grey vascular growth specked with small white dots of fatty and earthy degeneration. The growth sprang apparently from the optic nerve and retina, and had infected the choroid and sclerotic at an early period before it had distended the eye-ball.

The histological elements were small, round, roundly oval, and spindle-shaped cells, ranging from $\frac{1}{4300}$ " to $\frac{1}{2730}$ " in diameter, with one or a couple of minute nuclei, and a finely-granular cytoplasm; and these cells were embedded in a scanty intercellular substance, homogeneous, finely granulated, or obscurely fibrillated. None of the normal retinal tissues were discernible; but the elastic lamina of the choroid was recognizable, and in the portions of the tumour involving the choroid pigmented cells were not infrequent. The cells in the sclerotic were rather larger than elsewhere. In all the coats, wherever any of the normal tissues were recognizable, the new growth appeared to be intercalated between them.

I do not, however, suppose that a gross mechanical connection occurred from the primary focus, because the minute anatomy of the growth afforded distinct evidence that its cell-elements were evolved out of the connective tissues of the respective coats.

Retinal glioma differs clinically from true cancers in the absence of distant infection, which I have not yet seen in any of the many cases which have fallen under my observation, and anatomically in the presence of an intercellular substance. It is a disease almost peculiar to childhood, the age when cerebral gliomas are most frequent.

Mr. J. W. HULKE, 18th December, 1866.

7. *Case of infecting melanotic sarcoma of the choroid.*

A woman, aged 45, was admitted into the Middlesex Hospital on November 6th of this year, with complete loss of sight in the left eye. In the preceding July she first became conscious of an obscuration which, beginning at the nasal side, gradually overran the whole

visual field, quantitative perception of light being not entirely lost till a fortnight before she came under my care. With the exception of an attack of pneumonia, two years previously, she had had fair health, but had never been robust.

The pupil was large and motionless. At the nasal side two festoons of floating retina, detached from the choroid, nearly approached the back of the lens. These were greyish-white and evidently of some age. Ramifications of the retinal vessels were plainly seen upon them. A solid dark-brown mass projected from the temporal side of the globe, across the axis towards the detached retina. Its surface extended backwards from the ciliary region on the nasal side towards the temporal side, and its posterior limit was hidden in the fissure which separated it from the festoons of detached retina. Its anterior surface was evidently covered by slightly opaque retina. The mobility of the globe was perfect, and its tension was normal.

The ophthalmoscopic signs alone were not sufficient to establish a positive differentiation between sclerosis and a sub-choroidal hæmorrhage, but the history of the case decided in favour of the former, for the slow progression of the obscuration indicated a correspondingly slow growth of the intra-ocular mass, while large sub-choroidal hæmorrhages usually occur suddenly and are attended with pain.

I recommended her to lose the eye, and enucleated it on the following day. The sclerotic was entire, and the optic nerve apparently not infected. At the end of a week she became an out-patient, and has since returned home.

On making a horizontal section of the globe, a black tumour was seen projecting from its temporal side across its axis to a height of 7''' from the inner contour of the sclerotic. The general form of the tumour was sub-globular (Plate V., Fig. 4); its base reached from the ciliary region nearly to the optic nerve, and it rested in its entire extent upon the sclera. Amongst the fibres constituting the innermost laminæ of this latter coat there were long fusiform and spindle-shaped corpuscles filled with diffuse and granulated dark-brown pigment; most of these were larger and unlike in their figure to the normal stroma-cells of the choroid, but others could not be distinguished from these. In front and behind, the base of the tumour thinned out so gradually that a distinct limit was not apparent, and in these situations the free surface of the tumour was overlaid by the epithelium and elastic laminæ of the choroid, with traces of the chorio-capillaris, and here and there one of the larger

veins. The epithelium, generally unaltered, exhibited a few patches of microscopic and irregular cells. The retina was separated from the choroid, at the nasal side and posteriorly near the optic nerve, behind the limit of the tumour, by a flocculent chocolate-brown serum containing disintegrating blood and cholesterine; while on the temporal side the retina was tightly strained over the free surface of the tumour (Plate V., Fig. 4).

The histological elements were principally round, and roundly-oval cells, averaging $\frac{1}{1075}$ " in diameter, and loaded with deep-brown pigment. These were so closely packed that, except at the thin edges of good sections, the individual cells were often not discernible. The scanty intercellular substance appeared transparent and homogeneous when fresh, but were finely fibrillated in chromic acid and alcoholic preparations. In some situations small fusiform and spindle-shaped cells, about $\frac{1}{3300}$ " broad, and five or six times as long, were present amongst the fibrillæ. (See Plate V.)

In sections through the apparent limits of the tumour, in which the elastic lamina and epithelium of the choroid were traceable upon its free surface, a gradual passage of the cells of the choroidal stroma into those of the tumour was easily traceable. The body of the cell grew larger and rounder and became filled with pigment, while its branches became dwarfed or disappeared. I could not so easily satisfy myself of the origin of the small fusiform cells, holding little or no pigment; they were perhaps evolved from the embryonic forms of connective tissue corpuscles always present in the choroidal stroma.

The relation of the structural elements with those of the connective substances, and the presence of an intercellular substance bring the tumour into Virchow's class of Sarcomata; while the infection of the sclerotic, the predominance of the cells over the intercellular tissue, and the wide departure of most of them from the connective type speak for its malignancy. Mr. J. W. HULKE, 18th December, 1866.

8. *Removal of a scirrhus tumour from the orbit and face.—The patient continuing free from any recurrence of the disease seventeen months after the operation.*

Mary H., aged 48, was admitted under my care into the Middlesex Hospital on January 30th, 1866, suffering from a tumour in the left orbit, and from a scirrhus tubercle on the side of the face in the parotid region.

The history the patient gave of herself was, that nine months before coming to the hospital she first experienced pain in the back of the left eye. This continued, and about two months afterwards she noticed that the eye was prominent.

The bulging steadily increased up to the time of her admission. The eye was then thrown forwards for a full inch beyond its fellow by a hard solid growth, which could be distinctly felt with the fingers to be filling the orbit. The surface of the cornea was ulcerated, and the eye had only perception of light. The upper lid could not close over the globe.

WOODCUT 13.



Between three and four months before her admission into the hospital a hard scirrhus tubercle appeared in the skin in front of the ear and lying over the parotid gland. It was now the size of a French bean, firmly adherent to the skin and subjacent cellular tissue, which around it felt thick and brawny.

In the treatment of this patient, I adopted the plan recommended by Mr. Moore and so successfully pursued by my colleague, Mr. De Morgan, when he removed a large recurrent encephaloid tumour from the orbit, a detailed account of which is given in Vol. XVII. of "The Transactions of the Pathological Society," page 265. I first excised the globe, and then carefully cut away the tumour from the orbit, commencing at its central portion, and working towards its circumference. Having apparently succeeded in removing the whole of it down to the orbital walls, I then applied the actual cautery over the surface to arrest all hæmorrhage.

Strips of lint well covered with the chloride of zinc paste were then

applied to the bottom of the orbit and around its walls. I then excised the scirrhus tubercle on the face, and applied to the cut surface, as soon as all the bleeding had ceased, the chloride of zinc paste spread on lint. The patient progressed very favourably after this operation.

Large superficial sloughs were first detached, and in about three months afterwards the whole bony orbit became completely detached, and I pulled it away in one piece.

The woodcut (Fig 13) represents very correctly the exact size and appearance of the orbit after it was removed. It is now in the museum of the Middlesex Hospital.

WOODCUT 14.



During the separation of the bone from the neighbouring tissues the patient at times suffered severely from pain in the head on the affected side, and from sickness; but all these symptoms at once ceased after the orbit had come away.

June 5th.—It is now over seventeen months since the operation.

She has had no recurrence of the disease, but continues in excellent health. Her body is well nourished, and she eats and sleeps well.*

The woodcut (Fig. 14), which has been drawn from a photograph, by Mr. Heisch, shows very well her present appearance.

MR. GEO. LAWSON, *15th January, 1867.*

* *September 14th, 1867.*—She is still well and free from any recurrence of the disease.—ED.

9. *Specimen of black cataract.*

The cortex of the lens was greyish-white and soft ; but the nucleus was perfectly black. There was evidence of old iritis in the case, with some black specks on the capsule of the lens.

Mr. Laurence stated it was the first case that had occurred at the Southwark Ophthalmic Hospital, amongst upwards of twenty-one thousand patients. The specimen possessed an additional interest in showing the concurrence of this rare form of cataract with the ordinary form.

MR. J. Z. LAURENCE, 16th April, 1867.

10. *Specimen of tumour of the eye-ball.*

The disease occurred in a child, when nine months old, in the left eye ; fifteen months afterwards the same disease appeared in the right eye. In November, 1866, a buff-coloured tumour was apparent behind each lens ; vision was destroyed.

These tumours gradually grew, distending the tunics of the eye, in a nodulated form, and setting up chronic inflammation of the globes. On April 3rd, Mr. Laurence removed the left eye-ball to relieve the patient of the suffering which the tension and irritation were causing ; since then the general health has much improved.

The eye-ball was found—excepting a minute space occupied by the softened lens—completely filled by a soft blood-stained tumour. The optic nerve at its division by the operation was, if anything, enlarged, but presented a perfectly normal-looking section. The microscopic characters were multitudes of small indistinctly nucleolated nuclei, which were in some instances aggregated in round cell-envelopes.

Mr. Laurence was in doubt as regards its encephaloid or tuberculous nature.

MR. J. Z. LAURENCE, 16th April, 1867.



VIII. TUMOURS.

1. *A specimen of a cancerous gland, which had been injected with acetic acid in the living body.*

A middle-aged man permitted a cancer of the lip to increase until it had spread over more than half the lower lip, and had involved a

considerable portion of the right cheek and nearly half the upper lip on the same side. It was then removed by Mr. Moore, on July 30th, 1866. After the healing of the wound, a small warty growth sprang up near the lower edge of the scar, and a part of the adjoining skin became hard. These slowly shrank without treatment, and disappeared; but during their subsidence, a gland beneath the angle of the jaw, on the same side, enlarged, and became a spherical, hard, moveable, moderately tender tumour, somewhat less than a cherry. This tumour Mr. Moore injected with a solution of acetic acid, of the strength of one part of acid to three of water, according to the plan of treatment proposed by Dr. Broadbent, and by means of a vulcanite syringe fitted to a sharp steel-pointed silver canula. Before throwing in the liquid, Mr. Moore pierced the gland in three or four directions with the canula. The quantity injected was estimated at rather less than a teaspoonful, and some of this escaped into the tissue outside the gland. The sensation produced by the injection was stinging and severe, and it lasted several hours. The injection was made on September 20th, 1866.

The gland did not diminish in size, but the surrounding textures became slightly swollen and inflamed. This swelling also did not lessen; and a general enlargement of all the parts beneath the angle of the jaw took place, until a tumour of the size of a large walnut had formed. This mass was externally rather soft, being apparently œdematous, and was not readily moveable upon the jaw. The injected gland could be felt through it undiminished in size; and there was a feeling of firmness about the mass as a whole, which made it probable that cancerous disease was growing in it. On the 10th of October, Mr. Moore accordingly removed the whole tumour, taking with it the submaxillary gland, for the purpose of somewhat diminishing the quantity of saliva which trickled, much to the inconvenience of the patient, over the shortened lip.

The specimen comprised the injected gland, a second lymphatic gland, more deeply placed and covered by œdematous cellular tissue and by the submaxillary gland. The facial artery and vein passed through the mass; and outside all was a portion of the platysma myoides.

The deeply-seated lymphatic gland was cancerous throughout. It presented on section a bluish pearly appearance, and was filled with cancerous matter, having somewhat the rough aspect of the softer portion of an intervertebral substance. It was dryish and friable, and was not

compact. The lymphatic gland which had been injected consisted of a thin, firm, bluish shell or cyst, less than a line in thickness. Its entire contents had become converted into a light brown, inodorous, stringy pulp, on the section of which floated minute pools of free oil. These soft central parts adhered to the compact wall in which they were enclosed.

The microscopic appearances of the two glands were as much in contrast with one another as those which they presented to the naked eye. The uninjected cancerous gland showed chiefly a very large number of dark, elongated, and poly-nucleated cells. Their length was from four to five times greater than their breadth, and they terminated in pointed or forked extremities. The soft contents of the injected gland presented similar cells, but single, not in clusters, and only once in four or five microscopic fields. Here and there was a small, thin, angular portion of what had apparently been a cell; but the principal part of all the specimens (and they were frequently examined, and by different persons) consisted of oil-globules, cells resembling those of pus, and granular corpuscles.

The change thus produced in the living cancerous gland was found to correspond with some exactness to that which can be seen to occur under the microscope when acetic acid is added to cells from growths of cancer. The proper cancerous growth appeared to have been chemically dissolved, and, with the exception of a few scattered cells, to have been rendered inert and unprolific. Only in the disengagement of minute oil-globules and their coalescence into little pools—a process requiring time, and also in the commencement of suppuration—unless, indeed, it were the conversion of the nuclei into pus—did the change differ from that with which the microscope makes us familiar. The finely stringy pulp, to which the whole interior of the tumour had been reduced, appeared to be the original stroma of the gland itself, freed from the unnatural growth which had occupied its meshes, but probably deprived of life.

Mr. CHARLES H. MOORE, 16th October, 1866.

2. *Fibrous tumour from the shoulder.*

The tumour, of the size of a large fist, was removed from the shoulder of a male admitted under Mr. Nunn's care into the Middlesex Hospital, on October 12th, 1866.

R. P., aged 67, nine months since first observed a tumour on the top of his shoulder not larger than a filbert; it was then painless; growing very rapidly it became, two months previous to admission, excessively painful. The tumour was seated over the insertion of the trapezius muscle into the scapula, and was firmly adherent to the muscle; it had all the external appearances of medullary sarcoma: the skin, from being tightly stretched over the tumour, was thought to be adherent to it.

The mass was swept away with the knife, and the actual cautery very freely applied over the whole site of the tumour, and to the borders of the skin around: the patient made an excellent recovery. He was inspected in May, 1867, and a small tumour had made its appearance in the middle of the cicatrix, to which, however, it was not attached. The patient declined to have it removed at the time.

Mr. NUNN, 6th November, 1866.

Report on Mr. Nunn's case of tumour of shoulder.—The tumour, a sub-globular mass, $2\frac{1}{2}$ " by $3\frac{1}{2}$ " in diameter, had been cut in halves, and had lain for some weeks in methylated spirit. Its rough characters were much altered, but its minute structure was well preserved.

The tumour lay in the subcutaneous fatty tissue, which formed a stratum of some thickness about its circumference, but which had disappeared from its summit, where the tumour and the deeper layer of the cutis cohered. The deep surface of the tumour was overlaid by a thin sheet of coarse bundles of striped muscular fibre.

Structure.—A capsule and a parenchyma are discernible.

The capsule consists of bands of common connective tissue interwoven in planes, the general direction of which is more or less parallel to the outer surface, and of a few elastic fibres. Groups of fat-cells occur sparingly amongst the more superficial bands.

The parenchyma is composed of a reticulum, and of a softer tissue filling its meshes. The coarser trabeculæ of the reticulum are prolongations of the capsule, with which they structurally agree; they are opaque white, and the larger spaces mapped out by them are filled with a finer net of paler, less opaque, fibres, which are really bands of large fusiform cells (Plate IV., Fig. 1). The soft tissue lying in the finest meshes consists of oval, roundly oval, and polygonal cells, from $\frac{1}{4500}$ " to $\frac{1}{1500}$ " and upwards in diameter (Plate IV., Fig. 2). The largest of these consist of a thick capsule, or outer membrane,

enclosing two, three, or four nucleated cells, while the smaller cells have a thin membrane, and are mostly mononucleated. These lie in a finely fibrillated or granular matrix, which is abundant in some situations, but scarcely present in others.

In some sections an alveolar structure was observed (Plate IV., Fig. 3). This may have been, in some instances, an illusion produced by the section obliquely cutting across bundles of fusiform cells in the level of several nuclei; but in most instances the appearance was doubtless real, because the diameter of the cells exceeded that of any possible section of a fibre-cell. These parts of the tumour show an anatomical affinity with cancer by their alveolar structure, and by the almost complete absence of intercellular tissue; but the principal part of the mass has the structure of a trabecular spindle-celled sarcoma — the “sarcoma fusocellulare trabeculare” of Virchow. (Virchow, *Die krankhaften Geschwülste*, Bd. ii. s. 197.)

Mr. J. W. HULKE,

Dr. W. CAYLEY, 18th December, 1866.

3. *A large enchondromatous tumour of the shoulder, with malignant deposits in the liver and uterus; ununited fracture of the tibia of both lower limbs.*

This case had recently been under the care of Mr. Marshall, in University College Hospital, through whose kind permission it was exhibited to the society.

The history is as follows:—

H. W., a young woman aged 20, but appearing not more than 15 years of age, and of a very cachectic aspect, presented herself at the hospital, and was admitted under Mr. Quain in April last. She had always been delicate, but had enjoyed tolerable health. In her childhood she fractured at different times, and from slight degrees of violence, the tibia and fibula on both sides; the tibiæ seem never to have properly united, and false joints formed at the seats of fracture. No attempt seems to have been made to establish osseous union. With this exception, nothing of importance was learnt with regard to her history till November last, when a swelling was noticed on the right shoulder, which gradually increased in size, extending backwards towards the spine and downwards towards the elbow, and causing much pricking and shooting pain.

DESCRIPTION OF PLATE VI.

This plate illustrates Mr. A. Bruce's case of Enchondromatous Tumour of Shoulder, with Cancerous Deposits in Uterus and Liver (p. 240).

Fig. 1 shows the appearance presented by the tumour during life.

Fig. 2 shows the microscopic appearance presented by the tumour of the shoulder, from a drawing by Mr. Hulke, magnified 200 diameters:

Fig. 3. Cells from cancerous growth in liver, from drawing by Dr. Wilson Fox, magnified 400 diameters.

Fig. 4. Cells from margin of growth in liver, from drawing by Dr. Wilson Fox, magnified 400 diameters.

Fig. 5. Cells from cancerous growth in uterus, from drawing by Dr. Wilson Fox, magnified 400 diameters.

Fig. 6 shows transition forms between the normal histological elements of the uterus and the foreign growth, the former predominating at the lower part of figure, and the latter at the upper.

Fig. 1.



Fig 2

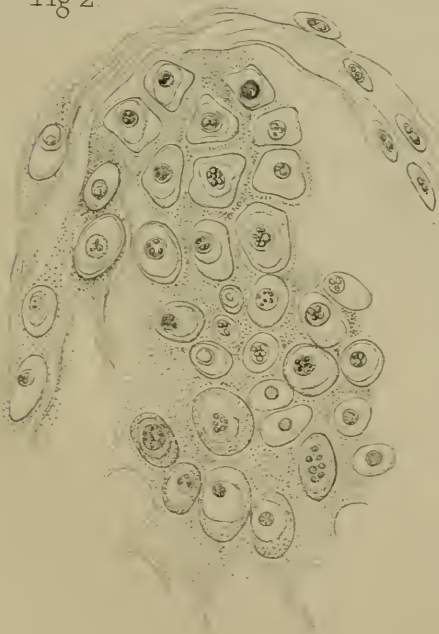


Fig 3.

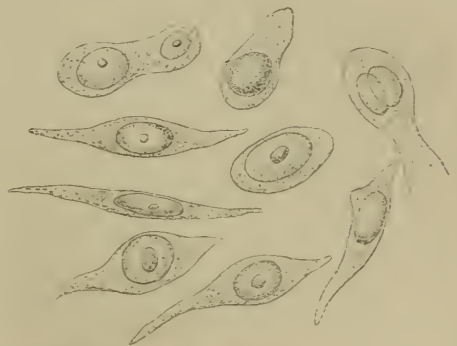


Fig 4



Fig 5

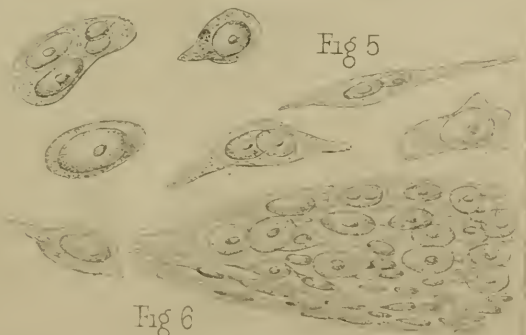


Fig 6

On her admission in April last the right shoulder was found to be occupied by a tumour, which extended from a point about two inches from the middle of the sternum in front to about the same distance from the spine behind, and from about the middle of the clavicle above to the middle of the humerus below, implicating the entire hollow of the axilla. The tumour was smooth over the greater part of its surface, very slightly nodulated in other parts, of a hemispherical form, and of a somewhat dusky colour at the posterior and lower parts: large veins were seen ramifying over the surface. The mass moved slightly on the chest walls, but less freely above than below. On palpation it was felt to be of a firm, resisting, yet slightly elastic nature; in parts it was softer, and some indistinct sense of deep fluctuation was obtained. The humerus could be distinguished in the anterior part, and moved with moderate freedom. The pain in the tumour was considerable. The lower limbs were much deformed; the right tibia was divided into two portions, which were connected together at about a right angle; a gliding movement of one fragment on the other was easily obtained, and no crepitus could be felt. The fibula was also bent, but, as far as could be ascertained, no movement took place between the parts. On the left side the fragments of the tibia were united at a more obtuse angle; a false joint also existed between them. Over the prominence thus formed in both shins the skin had become hard, and was covered by a thick cuticle; a bursa seemed to have been developed beneath it. Operative interference being out of the question not only in consequence of the great magnitude of the mass, but also in consequence of the general condition of the patient, the only treatment that could be adopted was to relieve the pain, which was at times very severe, especially in the right hand and arm and up the side of the neck and face, and to improve the general condition. She left the hospital in May and was re-admitted in June.

The only changes noticed in the tumour were, a general increase in size, the transverse measurement over the most prominent part being now twenty-four inches (instead of twenty-three); a greater stretching of the skin, which was at this time very tense and shining, of a deeper red, and in parts of a dusky purplish hue; and an increase in the number and distinctness of the cutaneous veins (Plate VI., Fig. 1). She suffered much from intense burning pain in the back of the hand and the tips of the fingers. A small inflamed patch of skin was noticed on the posterior fold of the axilla, near the arm; it was adherent to the tumour beneath, which was here softer and distinctly fluctuating; there was

great tenderness on pressure at this spot. She left the hospital in July (the tumour measuring in transverse circumference twenty-seven inches) and was re-admitted in September. Ulceration had now taken place at two spots near the posterior fold of the axilla, where the skin had previously been adherent. A cavity had formed presenting a grey, sloughy aspect, and discharging a thin, puriform, and very foetid fluid, with shreds of broken down tissue. The posterior part of the mass was much darker than the anterior, and it was here that the superficial veins were most distinctly seen. Two prominent knuckle-shaped prominences were seen upon the upper part of the tumour, corresponding to the situation of the acromion; these were close together, of a bluish-red colour, and were marked by a network of fine vessels. The condition of the patient was wretched in the extreme; she was unable to lie down and the most constant care was required to prevent the extension of the bed-sores that had formed. She died on October 15th.

Post-mortem examination thirty-six hours after death.—The body badly nourished; the limbs shrunken and dwarfed; the skin harsh and rough. Œdema of the right arm and hand. The superficial veins of the abdomen were much enlarged, especially on the right side, where one vein in particular was very prominent. Bed-sores were found over the coccyx and both ischial tuberosities; purplish discoloration of the skin of the back, around the arms, and on the outer side of the seats of fracture of the tibiæ.

The large mass occupying the right shoulder gave the following measurements:—

- Circumference of base of tumour, thirty inches;
- Vertical diameter, ten inches;
- Horizontal measurement over tumour, eighteen inches;
- From base to most prominent point, nine inches.

In addition to the particulars mentioned in the description of the tumour given above it was found that the collar-bone passed obliquely upwards and outwards in front of the upper part of the tumour, and, on tracing this line further backwards and downwards, a ridge could be felt, which was supposed to be the spine of the scapula. On rotating the humerus, the upper end could be felt embedded in the anterior and outer part of the mass, and a rough grating sensation was perceived.

The margins of the sloughing cavities were thickened, and the skin was closely attached to the subjacent structures.

The cervical glands could not be felt, but the axillary glands were enlarged, indurated, and in part incorporated with the mass of the tumour.

On opening the thorax, the lungs were found much collapsed against the spine, the pleural cavities being occupied by large quantities of yellowish and slightly turbid fluid; 90 cub. cent. of fluid in the right, and 115 cub. cent. in the left. Much soft, flaky, and puriform lymph was found lining the pleural surfaces. The ribs on the right side were found to be pressed inwards, and flattened by the growth of the tumour.

The right lung was very much compressed; the lower and posterior three-quarters of the organ being completely airless, dense, and sinking readily in water. The left lung contained much more air, only the extreme base being non-crepitant. The substance of both lungs was in other respects normal, and no deposits of any kind were found in them.

Lying in front of the trachea, and extending from the front of the heart to the apex of the thoracic cavity, was a hard mass, which was supposed at first to be enlarged glands, but was evidently the right subclavian, the right and left innominate veins, and the superior vena cava completely obliterated by a hard mass in their interior. The pericardium contained a clear yellow serum, and a jelly-like coagulum, amounting together to about 10 cub. cent. The heart was very small and its walls were flabby; the cavity of the right ventricle was much contracted. At the opening of the superior cava into the right auricle a hard nodule was found projecting from the vein above, and attached to the end of this was a small decolorized thrombus.

Liver.—On the anterior superior surface of the right lobe near the fissure was a deposit about the size of a small filbert, circular in outline, elevated above the surface of the organ, and projecting into the substance to the extent of half an inch. It was of a cream-colour, moderately soft, and broke down easily on pressure; it yielded a juice, imperfectly resembling true cancer juice, on pressure. On the upper surface of the left lobe was a prominence, beneath which on section a large deposit of the same nature was found; this mass measured one inch and a-half, by one inch. The appearance presented by these masses was evidently that of the usual form of cancerous deposit in the liver. The rest of the organ was healthy.

The extremity of the great omentum was adherent to the upper and anterior surface of the *uterus*, at the fundus of which a hard nodule about the size of a bean was felt, which afforded on section a grating sensation and presented many of the naked eye characters of cancer.

The kidneys and other abdominal viscera were normal.

Examination of the tumour.—It was covered on the surface by the distended and atrophied fibres of the pectoral, deltoid, and scapular muscles. Along the upper border could be traced the clavicle, which at its outer extremity was intimately connected with the substance of the growth. The humerus penetrated the lower border, and could be moved with tolerable freedom; it was evidently only secondarily implicated, and was not in any way the primary seat of the disease.

The growth occupied the entire scapula, no portion of that bone being distinguishable.

On section the tumour was found to consist of a firm gristly substance, crossed by bands of fibres, of unequal density in different parts, and in many spots hollowed out into large cavities containing a puriform fluid, broken down cell-structures, and shreds of tissue. Numerous plates and spicula of bone were found freely scattered throughout the mass. The gristly substance composing the greater part of the growth presented on closer inspection a faintly bluish, semi-transparent, or dimly granular appearance, like the matrix of cartilage. This was divided into loculi of various sizes by fibrous septa, which branched in all directions from the larger bands of fibres. In many parts these loculi contained small spaces varying in size from that of a millet-seed, or smaller, to that of a pea. There was no evidence to show whether these were related in any way to the large cavities, which had evidently formed in consequence of a breaking down of the substance of the growth. Vessels might be traced running along the fibrous bands, and in many parts the vascularity was considerable; discoloration had taken place in some parts, as a result either of hæmorrhage or of *post-mortem* staining. Other spots were seen with a very irregular distribution, and varying in colour from an opaque white to a tawny yellow, evidently the result of fatty degeneration.

The calcareous and osseous deposits scattered through every part of the growth appeared to consist of two varieties, viz., plates and spicula of true bone varying in size and shape, and being probably portions of the scapula, which had been displaced by the development of the tumour; and secondly, irregular granular deposits of calcareous or bony substance, the result probably of changes taking place in the new formation. In the axilla the mass had so completely implicated and fused together the different structures, that great difficulty was found in distinguishing them; the great trunks of nerves derived from the brachial plexus were matted together so as to prevent any dissec-

tion of them being made. The subclavian vein having been traced into the substance of the tumour from above was speedily incorporated with it, and the hard mass which occupied this vessel was found to be of the same structure as the growth itself. The matrix was more hyaline, less firm, and of a pinkish colour; the fibrous septa were scarcely to be distinguished, and the calcareous deposits were not so numerous nor so large: as might have been expected, none of the larger plates or spicula of bone were to be seen here. The coats of the vessel were not in any way attached to the mass within it, until it had penetrated into the tumour, when they became apparently incorporated with the growth.

On microscopical examination of the tumour, it was found to present the characters of a rapidly growing enchondroma; its structure varying however in different parts. In the portions that appeared to be of most recent formation and to have been least affected by degenerative changes the characters were those of ordinary cartilage, viz., large thick-walled cells of a rounded, oval, or polygonal form, with a large nucleus and nucleolus, embedded in a firm hyaline or granular matrix: the proportion of cell-element was much larger than in ordinary cartilage, whilst the nuclei were rarely seen dividing, and the cells were not placed in groups as is so commonly the case in the normal form. The nuclei were mostly very granular, and occupied the greatest part of the cell space.

In other parts, where the septa were very numerous, the matrix was markedly fibrous; here also ossification might be seen taking place in the tumour. The process, however, appeared to me to be a mixture of true ossification and simple calcification, or rather of ossification stopping short at an early period before true bone is formed. Bony spicula might be seen radiating from small centres of ossification; and traversing the matrix in advance of these spicula were seen fibrous bands projecting amongst the cells and grouping them together, but never so completely as in normal ossifying cartilage. A calcification of the cartilage-cells then appeared to take place, and at this point the process was generally arrested; the deposit remaining dimly granular and fibrous without any attempt being made to form lacunæ and canaliculi. This process was evidently quite unconnected with the fragments of the scapula found throughout the mass.

In those portions of the tumour which were undergoing degenerative changes, the stroma was completely fibrous, and the cells granular or rapidly disintegrating.

The mass which filled the veins presented similar characters throughout the greater part of its extent, the matrix being, however, more uniformly hyaline, the cells less granular, and the calcareous deposits smaller and less numerous.

At the orifice of the vena cava, where the mass projected into the auricle, the matrix presented new characters: the cells appeared to be embedded in a substance much resembling newly coagulated fibrine, but firmer; it was as if the new growth had involved a previously-formed thrombus, and had retained some of its structure.

No evidence of any malignant character could be found in the growth.

The microscopical examination of the deposits in the liver and uterus confirmed the opinion formed from their naked eye characters. The report of the committee contains so full a description of their structure that it is needless to give any details here.

On examination of the fractured tibiæ it was found that the fragments were held together partly by thickened bands of fibres derived from the periosteum, and partly by their union with an interposed piece of cartilage, which allowed a gliding movement similar to that observed at the symphysis pubis. The medullary cavity was partially filled with deposit of bone internally, probably the remnants of the original callus formed at the time of injury. There was no evidence of any cancerous or other disease in the bone.

The report of this case presents many points of clinical and of pathological interest, more especially with regard to the concurrence of cancerous and enchondromatous growths in the same individual, without any apparent connection between them. The diagnosis moreover of the nature of such a tumour as that described above is replete with difficulties.

Portions of the tumour, liver, &c., together with a cast of the former, taken after death, and the bones from the legs, are contained in the museum of University College.

Mr. ALEX. BRUCE, 6th November, 1866.

Report on the tumours exhibited by Mr. Bruce.—The parts presented for examination were:—

- (1). A large tumour removed after death from the scapular region.
- (2). The heart and great veins.

(3). A portion of liver containing a section of a morbid growth of about the diameter of a large walnut.

(4). The uterus.

The tumour as now seen is externally very irregularly lobulated; on the greater part of its surface the remains of a capsule are still to be distinguished. On section it has a firm surface, bluish and semi-transparent, and presents the ordinary characters of an enchondromatous tumour.

It is divided by septa into lobules of various sizes. The larger lobules are bounded by thick whitish bands of a fibrous character, which give off smaller septa in all directions.

The vascularity of the tumour varies greatly in different parts; in some places it is considerable, and in others hæmorrhage is seen to have occurred, giving a chocolate-brown tint to the otherwise hyaline tissue.

Irregular cavities are here and there scattered through the tissue; the contents of some appear to have been a clear fluid, which has for the most part escaped; but in these cavities, which rarely exceed in size a walnut or hazel-nut, there are none of the appearances of suppuration observed in the larger cavities found on the removal of the tumour at the *post-mortem* examination.

The cut surface is also variously mottled with spots of fatty deposit, and with osseous spicula scattered through the tissue.

On a careful examination of this tumour, I find it to present the ordinary characters of an enchondroma. The structure is cartilaginous throughout, except in places where an imperfect ossification has commenced; and the results of my examination correspond entirely with the description and drawings furnished by the exhibitor, Mr. Bruce (Plate VI., Fig 2).

The mass surrounding the subclavian-vein presents the same hyaline appearance as that characterizing the larger growth. It is, however, somewhat softer and slightly redder in tint, and its division into septa is less marked. Spicula of bone are also found in it. In microscopical characters it corresponds precisely with those of the larger tumour, and presents the ordinary characters of an enchondroma. A small thrombus is found attached to its free extremity in the vena cava.

The freedom of the coats of the innominate and subclavian veins from invasion by the tumour has been already alluded to in Mr. Bruce's report.

A section of the mass in the liver, as seen after immersion for a few days in strong brine, and subsequently in alcohol, presents an opaque, yellowish-white, elastic, and homogeneous-looking tissue. It has nowhere a distinct boundary, but blends with the adjacent liver tissue, as if infiltrated into the parenchyma of the organ. A branch of the portal vein passing into the tumour is speedily occluded, but does not appear to be penetrated by the growth. Another larger branch of the vein passing through the mass is unaffected by it.

The uterus contains in its body, on the left side near the fundus, a mass of the size of a large hazel-nut. It is hard, not at all circumscribed, but blends irregularly with the uterine tissue, traces of which may be seen throughout its entire thickness, giving it a finely areolar appearance. Mr. Marshall informs me that this growth had, when recent, all the ordinary naked eye appearances of scirrhus cancer.

Examined microscopically, the growths in the liver (Plate VI., Figs. 3 and 4) and in the uterus (Figs. 5 and 6) at their margins present an almost complete identity of structure; and in both there is observed a large amount of heterologous cell-element infiltrated among the remains of the original tissue of the parts. In the uterine tumour, transition-forms between the normal histological elements and the foreign growth could be distinctly observed.

The growths themselves consist of densely-packed cells, between which, in the central parts, there is but little stroma visible. The cells vary greatly in shape between fusiform and large round or ovate cells, while others are very irregular in form; the average length of the ovoid cells is about $\frac{1}{1000}$ to $\frac{1}{1200}$ of an inch; their breadth, $\frac{1}{1500}$ to $\frac{1}{2000}$.

Some of the cells attain, however, a length of $\frac{1}{700}$; and $\frac{1}{850}$ inch is no uncommon measurement. The nuclei average $\frac{1}{2500}$, and are more uniform in size than the cells. The nucleoli, probably owing to the mode of preservation, are indistinct. Poly-nucleated cells are the exception rather than the rule, but are not very unfrequent. In some cases cells can be seen in processes of division.

I am inclined to place both these last-named tumours in the category of the cancerous growths, from the manner in which the tissues are infiltrated by the cell-structures, and from the rapid growth, irregular shape, and large nuclei which characterize these latter; characters which are rarely presented in so marked a degree by any fibroplastic tumours which I have hitherto examined.

I should, as a hypothesis, regard it as probable that the growth in the liver was secondary to that in the uterus, and that both these were independent of the enchondromatous growth in the shoulder.

The occurrence, however, of two series of growths—of classes hitherto reckoned distinct in the same subject, and in such distant and apparently disconnected organs—appears to be a fact of great clinical as well as pathological interest.

Dr. WILSON FOX, *4th December, 1866.*

Having examined Dr. Fox's preparations of this case, and the parts in their rough state, we agree with him in regarding the morbid growth in the liver as secondary to that in the uterus, and we consider that both are unconnected with the enchondroma of the shoulder. We also confirm Dr. Fox's account of the microscopical appearances.

Dr. W. CAYLEY,

Mr. J. W. HULKE, *4th December, 1866.*

4. *Congenital tumour of tongue in a patient aged thirty.*

This tumour was taken from the tongue of a woman aged 30, from whom Mr. Mason removed a similar growth three years ago. (Vide Path. Trans., vol. xv., p. 210.) She applied at King's College Hospital in August last, and desired to have the tumour removed on account of its rapid increase in size. Mr. Mason placed a ligature round the pedicle, and separated the growth with scissors. The case did perfectly well. It was of a fibro-cellular nature, and in all respects resembled the tumour previously operated upon.

Mr. FRANCIS MASON, *20th November, 1866.*

5. *Fibroplastic tumour removed from the body of the external oblique muscle.*

Mary K., aged 31, was admitted into Guy's Hospital, under my care, on December 7th, 1866, with a tumour, the size of a walnut, situated above the crest of the ilium in the right loin. It was apparently deeply seated beneath the fascia. It had been growing for two years, and had given rise to much pain.

On December 18th the tumour was excised. It was found to have been situated in the fleshy portion of the external oblique muscle,

and to have separated its fibres and infiltrated it, the fibres of the muscle being clearly seen passing away from its lower border.

Microscopically, all the elements of the fibroplastic tumour were readily made out.

From the fact of its growing within a muscle and infiltrating it, there appears to be a great probability that the tumour may turn out to be of the recurrent kind.

Mr. THOMAS BRYANT, 18th December, 1866.

6. *Fibrous tumour removed from over the trochanter major.*

The tumour was removed from a healthy soldier, aged 27, and of eight years' service. It was supposed to have been caused by pressure on the part when lying on the hard guard-bed, and the occurrence of such tumours is sufficiently frequent to justify this opinion. The patient first observed it two years ago as a small moveable tumour over the trochanter major of the right side, which was the seat of intense pain when he happened to lie upon it on the guard-bed. It gradually increased in size until it attained that of a small egg, when he applied to have it removed, on account of the pain and inconvenience arising from it; this was done on January 6th, 1867. The wound healed by the first intention, and he was fit for duty in ten days. He had never suffered from constitutional syphilis.

On section and microscopic examination, the tumour presented throughout a firm fibrous structure, and no trace of bursal origin could be detected. Mr. JOHN W. TROTTER, 5th March, 1867.

7. *Congenital tumour of the mouth, involving the brain, and connected with other malformations.*

On the 27th of January I was requested to see a case at the German Hospital, sent in by Mr. Denny of Kingsland. On my arrival there I found the little patient, a full-grown female child, born the night before, lying in the nurse's lap. A large bluish-red looking tumour, of the size of a small fist, was hanging out of the mouth, overlapping the chin, and resting with its base on the sternum. On making a more minute examination, I found that the patient had

been born with hare-lip and with cleft palate, but with the modification that the fissure of the lip was precisely in the centre. The above-mentioned tumour, slightly constricted in the middle and elastic to the touch, was attached to a pedicle, which, on opening the mouth, could be followed up to the right side of the septum narium, and appeared to end at the vomer and the conchæ of the nose, where it was seemingly one with the mucous membrane. Handling, or even pressing, the tumour, neither diminished the size of it nor affected the child. I certainly thought, and mentioned the fact to Dr. Hirsch, that it might be in connection with the cerebrum, but the above-mentioned and other circumstances made me believe that I had to do with a polypoid growth. I therefore put a strong ligature round the pedicle, as high up as possible, and cut off the tumour. A small quantity of reddish fluid escaped into the mouth of the child, producing partial suffocation, but it soon recovered, and took some milk with a spoon. The infant went on fairly for the first three days, and with the exception of a bluish appearance of the extremities, which with difficulty could be kept warm, there seemed to be nothing the matter with it. In the night, from January 30th to 31st, however, convulsions suddenly set in, under which the child quickly succumbed.

At the *post-mortem* examination we found, on dividing the skull vertically, that the pedicle perforating the sphenoid bone entered the skull immediately in front of the sella turcica, and was there attached to an oval tumour, which was covered with a thin membrane (*pia-mater*), and surrounded by the brain, and which consisted entirely of grey brain-substance, but yet seemed (!) a new growth, not constituting an integral part of the brain. The membranes of the brain and the brain itself were rather in a hyperæmic state, particularly the *pia-mater* and choroid plexus; the lateral ventricles were much dilated; in other respects no abnormality; the skull also showed no other deformity than the aperture in front of the sella turcica. With respect to the tumour itself, it consisted of two separate membranes, forming a small empty sac, of which the intervening tissue was highly œdematous and of a reddish colour, and assumed during lifetime on that account the enormous bulk above mentioned.

With regard to the diagnosis of this case, I think one is justified in considering it a fair specimen of an encephalo-meningocele.

The other organs were healthy, with the exception of the heart, which showed several important points of interest; and as my friend

Dr. Baeumler has kindly examined it in detail, I think I cannot do better than give an abridged account of his notes. The apex is rounded off more than usually. The conus of the pulmonary artery is greatly developed; the large vessels originate from their usual place. A longitudinal incision on the left side brings the left or only ventricle into view. Of the septum one only perceives a small rudiment, in the shape of a fleshy protuberance originating from the base of the pulmonary artery and thinning towards the aorta. The pulmonary artery has three valves; the aorta, only two. The most striking phenomenon is the utter deficiency of the right auriculo-ventricular opening, and of the tricuspid valve. In the right auricle one perceives, before the entrance into the appendix auriculæ, a large Eustachian valve, leading the stream of the blood towards the foramen ovale, and covered by a large valve. The beginning of the coronary vein of the heart is very much dilated, and the foramina Thebesii do not exist. The right auricle is smaller than the left. The ductus arteriosus Botalli is permeable.

Dr. LICHTENBERG, 19th March, 1867.

8. *Multiple subcutaneous fatty tumours.*

Mary Ann H., aged 44, married, without family, applied for relief at the Western Dispensary in October, 1866, in consequence of suffering severe pain in both arms, and called attention to the nodules situated upon them. She had first noticed them when of small size, eighteen years ago. Sometimes she would miss one and find that another fresh one had made its appearance in the neighbourhood (probably a shifting tumour). They increased in number, and slowly in size, but not until five years ago did they cause any inconvenience.

Latterly her rest has been disturbed by a sense of diffused tension and pain.

On admission, the tumours, to the number of nine on each arm, were scattered about irregularly, the favourite situation being the ulnar surface of the fore-arms; with the exception of one in the axilla, none appeared on any other part of the body. The greater number were the size of a split pea. The largest, which was lobulated, was less than a bean. The smaller ones were hard; the larger, less so; no pain was caused by pressure. They were freely moveable. The skin appeared perfectly natural over the smaller tumours; faintly dis-

coloured, of a purplish hue, over the larger ones. The pain of which she complained came on at night-time; numbness invaded the fore-arms, and extended downwards to the hands and upwards to the shoulders; the hands became swollen, and she could not clench the fist. This numbness and some loss of power were felt at other times, so that she had to abandon her employment as needlewoman and take to laundry work. The middle finger on the right hand was entirely disabled.

On January 25th Mr. Hickman removed one of the tumours, with its capsule. Dr. Dickinson examined it, and says, "It appears to be a simple fatty tumour. A section looked at with the naked eye appears to consist of fat, semi-transparent and greasy, intersected by a few lines of fibrous tissue. With the microscope it shows an almost uniform mass of fat-cells. Here and there a few crystalline collections of the fatty acids are seen, and a few slender and sparse bands of fibrous tissue traverse the growth in different directions. The fibrous tissue is not enough to entitle the growth to be called 'fibro-fatty.'"

The patient has been a healthy woman, fairly robust; she has lost flesh in the course of the last two years, but cannot be said to be thin now. The catamenia ceased nine months ago. She has been under treatment for pyrosis, flatulence, and gastrodynia, and has improved materially in these respects. Subcutaneous injection of morphia was serviceable in inducing rest at night. Liquor potassæ is being tried, in accordance with Sir B. Brodie's recommendation in such cases, under Mr. Hickman's direction.

Remarks.—At first it was suspected that these tumours might have a malignant character; but their history, the little alteration they were observed to undergo in the course of the six months during which they were under observation, and their usual situation away from the lymphatics and large veins negatived this idea. It still, however, remains to be proved whether they will maintain their simple fatty character. Pain and numbness are symptoms not alluded to by Sir B. Brodie in his account of multiple fatty tumours. Mr. Lloyd observed them in a case of simple fatty tumours remarkably like this, recorded in the 'Lancet' for January 15th, 1853.*

Dr. BAGSHAWE, 10th April, 1867.

* For similar cases of multiple subcutaneous fatty tumours, which also appeared to be hereditary, the reader is referred to a paper by Dr. Murchison, in the *Edinburgh Medical Journal*, for June, 1857, p. 1091.—ED.

9. *Fibroplastic tumour removed from the deep fascia of the leg of a patient in whom two other like tumours existed.*

Honora B., aged 28, a married woman, the mother of seven children—the youngest being four months—came under my care at Guy's Hospital on March 11th, 1867, having been sent up to me by Mr. R. Moon of Lower Norwood.

She had been the subject of a tumour on the outer portion of the lower third of her right leg for a year and a-half; its increase had been somewhat rapid. When coming under observation the tumour was composed of two large masses, the size of oranges, projecting from the lower third of the leg. The skin over both was broken, the growth being apparently encapsuled by it; the margins of the opening in the integument were healthy and unconnected with the growth beneath; the tumour had evidently deep attachments.

The patient had likewise a second tumour in the right parotid region, the size of an egg, of three months' standing. It was firm and nodular, and apparently fibroplastic.

A third tumour also existed in the abdominal walls, midway between the ensiform cartilage and the umbilicus. It was of the size of a walnut, and had also existed three months. It seemed deeply connected, and was apparently of the same nature as the two first described.

On March 22nd the tumour in the leg was removed. It was found to be closely connected with the deep parts, and involved the gastrocnemius muscle, from which it was dissected. A nodule of the tumour dipped down between the deep and superficial layers of muscle. It was readily turned out; enough skin was left to cover the wound. The wound was carefully adjusted and the parts steadily compressed with strips of wet lint, a splint being applied.

An uninterrupted recovery took place, the woman leaving the hospital in about one month, nearly well.

She was requested to return to have the parotid tumour removed some months hence.

On removal, the tumour presented all the features of the fibroplastic tumour, both to the naked eye and microscope. It measured four inches and a half in diameter.

The case was one of extra interest as an example of multiple fibroplastic tumours.

Mr. THOMAS BRYANT, 2nd April, 1867.

10. *Large tumour from the female breast.*

The tumour measured twenty-three inches and a-half in circumference and weighed four pounds twelve ounces. It had developed itself in the upper part of the right mammary gland; the nipple with the remains of the gland being discoverable, but quite overshadowed by the tumour at the lower border of the preparation, and constituting but a very small proportion of the entire mass.

The patient from whom it was removed, aged 28, unmarried, but the mother of two children, was admitted into the Middlesex Hospital under Mr. Nunn's care on March 11th, 1867. Two years previously, subsequent to lactation, she first noticed a lump of the size of a broad bean, midway between the nipple and the clavicular border of the gland; this lump grew rapidly, and after six months proved painful, the pain being of a lancinating character; ten months previous to admission the skin ulcerated at about the centre of the tumour; the tumour then grew still more rapidly.

On admission the tumour had the measurements above named, and appeared to be made up of large rounded lobes; the skin was discoloured, being more or less livid and marked by large and tortuous veins. Through the ulcerations pale yellowish fungoid excrescences as large as walnuts protruded, yielding an offensive discharge. The tumour was very tender on being handled.

No enlargements of lymphatic vessels or glands was perceptible. The tumour was removed on March 11th, and the patient returned to her home in Wales with a sound cicatrix on May 7th.

On section of the tumour it is seen to be made up of lobes, each lobe being bounded by a fibrous envelope. In the central lobe the envelope forms one half the thickness of the lobe. At various points cavities containing fluid exist. On microscopic examination the tissue is seen to be fibrous, mixed with granular cells, especially as regards the central mass; more externally, round nucleated cells with fusiform fibres abound. Here and there the cells are collected into masses, and are tolerably uniform in shape and size.

Mr. Arnott, the surgical registrar of the hospital, also examined the tumour microscopically, and he reports that it is chiefly made up of spindle-shaped and round or oval mono-nucleated cells with fibrous tissue.

MR. NUNN, 21st May, 1867.

IX. DISEASES, ETC., OF THE DUCTLESS GLANDS.

A. SPLEEN.

1. *Hypertrophy of spleen : Leukæmia.*

This spleen was removed, *post-mortem*, from a gentleman aged 60. It measures twelve inches long, seven inches and a-half broad, and three inches thick, and weighs five pounds fourteen ounces.

Extensive inflammatory adhesions connected it with the surrounding structures, and considerable difficulty was experienced in removing it from the body.

Under microscopic examination by Mr. Bruce and myself, no other elements were found than those natural to spleen tissue. It may, therefore, be described as simple hypertrophy of that organ.

The liver was found enlarged, and weighed five pounds fourteen ounces, thus forming an exact counterpoise to the spleen. All the other organs were in a healthy condition, and no trace of disease was discovered in the mesenteric or other glandular structures.

The auricles were filled with large white clot, with only a film of dark-coloured blood on the under surface; the ventricles contained some of the same kind of clot, and the large venous trunks of the thorax and abdomen were distended with the same.

I am unable to give the duration of the splenic disease. Three years ago the patient came under my care suffering from some abdominal discomfort, and I then discovered the spleen to be enlarged, perhaps about twice its normal size.

The blood then showed a large increase in the white corpuscles. Dr. Wilks, who saw him shortly after this, made the same observation, and kindly wrote to me his opinion that the case was one of true hypertrophy. During the following two years the organ gradually increased in size, and after that it ceased to grow.

The patient was able to continue his business pursuits, that of a wine-merchant, until about a year before his death, when loss of power compelled him to relinquish work. He was, however, able to take gentle walking exercise for many months after this. His mental faculties were clear to the last. He died from asthenia.

Mr. WILLIAM ADAMS (37, Harrington Square), 18th December, 1866.

2. *Old hydatid cyst in the spleen with fibro-calcareous thickening of its wall.*

This specimen was taken from the body of an elderly man, in the dissecting room attached to St. Mary's Hospital. The liver was quite free from hydatids, and that in the spleen was the only one met with in any part of the body. The spleen was small, measuring 4" in length; its lower half was thick and rounded, and about equal in bulk to a moderately sized orange. This portion of its capsule was white and opaque though slightly nodulated, and had undergone that peculiar fibroid thickening with cartilaginous hardness which is frequently met with on superficial parts of the spleen. Some parts of it, also, were hard as from calcareous infiltration, and from the external appearance of the organ it was at first thought that the whole of the lower half of the spleen had been replaced by the new fibroid tissue. On making a longitudinal section of the organ, however, it was at once seen that this fibro-calcareous tissue, instead of constituting a solid mass, formed the irregularly thickened wall of an old hydatid cyst. The hydatid cyst was shrivelled, and many times folded upon itself, in the interior of the outer, firm, fibro-calcareous portion of altered splenic tissue.

The wall of the hydatid was rather less than one line in diameter, and, on the surface of the section, it could be traced continuously throughout the various foldings which it had assumed. On microscopic examination of fine sections of the wall of the hydatid, this was found to be made up of innumerable, hyaline, concentric layers, which differed, however, enormously as regards thickness. Some of these layers were quite thirty or forty times as thick as others. On the surface of the inner layer there were still traces of the granular germinal membrane. Within this shrivelled hydatid there was a small quantity of a white pasty substance, made up of mixed fat and proteine granules, with amorphous carbonate and phosphate of lime. No Echinococcus hooks were met with, and thorough search was made for them.

The subject of fibroid degeneration of the capsule of the spleen was brought before the society by Mr. Canton, and a figure of the organ which he exhibited is to be found at p. 242 of vol. xiii. of the 'Transactions.' There is an account, also, of the microscopical examination of this tissue by Dr. Bristowe. I have found that transverse sections of the fibroid tissue exhibit an appearance of interlacing hyaline bundles, which, in the situations where the calcareous deposit was

spreading, contained in their interstices a number of highly refractive granules, most of which disappeared with the evolution of a quantity of gas on the addition of dilute hydrochloric acid. The bundles themselves exhibited no striation or appreciable structure. They became slightly swollen after the addition of dilute acetic acid. In sections made parallel to the surface of the organ the interlacing fibroid bundles could not be recognized, though planes of almost structureless tissue were still to be seen more or less covered by the refractive particles, similar to those which were seen in the previous sections lying in the interstices between the fibres. Although there is some appearance of stratification in this tissue, the interlacing nature of the bundles or fibres seen in sections made at right angles to the direction of this stratification, seem to me scarcely to warrant the assumption made by Dr. Bristowe that, "as in the case of the hydatid membrane, or of the leaves of a book, the 'fibres' are merely the cut edges of a series of parallel membranes."

This specimen is an interesting one, not only because it is very rare to meet with a large hydatid cyst existing in the spleen alone, and not in the liver or other parts of the body, but because it shows the natural process of cure, in the death and shrinking of the hydatid cyst itself and the formation of a strong capsule around it: the nature of the tissue forming the capsule also lends an additional interest to the specimen.

Dr. H. CHARLTON BASTIAN, 19th March, 1867.

B. SUPRA-RENAL CAPSULES.

3. Addison's disease of the supra-renal capsules, with bronzing of the skin, tubercle of ureter, etc.

The specimens on which this report is founded were brought to me by Dr. G. Bantock, of Cornwall Road, Notting Hill, with the following history:—

"E. B., aged 35, married, but without issue. She had long suffered from more or less irritability of stomach, without any apparent cause. In May last she underwent an operation on the uterus—said to be removal of a polypus—attended with great hæmorrhage, which had reduced her very much, and from which she had not recovered.

"She first came under the care of Mr. Baker Brown about the beginning of September. Her symptoms then were great debility and evident emaciation, almost uncontrollable sickness, pain across

the loins, and tenderness, with nausea, on pressure in the region of the umbilicus and stomach. There was no uterine disorder; urine abundant, depositing a sediment, which, under the microscope, presented an abundance of pus-corpuscles, but no tube-casts or sugar. On the application of heat and nitric acid to the clear fluid a slight opacity was produced. There was no symptom of irritability of the bladder. There was no cough, and no positive evidence of pulmonary disease; but there was marked cardiac debility; the pulse was with difficulty felt, and there was great faintness. The complexion was dark, but it was said to have been always so. There was a very indistinct mottling on the forehead, and marked discoloration over the knuckles and joints of the fingers, which had increased in intensity lately. There was no mottling of the body, and no unusual discoloration of the mammary areolæ.

“Addison’s disease was diagnosed, and the pus was supposed to come from the kidneys.

“The usual remedies proved of no avail. The patient rapidly failed in strength; her emaciation increased, and she sank exhausted on the 21st September.

“*Post-mortem examination eight hours after death.*—There was a fair amount of fat in abdominal parietes. The kidneys were removed with supra-renal capsules attached. Both were much enlarged, and the right was adherent so intimately to the neighbouring portion of the liver that it was with difficulty separated.

“Left ureter enormously enlarged in calibre and thickened, the disease commencing from one to two inches below the pelvis of kidney, and terminating about two inches from the bladder. The right ureter was healthy. The liver was enlarged, much congested, and bound to the diaphragm by very strong adhesions. The gall-bladder was rather small, and contained a calculus of very irregular surface, and of the size of an ordinary marble.

“The spleen was healthy.

“The bladder contained a small quantity of turbid fluid; its base was thickly studded with small, shining, elevated spots. Its coats were unusually thin. The uterus was quite healthy. The intestines were at some places matted together.

“The thorax was not opened.

“Both supra-renal capsules were enlarged to three times the natural thickness, consisting mostly of soft cheesy matter, with a less quantity of firm, grey, translucent material.

“Submucous granules of morbid deposit in left ureter, which is as large as small intestine. A few also in pelvis of kidney, which is but slightly dilated.”

The parts submitted to me for examination consisted of the two kidneys, with the ureters and supra-renal capsules. Both supra-renal capsules were very firm and dense, having fully three times their natural thickness. On section they presented the characters of Addison's disease in a typical form, consisting of an opaque, yellow, soft, cheesy material, interspersed through a smaller amount of a firm, grey, translucent substance. The left ureter was almost as large as a piece of small intestine, and its coats were much thickened. On slitting it open the inner surface was found studded with numerous granular elevations, due to the deposit of tubercle in the submucous tissue. The mucous surface presented an appearance similar to that exhibited by the pelvis and calices of the kidneys, when affected with tubercular pyelitis. The peculiarity of the case was that the disease was almost entirely confined to one ureter. A few small granules only were seen on the inner surface of the pelvis of the left kidney, which was only slightly dilated.

Remarks.—This furnished another example of what is known as Addison's disease of the supra-renal capsules in conjunction with discoloration of the skin, and deposit of tubercle in other organs.

Dr. MURCHISON, 16th October, 1866.

4. *Cancer of one supra-renal capsule.*

The specimen, which was sent to me by Dr. Balthazar Foster, of Birmingham, was taken from the body of a girl aged 12 years, who had been admitted into the Children's Hospital of that city in a dying state. Several months before her death the girl had suffered from a slight attack of scarlet fever, followed by dropsy, which rapidly disappeared under treatment, and for some time previous to her last illness she had enjoyed her usual good health and had never complained of pain in the back or in any other part.

On *post-mortem* examination the body was seen to be well nourished and the skin of the natural colour. The lungs and pleuræ were found to be extensively inflamed, and the pleuro-pneumonia had evidently caused death. The other organs, with the exception of the

supra-renal capsule exhibited to the Society, were all healthy. The supra-renal capsule formed an irregular tumour about three inches in long, and two in short, diameter, and was considerably larger than the corresponding kidney, against the upper part of which it rested. Both organs were somewhat flattened at the point of contact, but they were not adherent.

The surface of the diseased capsule was smooth and slightly nodulated.

My colleague, Dr. Cayley, who carefully examined the tumour at my request, has favoured me with the following report:—

“ On section it presented an inner portion, of globular form, which occupied the greater part of the mass, and an outer portion, or cortex, which was generally separated from the inner by a distinct line of demarcation. The inner portion was of very soft consistence, white in colour, and the surface of the section presented a very finely reticulated appearance, and exuded an abundant somewhat flocculent white juice. In the centre of it appeared the opening of a large vein surrounded by fibrous tissue. The cortical portion was of firmer consistence, of yellowish colour, and the surface of the section smoother and more uniform in appearance, though it was also slightly reticulated. On microscopical examination of thin sections taken from both portions, the characters were found to be very similar. There was in both cases a well-marked mesh-work of fibrous tissue, with very regular areolar interspaces. These interspaces were for the most part filled with round and oval nucleated cells (many containing two and three nuclei), which were also thickly diffused through the fibres forming the partitions between the areolæ. In the central portion the areolæ were larger and more regular than in the cortical part. No trace of the normal structure of the organ was visible.”

Remarks.—On the assumption that the supra-renal capsule was the only seat of cancerous deposit in the body, this case stands almost, if not quite, by itself, for I have been unable to find in the records of this Society or elsewhere any example of cancer of a supra-renal capsule, positively ascertained to be such by microscopic examination, which was not associated with more or less of cancerous deposit in some other organ.

The case is interesting, moreover, as an additional illustration of the

fact that neither the constitutional symptoms, nor the discoloration of skin incident to Addison's disease, are found to occur in connection with cancerous disease of the supra-renal capsules.

Dr. GREENHOW, 5th March, 1867.

Report on Dr. Greenhow's specimen of cancer of the supra-renal capsule.

—Thin sections of this tumour exhibit a reticulum, the meshes of which are filled with a softer friable substance, which is easily removed from them by washing. Near the surface, the reticulum is closer and its meshes are stouter than towards the centre of the tumour, where the interstitial tissue preponderates (Plate III., Fig. 7).

The trabeculæ of the reticulum appear finely fibrillated or fibrous. They are composed of exceedingly slender, delicate, soft, fusiform cells of great length.

In the interstitial tissue, cells and an intercellular substance are distinguishable. The former are mostly round, and they range from $\frac{1}{4300}$ inch to $\frac{1}{1433}$ inch. The smaller cells are far more numerous than the larger. They contain either a single nucleus, or more generally a few fine granules, while the larger cells contain from one to three nuclei, and are evidently one source of the smaller cells (Plate III., Fig. 8).

The amount of intercellular substance varies greatly; in situations where the cells are crowded it is scarcely demonstrable, but in other situations the cells are separated by intervals exceeding their diameters, and here the intercellular substance is easily recognizable. Its texture is slightly granular, but this is probably a *post-mortem* alteration produced by the spirit in which the specimen has been immersed. It is also probable that the colourless, tabular, rhomboidal crystals (longer and more slender than the common form of cholesterine) which are scattered through the tumour have a like origin.

Judged by its rough characters, the tumour would no doubt by many persons be called a medullary cancer; but its histioid rather than organoid structure, the affinity of its elements with those of the connective tissue series, and the presence of a true intercellular substance, separate it from cancer anatomically defined, and place it in the class of sarcomata. Nevertheless, the predominance of the cellular elements, their very rapid multiplication, and their non-conversion into higher forms of tissue, dispose us to consider the tumour as one which from a clinical point of view would probably rightly be regarded as malignant. Mr. J. W. HULKE,

Dr. WM. H. DICKINSON, 19th March, 1867.

C. THYMUS GLAND.

5. *Specimens of thymus glands remaining to a later period of life than normal.*

My attention was first directed to this subject by a specimen presented to the Museum of University College by Dr. Bastian; and having since then collected, from time to time, during the past year various specimens of permanent thymus glands from individuals varying in age from 14 to 57, I take this opportunity of bringing them collectively before the notice of the Society.

The opinion which is, I believe, still prevalent, that the thymus is an organ of foetal life, has been distinctly disproved by Mr. Simon in his elaborate essay on the thymus gland. From his statistics, it appears that the progressive development of the organ ceases as a rule at the close of the second year; that the gland then remains in a more or less perfect condition for a considerable period till the eighth or even the twelfth year, but rapidly declines at puberty, and remains as a mere remnant till the age of twenty or even twenty-five. Mr. Simon continues: "I have sometimes discerned faint remnants of its form in subjects up to thirty years old; and Meckel and Hangsted quote various instances of its alleged persistence to a much later period. In some of these last-mentioned cases the gland was evidently the seat of disease; and in others its abnormal continuance seemed associated with other morbid affections chiefly of the respiratory organs."

Krause gives a table in Müller's Archives (1837), from which it appears that he had met with a thymus, at the age of twenty-five, weighing 380·3 grs., and another, at the age of twenty-eight, weighing 69·2 grs. Kölliker and Ecker, however, state that they have *frequently* found the thymus well nourished and distended with fluid, at the twentieth year; it having experienced no metamorphosis, and having just the same structure as in children. The former authority states, moreover, that it is difficult to ascertain the period of its complete disappearance and that no definite limit can be assigned for the occurrence of this change: it is, however, rare to find any remains after the fortieth year.

Before detailing the particulars of my own cases, I may mention that in all of them, as far as I have been able to ascertain by microscopical examination, the structure is perfectly normal, although some are affected to a variable degree by fatty metamorphosis. With re-

gard to an observation of Kölliker's, that the concentric bodies, which present so characteristic an appearance in the thymus gland, multiply as age advances, I must say that this appears to be only partially true; for although doubtless their number is greater than during foetal life or early infancy, yet it is not greater than in the fully developed gland.

In most of these cases death had occurred rapidly; in two from accident, in two after surgical operations, and in one from cholera.

Specimens.—1. A full-sized thymus from a boy aged 12, who died from injuries received in a fall. All the organs, and the other ductless glands, were perfectly normal. This specimen may be considered as representing the extreme limit of thymic life under ordinary conditions.

2. A very large thymus, weighing 620 grs., from a boy aged 14, who was killed by a fall from a house, and was brought to the hospital dead. The body was well nourished, and all the organs were perfectly healthy: special attention was directed to the condition of the other ductless glands, which appeared to be normal in size and structure. The thymus appeared perfectly healthy in every respect, and presented an average, but not excessive, number of concentric bodies: its cavities contained much fluid.

3. A thymus, weighing 250 grs., from a ballet-girl aged 16, who died of cholera after an illness of three days. I am indebted to Mr. Mason for the opportunity of obtaining this specimen. The body was well nourished and plump: congestion of lungs and kidneys, which were somewhat degenerated. The ductless glands apparently normal. The thymus presented here and there lobules undergoing the usual fatty metamorphosis: otherwise its structure was quite healthy.

4. A thymus, weighing 300 grs., from a lunatic aged 21, presented by Dr. Bastian to the Museum of University College. It was also noticed that one of the supra-renal capsules was very small, and the other was either missed or did not exist.

5. A thymus, weighing 57 grs., from a woman aged 29, who died somewhat suddenly after amputation of the thigh immediately above the knee. The body was well nourished, but the kidneys were found to be the seat of extensive fatty degeneration.

The gland is far less perfect than in the previous cases; the fatty and fibrous tissues prevailing over the glandular and corpuscular elements.

6. A thymus, weighing 30 grs., from a woman aged 40, who died suddenly after parturition, brought on at the seventh month by the occurrence of intense peritonitis following tubercular ulceration and perforation of the intestine. The lungs were also extensively affected.

The thymus is reduced to two very slender lobes, which, however, contain a fair proportion of glandular tissue and concentric bodies, although there is a marked increase of fat and fibrous tissue.

This closes the series of thymus glands which I have collected, containing distinct and unmistakable evidence of their true nature; but I have found several examples of the organ remaining to a much later period, after undergoing complete metamorphosis into fatty tissue, a change which Mr. Simon regards as the true physiological termination of its functional activity. I have preserved only one of these specimens. It consists of a mass of fat, having exactly the form and connections of the true thymus, and was distinctly isolated from the surrounding adipose tissue. It is from a woman, aged 57, who died somewhat unexpectedly after a minor surgical operation. There was fatty degeneration of the liver and kidneys. The spleen was normal. The supra-renal capsules were soft: their cavities large, and medullary substance pultaceous. The thyroid is somewhat enlarged, and the subject of the ordinary gelatinous induration so common in this organ.

The above series contains an example of the largest healthy thymus, I believe, on record; and of one of very notable magnitude, persisting to the extreme limit of age assigned by previous writers on this subject: and I have no doubt that the last specimen really represents an advanced stage of the changes which may be traced throughout the entire group.

In the fine collection of thymus glands in the Hunterian Museum, the following are the extremes as regards size and duration, viz., a thymus, weighing 350 grs., from a child aged 9 months: and one weighing 43 grs. from a person aged 30 years. No specimens of equal interest are to be found in any other museum in London.

The series of thymus glands above described are in the Museum of University College. Mr. ALEX. BRUCE, *5th March, 1867.*

D. THYROID GLAND.

6. *Cystic enchondromatous growth in connection with the thyroid gland.*

This is a tumour removed from the neck of an old man who died a few weeks ago at the Middlesex Hospital. He died of prostatic disease, with secondary kidney- and bladder-affectations, and had presented no signs of such a tumour while under observation in the wards. While removing the larynx, for other purposes, after the *post-mortem* examination, the porter cut into the tumour, and removed it together with the larynx and trachea. It had been placed between the right common carotid artery and the muscles in front of the spine, on a level with the thyroid cartilage. The rest of the thyroid gland was of quite normal appearance.

The tumour is partly a cystic growth, and is altogether about the size of an egg-plum, having a solid base about the size of half a walnut. This solid portion has the pearly-white colour and firm consistence of cartilage, and is irregularly shaped, processes projecting from its surface into the cavity and along the cyst-walls somewhat fantastically, like the papillary muscles and chordæ tendineæ of the heart. Studding the walls of the cyst are smaller plates of similar cartilaginous substance with the like irregular processes. When cut across, the cyst was found filled with a viscid greenish fluid, apparently containing cholesterine crystals from its glistening appearance, and also some shreddy flakes of fibrine. This fluid was unfortunately spilt, and therefore not examined further. Connected with the base of the tumour was some glandular substance, microscopically identical in structure with the thyroid body. A section from the firm base of the cyst showed, under the microscope, the ordinary characters of enchondroma, viz., small oval cartilage-cells embedded in a fine fibrous stroma. It is not easy to say whether the tumour was originally developed in the thyroid body, in an outlying portion of that gland, or external to it altogether, nor can one say whether the cartilaginous portion was developed in the wall of the cyst, or whether the cyst was formed during the growth of the enchondroma. The tumour, in its mixed character, is not, I believe, often met with in connection with the thyroid gland.

Mr. HENRY ARNOTT, 2nd April, 1867.

X. DISEASES OF THE SKIN.

1. *Living specimen of herpes zoster and herpes phlyctenodes conjoined.*

The patient, a woman, aged 53, was affected with herpes zoster of the right side of the trunk, occurring at the level of the acromion. Along the anterior surface of the right arm, a band of herpes phlyctenodes extended from the bend of the band of herpes zoster (which it joined near the acromion) almost as far as the flexure of the elbow.

The case was interesting as proving the identity of herpes phlyctenodes with herpes zoster.

Herpes zoster occurring by itself was common enough, and the exhibitor had sufficiently often met with herpes phlyctenodes occurring alone; but he believed he was correct in asserting that it was rare to find the two associated, and those who took interest in the literature of the subject would be aware that several authors of repute deny, or ignore, the identity of these two affections.

MR. BALMANNO SQUIRE, 16th October, 1866.

2. *Second case of plica polonica observed in England.*

The physicians of those countries where plica polonica is endemic have always admitted the existence of two kinds of the disease, viz., natural and artificial; the former being a pathological product accompanied by certain symptoms, the latter the product of uncleanness and dirt. Nay, some physicians have gone even so far as to deny altogether the existence of plica as a disease, and to consider every Trichoma as artificial.

This opinion is decidedly wrong, and betrays lack of observing power. What has been considered artificial plica is rare, and though I have observed numerous examples of natural Trichoma, I have never hitherto seen a case which could be styled artificial. Indeed, I do not know whether, in cases of long-lasting illnesses, in which patients are prevented for months from combing their hair, artificial plica has ever been observed.

At the meeting of this Society of April 17th, I quoted a letter containing the account of a case of true Plica Polonica* observed in this country.

* *Transactions of the Pathological Society*, vol. xvii., p. 418.

The second case is that which I have now the honour of bringing under the notice of the Society.

In the daily papers of November 8th, a "horrible disclosure of misery" was published concerning a woman, Jane Mitchell, 39 years old, of High Road Well, about a mile from Halifax, who had been discovered by the police. "The spectacle," says the report, "was most disgusting and appalling. Not an article of furniture was to be seen in the chamber, except a dark screen before the window. The floor was in some places more than an inch thick in dust, potato-parings, animal refuse, woollen flocks, etc. He next proceeded to remove the screen, and was appalled to find a human being huddled up in a lump, upon an old bed laid upon a wooden trunk, the whole being with dirt as black as a chimney hole. Her hair was matted, and her whole appearance that of wretchedness and squalor. She was not lying, but rather reclining, or huddled with her back against a pillow. The whole place she occupied behind the screen was only about three or four feet by half a yard broad. When the curtain was drawn aside she blasphemed, and wanted to know if the policeman had come to kill her. The sight was horrible. She refused to be removed or touched. At her right hand was a small darkened window, the recess of which was filled with vileness. Since the discovery, the sister, Eliza, has informed a neighbour that it is three years since her sister was washed, had combed her hair, or had had a chemise on. She had at present nothing on but a pair of old stockings, which had not been changed for years. Eliza states her sister to be suffering from bodily debility, not insanity."

Having read the report, I wrote to Dr. Alexander, of Halifax, asking him whether he knew anything about the case, as, if there existed anything like artificial plica, it should be found in the head of this unfortunate woman.

My presumption was correct, and Dr. Alexander has been so kind as to send me two specimens of plica, the one being a real "elf-lock," the other a piece of "plique en queue." He writes:—

Halifax, Sunday 11th.

"DEAR SIR,—I cut the hair from the head myself, and might have had any quantity, since I recommended the head to be shaved as the only means of operating upon the agglutinated mass and cleansing the scalp. The back hair was turned up into a knob as usual, and one sample sent you was at the end of it. It is evident, not being down

in ringlets, that it could not separately be plaited in single plaits like the loose end. All was matted and encrusted.

“Yours very truly,

“Dr. BEIGEL.”

“WM. ALEXANDER, M.D.”

Dr. Lionel Beale was kind enough to lend me his valuable help in microscopically investigating the two specimens. They consisted of the same substances as those discovered in the specimens described in the last volume of the Society's ‘Transactions,’* with the only difference that in the Halifax specimens we found a very great amount of starch. Dr. HERMANN BEIGEL, 18th December, 1866.

3. Case of true keloid.

The specimen belongs to the class of true keloid, *i.e.*, that form of the disease which does not appear on a scar, but on a portion of previously sound skin.

It was taken from S. W., a stout married woman, aged 33, who had several other such tumours of a later origin and smaller size in other parts of her body. The one now shown made its appearance eleven years ago, and was then painless. Two years ago, however, and when she was six months pregnant with her first child, the tumour became very painful and began also to enlarge; at irregular intervals other such swellings made their appearance in different parts of the body.

The specimen shown was situated at the edge of the latissimus dorsi, near the axilla, and being placed under the edge of the stays, was exquisitely painful, in spite of protection by belladonna plaisters, etc.

The character of the tumour is the usual dusky purple, nodulated, and extremely hard swelling, confined entirely to the skin. The microscopic examination was kindly made by Dr. Morris Tonge, who gives the following account:—

“The tumour was continuous with the cutis of the portion of skin beneath which it was situated. It was extremely tough and dense, and of a whitish-yellow colour; on microscopic examination of a thin section, it appeared to consist entirely of white and yellow fibrous tissue and scattered oil-globules. The white fibrous tissue was by far the most abundant. No cells or nuclei were seen.

Mr. BARWELL, 19th February, 1867.

4. *The chignon-fungus.*—*Pleurococcus Beigeli* (?).

A few months ago Professor Lindemann of St. Petersburg published some observations on Gregarines in artificial hair, which gave rise to a kind of panic as well amongst the manufacturers as amongst the fair wearers of chignons. The question was taken up rather by the daily journals than by scientific publications, and bad observers, who were not much accustomed to microscopic work, soon confirmed Lindemann's observations. It was at that time that opportunity was offered to me to examine a great number of samples of hair, amongst which one sample was shown to me in the premises of Messrs. Hovenden and Sons, which gave full explanation of Lindemann's wrong observation. The sample in question was laid aside by the workmen of the factory as totally unfit for being cleaned, each hair exhibiting a number of knots which, by the usual cleaning process, could not be separated. The substance of the hair was not broken at the knotty spots, which could easily be seen by the firmness on traction; but, on the contrary, on close examination each knot could be seen forming a sheath round the hair, and with due precaution could be wholly abstracted from the latter. Plate VII., Fig. 1, shows the appearance of the hair under a low power, and Fig. 2 of the knots, which at once could be recognized as consisting of a mass of vegetable growth. A higher power revealed the latter to be very similar to Lindemann's Gregarines. (See Fig. 3).

It may at once be mentioned that several first-rate authorities on the subject, to whom I have sent samples of the hair, were at first sight of opinion that they had Lindemann's bodies under the microscope, but closer examination soon showed the assumption to be erroneous.

Dr. Küchenmeister, whom I consulted about my vegetable growth, took the opinion of Professor Robenhorst, of Dresden, the greatest continental authority on microscopic fungi. He pronounced it to be a new species of *Pleurococcus*, to which he gave the name of *Pleurococcus Beigeli*. *Pleurococcus* being an alga, I do not know whether the name is an appropriate one, as the germination of the growth leads me rather to consider it as a fungus. Yet I have not arrived at any decided conclusion at present, and in the meantime have no objection to the name given by Robenhorst.

I succeeded in making the growth germinate in sugar-water, and also on my left arm, the epidermis having previously been removed by

DESCRIPTION OF PLATE VII.

Figures 1 to 5 illustrate Dr. Beigel's communication on the Chignon Fungus, *Pleurococcus Beigeli* (p. 270).

Fig. 1 shows the appearance of the hair under a low power.

Fig. 2 shows the knots on the hair, magnified 100 diameters.

Fig. 3 ditto ditto, magnified 350 diameters.

Fig. 4 shows the fungus germinating, twelve hours after application to a blistered surface of the skin, magnified 350 diameters.

Fig. 5 ditto ditto, after eight days, magnified 350 diameters.

Figure 6 shows the microscopic appearance in Mr. Lawson's case of Blood-cyst of the Thigh (p. 272).

a. Blood corpuscles, to show relative size of cells.



a blister; germination went on very rapidly, yet it had no effect whatever on the skin. Fig. 4 shows the microscopic appearances after twelve hours, and Fig. 5 after about eight days.

Dr. HERMANN BEIGEL, *19th March*, 1867.

Postscript.—It gives great credit to the candour of Dr. Tilbury Fox who, at the meeting when I showed the specimens to the Society, strongly opposed my views of the vegetable nature of the growth, but afterwards has published a paper in the “*Science Gossip*” (No. 29, May, 1867), “*The Chignon Fungus*,” in which he says: “I have never seen a true (?) Gregarine in connection with the hair, but I (?) have recently found a vegetable growth on false German hair, answering, in naked eye appearances (?) to that described by Lindemann as little dark specks surrounding the hair towards its end.”

Dr. HERMANN BEIGEL, *June*, 1867.

XI. MISCELLANEOUS SPECIMENS.

1. *Drawing of a man with two supplementary nipples.**

Henry Osborne, aged 31, was admitted into St. Bartholomew's Hospital under the care of Dr. Jeaffreson. About two inches below the nipples, which are fully developed and occupy their normal situation, is on each side a supplementary nipple, well-marked, but only about one-sixth or one-seventh of the ordinary size. These are not placed quite symmetrically, the one on the right side being a little higher and nearer to the middle line. According to the patient's statement, his brother is also furnished with two similar supplementary nipples.

Dr. ANDREW, *December 18th*, 1866.

* See similar case by Dr. Murchison in last volume of *Pathological Transactions*, p. 426. In reference to this case, Dr. Buchanan Washbourn of Gloucester writes as follows:—“I have just been reading in the ‘*Pathological Transactions*’ the account of a case of pleiomazia occurring in the male, and I am tempted to send you a few notes respecting a case that happened in my hospital practice five or six years ago.

“On examining the chest of a male, aged about 25 years, for some lung disease, I discovered a supplementary nipple on the left side, about three inches below the upper one, which was situated over the fourth rib. The lower nipple was equal in size to the upper, and had a distinct areola with papillary prominences; there was no second nipple on the right side, but the single one was unsymmetrical, being placed over the fifth rib.”—ED.

2. *A blighted fœtus which produced obstruction to the passage of a living child at the full period of utero-gestation.*

The case occurred in the practice of Mr. Hopewell of Chelsea. This gentleman in a case of labour found that the head of the child was obstructed by a round body, the nature of which he was for some time unable to determine. The obstructing body, however, after some difficulty, was pushed up, and a living child at the full period was soon extruded. This was followed by the expulsion of a blighted fœtus with the placenta attached. The fœtus measured eleven inches in length and weighed twelve ounces. The placenta weighed six ounces and a-half.

Neither the fœtus nor the placenta was in a decomposed state, although evidently they had been separated from their uterine connection for a long period. The substance of the placenta was hard and solid from the deposit of lymph. A small portion of the healthy placenta of the living child was firmly attached to it.

I have not time for research, but I believe that there are not many cases on record where the head of a blighted fœtus has formed an obstruction to the passage of a living child at the full period. The total absence of decomposition in the blighted fœtus and its placenta is also a matter worthy of note.

Dr. CRISP, 18th December, 1866.

3. *Blood cyst of the thigh.—Amputation of the limb.—Recovery.*

Mary H., aged 50, was admitted into the Middlesex Hospital under my care on November 20th, 1866, suffering from a tumour on the lower and inner side of the right thigh. The following is the history she gave of her case:—

For the last five years she had suffered great pain in the lower and inner part of the right thigh, but she had never noticed any swelling until about ten months ago, when on waking up one morning she felt the leg very painful, and found that she had difficulty in walking. On examining the leg, she then for the first time discovered a tumour of about the size of an orange at the lower and inner part of the thigh.

On her admission into the hospital the tumour had attained the size and shape of an ordinary French penny roll. To the touch there was decided fluctuation; but there was also a sense of deep solidity.

I decided first to puncture the tumour, and then to be guided by the result as to the further treatment to be pursued. Having made a small incision through the skin, I inserted a trocar into the cyst, when about six ounces of dark blood flowed away, evidently the contents of the cyst; its place was, however, supplied by fresh arterial blood, which flowed into the cyst as fast as it was drawn out of it by the trocar, so that the cavity was kept filled. I therefore laid open the cyst so as to examine its interior, and finding that a large portion of it was occupied by a quantity of vascular sarcomatous material from which the blood flowed rapidly, I at once amputated the thigh in its middle third.

The patient progressed satisfactorily, and left the hospital in April quite well. After the operation the limb was handed over to Mr. Arnott, the surgical registrar of the hospital, who kindly undertook to dissect out the exact anatomical relations of the tumour, and to make a microscopical examination of its structure. The following is his report of the case:—

“The tumour is about twice the size of an orange, irregularly oval in shape, situated at the inner side of the knee and lower end of the femur, and having the following relations to the muscles:—The sartorius is spread out over the cyst-wall and closely adherent to it, so that it is with difficulty separated from it.

“The gracilis tendon seems to pass through the cyst, but the posterior wall is really only reflected round it, enclosing it for about two inches near its insertion.

“The semi-tendinosus and semi-membranosus lie behind the tumour, quite free from it. The cyst is thus well clear of the popliteal vessels. On opening the cyst more freely it is found to contain many small blood-cysts in its walls. The cavity is half filled with colloid-like matter, yellow, transparent, semi-solid, and streaked with vessels. Under the microscope this is found to be almost entirely made up of spindle-shaped cells, like those from a recurrent fibroid tumour, and a few large round mono-nucleated cells, with hardly any intercellular substance. The cyst was so intimately connected with the parts adjoining that its dissection was a matter of considerable difficulty. It was not however adherent to the skin at any point of its surface.”

The illustration, Plate VII., Fig. 6, is from a drawing by Mr. Arnott of the microscopical appearances of a section of a portion of the tumour.

MR. GEORGE LAWSON, 15th January, 1867.

4. *Ganglion under the radial artery, communicating with the wrist-joint.*

This preparation is interesting because we rarely get an opportunity of examining a case of the disease which it illustrates.

M. Chassaignac* was, I believe, the first to demonstrate that ganglia of the wrist situated under the course of the radial artery were usually prolongations of the synovial membrane of the wrist-joint.

It so happens that a woman under the care of Mr. Hewett lately died in St. George's Hospital of pyæmia following abscess of the elbow-joint, who had at the same time a ganglion situated just under the course of the radial artery of about the size of a bean, and also another and larger one, on the back of the wrist among the extensor tendons. Mr. Hewett kindly drew my attention to the case and requested me to make a dissection of the part in order to verify, if possible, Chassaignac's observation. I accordingly dissected out the cyst and laid it open, and, as may be seen in the preparation, it is prolonged inwards and communicates with the synovial sac between the end of the radius and the scaphoid bone: the ganglion on the back of the wrist has also been laid open, and it will be seen to be developed simply among the sheaths of the extensor tendons, and to have no communication with the interior of the joint.

MR. THOMAS P. PICK, 19th February, 1867.

5. *Specimens of Anchylostomum duodenale, from a case of tropical anæmia.*

For the specimens exhibited, I am indebted to Dr. Wucherer of Bahia, who had obtained them from the body of a man who had died with the symptoms of tropical anæmia, and on whom, during life, the diagnosis of the entozootic nature of the disease had been made. Although the *Anchylostomum duodenale* had been discovered already by Dubini of Milan in 1838, and afterwards by Pruner and Billharz in Egypt, Griesinger † was, as far as I know, the first who suggested in his valuable papers on the diseases of Egypt, that these worms were the cause of tropical anæmia. Griesinger's view was at first not

* *Traité Clinique et Pratique des Opérations Chirurgicales.* Par E. Chassaignac. Page 181.

† *Beobachtungen über die Krankheiten von Egypten.* Von Professor Griesinger. *Archiv für physiol. Heilkunde.* Jahrgang XIII., p. 557, 1854.

generally supported, but Dr. Wucherer's* researches, published in the *Gazeta Medica di Bahia*, place it beyond any doubt that the tropical anæmia is caused by the *Anchylostomum*. The disease seems not to be rare in Brazil, and is known there under the names of *hypæmia intertropical*, *canção* (weariness), *oppilação* (oppilation, obstruction), etc.; as the true nature of the various forms of anæmia is not generally known, different diseases are no doubt designated by the same terms. The morbid conditions described as "Dirt-eating," "Geophagia," "Cachexia Africana," include probably a considerable proportion of cases of this *Anchylostomum* disease. The principal symptoms consist in the gradual development of great paleness of the skin, conjunctiva, lips, and mucous membranes; excessive weakness, and tendency to syncope; palpitation of the heart and dyspnoea caused by the slightest exertion, accompanied by anæmic murmurs in the region of the heart and in the jugular veins: pain and tenderness in the epigastrium seem to be likewise of very common but not constant occurrence. Dropsical effusions, especially anasarca, are frequent; the subcutaneous layer of fat remains often unaffected, the emaciation being by no means proportionate to the loss of strength and anæmia. Death is usually caused by intercurrent diseases, especially dysentery and diarrhoea, but may be the result of exhaustion induced by the entozoa alone, without any accessory disease. The diagnosis has been made from the consideration of the symptoms, and the absence of the other usual causes of anæmia; the worms themselves have not yet been found by Dr. Wucherer in the excretions of the patients, not even after the use of anthelmintic and drastic remedies, and the blood which, we should think, must be admixed with the fæces, seems to exist either in such small quantity, or in so changed a condition, as to escape notice. The remedies hitherto employed, such as turpentine, assafoetida, aloes, iron, the milk of the gamelleira, and others, seem not to have been permanently successful.

That the worms are really the cause of the disease Dr. Wucherer has proved by the fact that they have been found in the *post-mortem* examination of all those persons who during life exhibited the symptoms mentioned, while they have been absent in the bodies of those whose diseases had been complicated with other forms of anæmia.

The *Anchylostomum* evidently does not live, like other intestinal worms, on the secretions and other contents of the intestinal canal,

* *Sobre a Molestia vulgarmente denominada Oppilação ou Canção.* Pelo Dr. O. Wucherer. *Gazeta Medica di Bahia*, p. 27, et seq., Anno I., 1866.

but on the blood itself of the person affected, by entering into the mucous membrane and even the submucous tissue. Its deleterious effect, however, seems not to be caused alone by the loss of blood on which the animal itself subsists, but also by the waste occasioned by the extravasation around the bites and the effusion of blood into the cavity of the intestinal canal, for the contents of the duodenum have repeatedly been found, both by Griesinger and by Wucherer, to consist principally of bloody mucus. Another effect, independent of the mere loss of blood, must be the irritation caused by the bites and the presence within the tissue of the duodenum of so many little animals. In this respect their effect may be compared with that of other parasites, such as the trichina and the itch insect; but the much larger size of the *Anchylostomum*, and the greater importance of the organ infested by it render it more pernicious. In some *post-mortem* examinations, numerous ulcerations and other morbid changes of the mucous membrane of the duodenum and the upper portion of the jejunum have been found; and also signs of chronic local peritonitis, in the form of adhesions between several convolutions of the small intestines; and, according to Wucherer, also enlargement of the mesenteric glands.

The number of the worms found in each individual is very great; the larger females being much more numerous than the smaller males, in the proportion of about four to one. The length of the small viviparous nematode helminth sent from Bahia varies from rather more than one-fourth to two-fifths of an inch; they measure scarcely more than one-eightieth of an inch in width in the middle, and become thinner towards both ends. The circular, funnel-shaped mouth is provided with four teeth, enabling the animal to pierce the intestinal mucous membrane. The almost transparent skin allows a view of the arrangement of the digestive and sexual organs, for the description of which I refer to the excellent work on "Entozoa," by Dr. Cobbold,* who has very courteously assisted me in the examination of the specimens. The worms are represented in Plate VIII., Figs. 1, 2, 3, and 4.

The manner in which these viviparous worms enter the human body is not yet established, but it is probable that they are ingested with the water; and it is not unlikely, as Dr. Wucherer suggests, that only

* Dr. Cobbold describes the *Anchylostomum duodenale*, as "*Sclerostoma duodenale*," as he does not see sufficient reason for the establishment of a separate genus; he mentions also the close resemblance of this parasite to the *Sclerostoma synergus* of Diesing, which gives rise to the "gapes" in birds.

DESCRIPTION OF PLATE VIII.

Figures 1 to 4 illustrate Dr. Hermann Weber's communication on *Anchylostomum duodenale*, from a case of tropical anæmia (p. 274).

Fig. 1 shows the male, magnified 10 diameters ; 1 *a*, natural size.

Fig. 2 shows the female, magnified 10 diameters ; 2 *a*, natural size.

Fig. 3. Head of female magnified 30 diameters.

Fig. 4. Tail of male magnified 30 diameters.

Figures 5, 6, and 7 illustrate Dr. Hermann Weber's communication on an Affection of the Small Toes of Negroes in Brazil, known as "*Ainhum*" (p. 277)

Fig. 5 shows the feet with the appearance of appendages to the little toes, copied from a woodcut in Dr. J. F. Silva Lima's paper in the *Gazeta Medica di Bahia*, for 1867, p. 149.

Figs. 6 and 7 show the appearances presented on section of the appendage.

Fig. 6. *a*, Cicatrix of Separation ; *b*, Joint between terminal and middle phalanx ; *c*, remains of matrix of nail ; *d*, bursal cavity ; *e*, adipose tissue ; *f*, pigment of rete mucosum.

Fig. 7. *a*, Ulcer left by amputation leading down to bone, *d* ; *b*, remains of matrix of nails, *c*, unguis phalanx, joint structure unaltered ; *d*, middle phalanx ; *e*, adipose tissue of ball of toe unaltered ; *f*, thickened cutis and rete mucosum.

Fig 1a. } } Fig. 2a.



Fig 4

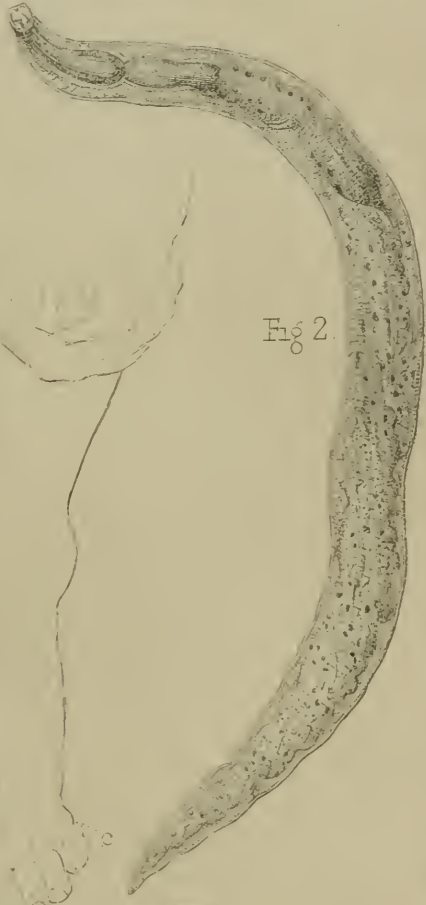
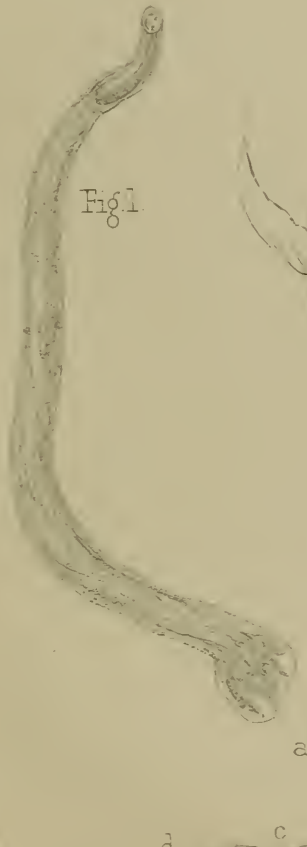


Fig 6

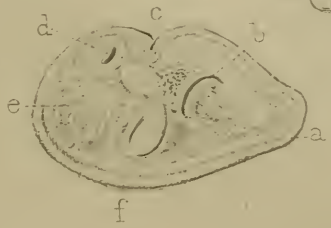
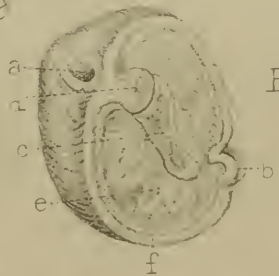
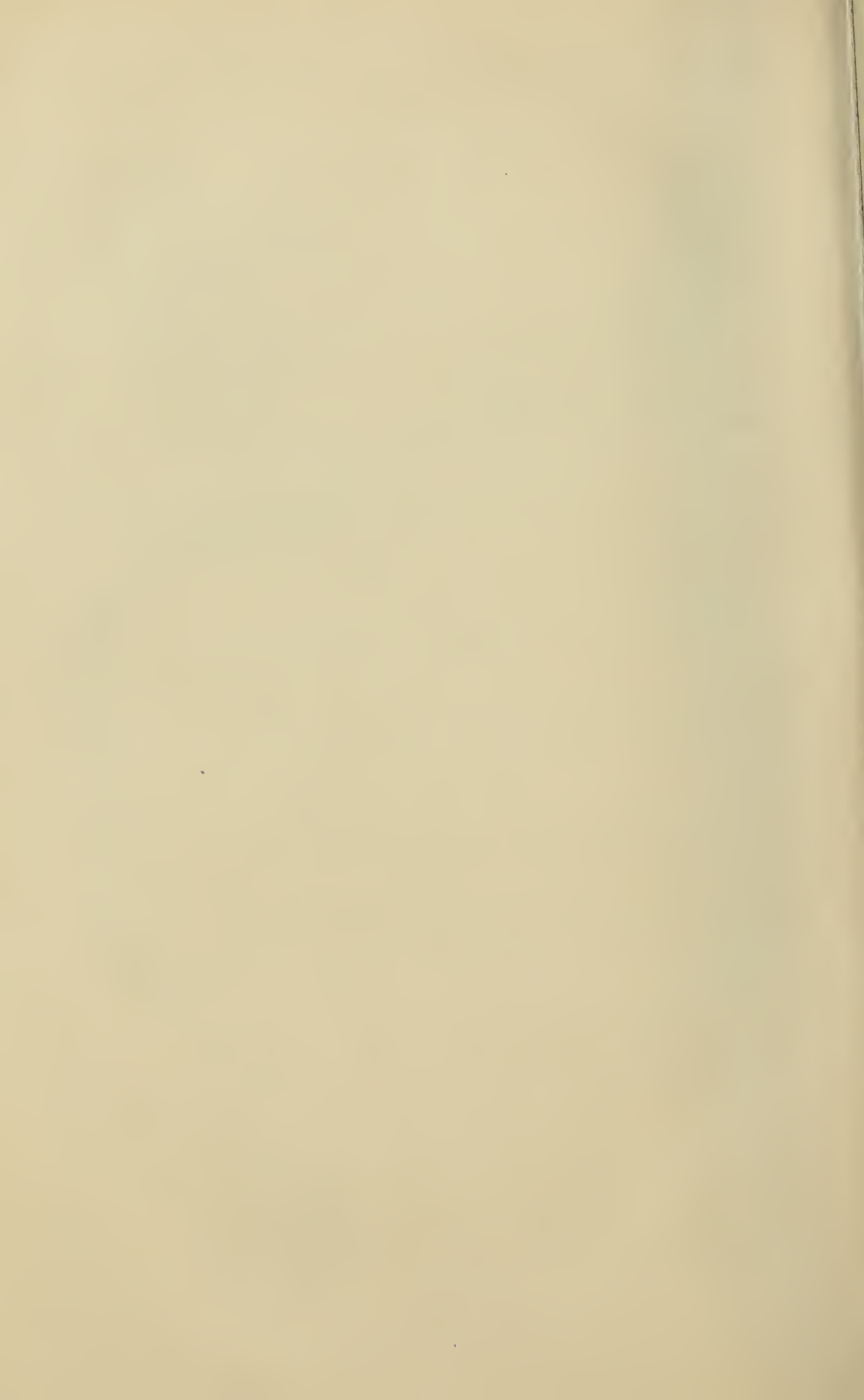


Fig 7





in some particular constitutions, or under particular circumstances, do they find a proper nidus for further propagation.

The fact that the *Anchylostomum* has been found not only in Egypt and in Brazil, but also in Italy, shows that the animal, and the disease to which it gives rise, may also exist in other parts of the world.

Dr. HERMANN WEBER, 15th January, 1867.

6. *On the affection of the small toes of negroes, called "Ainhum."**

The roundish organ exhibited, resembling a diminutive potato, is the principal part of the little toe of a negro affected with the pathological condition called "Ainhum." It has been kindly transmitted to me by Dr. Wucherer of Bahia, together with a number of the *Gazeta Medica di Bahia*, containing a valuable description of the ailment by Dr. Silva Lima, which is, as far as I know, the first account of this peculiar affection.† According to this description, and to a manuscript note by Dr. Wucherer, the complaint consists in a kind of spontaneous amputation of the little toes of negroes, being unaccompanied by any other affection, or by any constitutional derangement, and being met with only in the Ethiopian race, *i.e.*, African negroes, and, but much more rarely, their unmixed descendants born in Brazil.

The ailment commences by a not quite semicircular furrow in the digito-plantar fold, occupying the internal and inferior portion of the root of the small toe, without any marked inflammation, or pain, or ulceration attracting the attention of the individual so affected. Gradually the furrow becomes deeper, and sometimes slightly ulcerated, and extends itself to the upper (dorsal) and external surface of the toe, thus forming at last a circular groove, while the anterior part of the toe, *i.e.*, the part in front of the groove, becomes swollen to twice or three times its natural size, and loses its shape, becoming oval or almost round. The epidermis becomes rough, the nail is said not to be particularly changed, but it is turned outward by the rotation of the toe round its axis, which always takes place when the pedicle by which the toe remains attached to the foot becomes very thin, and the

* "Ainhum" is the term by which the negroes themselves designate the affection, and signifies "to saw."

† *Estudo sobre o "Ainhum," molestia ainda não descrita, peculiar á raça Ethiopica, e affectando os dedos mínimos dos pés.* Pelo Dr. I. F. da Silva Lima, Medico do Hospital da Caridade. *Gazeta Medica di Bahia*, Anno I., No. 13, p. 146.

continuity of the first phalanx has been destroyed (Plate VIII., Fig. 5); the anterior part of the toe, becoming more and more loose, forms at last a painful impediment in walking, and induces the sufferer to ask for its removal, either by amputation by means of the knife or scissors, or by ligature. If left to itself, it is either trodden off or becomes gangrenous. The progress of the affection is very slow, the time elapsing between the formation of the original furrow and the more or less perfect completion of the spontaneous amputation having been in some instances ten years and more.

When the small toe of one foot has been affected for some time, that of the other foot becomes usually likewise diseased, and in the same manner; but the affection is generally much more advanced on one foot than on the other.

The sensation in the loose and altered portion of the toe, according to the testimony of Drs. Silva Lima and Wucherer, is not destroyed; the pedicle, indeed, appears to be very sensitive, the act of amputation by a single cut causing sharp pain.

The wound heals quickly, generally in three or four days, and leaves a healthy cicatrix. As soon as both the small toes are removed, neither any other toe, nor any of the fingers, nor any other part of the body, becomes affected.

The *cause* or *causes* of the ailment are, as yet, entirely unknown to the two excellent observers in Bahia already mentioned; and it is partly for this reason that I bring this subject before the Society, hoping that one or other of its fellows may be able to throw light on it, either from personal observation, or by inducing others residing in tropical countries to pay attention to, and report on it. It seems to be by no means confined to Bahia, for some of the patients of Dr. Silva Lima told him that the complaint frequently occurs in their native country in Africa, as well amongst men as amongst women, while in Bahia it seems to be very rare in female negroes. One of the patients also told him that it was much more frequent in some families than in others. It would also be interesting to learn whether the negroes living in the West Indies or in the other parts of the globe are liable to the same or a similar affection, and whether there, too, it is confined to the little toes.

The facts that the general health is said to be perfect, that the complaint is entirely confined to the small toes, while all the other parts of the body remain free, and further, that it only occurs amongst negroes, may give rise to the impression that there exists some

mechanical cause, connected perhaps with habits peculiar to negroes only, but no such cause has hitherto been found, nor has either Dr. Silva Lima or Dr. Wucherer discovered anything in the hygienic conditions, or in the work performed by the negroes, which could account for it. In the absence of any mechanical cause, the symmetrical nature of the affection, and also the alleged prevalence in certain families—owing possibly to hereditary disposition—would point to the constitutional nature of the complaint.

With regard to the character of the changes effected in the amputated portion of the toe, it consists, according to Dr. Wucherer,* in atrophy with fatty degeneration of the tissues from want of nutrition. The specimen exhibited before the Society clearly shows an increase in bulk to at least double the natural size, and an alteration in shape, the specimen being oval, or almost round; the epidermis is rough; the place of amputation is round, about one-sixth of an inch in diameter, and concave, without apparently containing any particles of bone.

A longitudinal section, passing through the rather deformed nail, shows that the greater portion of the entire mass consists of adipose tissue; a single phalanx, apparently the last, has almost retained its natural shape, but the cavities of the spongy tissue appear to be enlarged at the expense of the osseous lamellæ; the articular cartilages between the first and the second phalanx are quite distinct; but there is only a small remnant of the second phalanx, and no distinct portion of the third; the tendinous elements attached to the bones seem to be likewise atrophied.

Dr. HERMANN WEBER, 5th March, 1867.

Report on Dr. H. Weber's case of "Ainhum."—The specimen consists of the terminal and middle phalanges of the little toe—probably the right one. The intervening joint with its cartilage and synovial membrane is perfectly healthy and unchanged. The bone tissue of the phalanges is also unchanged, except that the areolar spaces are rather enlarged, and may have been filled before being kept in spirits by fatty matter. The bone tissue between the middle and proximal phalanges is however replaced by fibrous tissue. The separation of the toe has taken place at the proximal inter-phalangeal joint, and not at the metatarso-phalangeal. The cartilage and articular end of the middle phalanx have been removed, and replaced by fibrous tissue

* In Dr. Silva Lima's paper, see p. 151.

exactly similar to that of an ordinary cicatrix. The cushion of fat normally placed under the end of the unguis phalanx is in all respects normal. The substance of the true skin is thickened, with some degree of hypertrophy of the papillary structure, and enlargement of the calibre with great thickening of the walls of the blood-vessels which permeate it. The connective and adipose tissue immediately subjacent appear under high powers of the microscope perfectly healthy. In some of the areolar intervals of the thickened corium there are corpuscular or granular masses arranged somewhat concentrically—probably sections of diseased blood-vessels acted on by alcohol. Of the toe-nail the site of the matrix covered by the shrivelled base of the nail alone remains, showing under the microscope some irregular remains of the ridges and bony grooves of the nail. (See Plate VIII., Figs. 6 and 7.)

MR. CAMPBELL DE MORGAN,

Mr. JOHN WOOD, 19th March, 1867.

7. *Artificial amyloid matter.*

The specimen consisted of fibrine which had been deprived of alkaline matter. Fibrine is soluble in very dilute hydrochloric acid (six parts in ten thousand), and when dissolved by this means will necessarily be deprived of all the alkali with which it is commonly associated.

The fibrine, in a dealkalized state, can be recovered by evaporation as a gelatinous translucent substance. The specimens before the Society exhibited the so-called amyloid reaction in a very striking manner, on the addition of iodine. It was shown that iodine gave to common fibrine the same faint yellowish tinge which it gives to the healthy tissues, while the dealkalized fibrine received a colour which closely resembled that produced by the reagent upon a liver which was infiltrated with the "amyloid" deposit, as the result of disease.

The method described of depriving fibrine of alkali was originally resorted to as a means of testing a conclusion, the grounds of which it is not necessary to repeat, that the so-called amyloid matter is essentially fibrine which has been dealkalized by some morbid process. The argument appeared to be completed when the artificial product displayed the reaction characteristic of the morbid formation. From the fact that in a large proportion of the cases where the peculiar morbid deposit has been found, the loss of alkali has apparently been

due to the process of suppuration, the term *depurative* has been proposed as a substitute for that of *amyloid*. Further particulars relating to the pathology of the subject are given in a paper in the contemporary volume of the Medico-Chirurgical Society.

Dr. DICKINSON, 5th March, 1867.

8. *A two months' fetus showing marks of scrofulous (?) ulcerations.*

This foetus was aborted on the 2nd of August, 1866, from a woman of nervous and sensitive disposition, aged 28.

The father appears to be a healthy man and denies having had syphilis; but his eldest boy, aged 10, is very scrofulous, and full of indolent sores about the head, thighs, and buttocks. The mother was ignorant of her condition up to the time of the abortion taking place.

There are small ulcers visible on the head and nates of the foetus, which in the recent state had the appearance of scrofulous sores. It presents, perhaps, the earliest specimen of disease in the embryo unassociated with malformation.

Mr. DE MORGAN, for Dr. Ross of Cape Town, 19th March, 1866.

9. *Specimen of a supernumerary finger removed from the little finger.*

The supernumerary finger was about three-quarters of an inch long, rounded at the end and pedunculated at its point of attachment, which was about the middle of the ulnar side of the middle phalanx. It had been injured accidentally by the patient (a girl of 11 years), and the pedicle had so far ulcerated, when she was brought to Mr. Watson, that it only required a slight wrench to separate it.

The growth consisted of a single rudimentary phalanx with a rudimentary nail upon its dorsal aspect, and on section its principal bulk was made up of fat. Mr. W. SPENCER WATSON, 16th April, 1867.

10. *Specimens illustrating the minute anatomy of tubercle from a case of acute tuberculosis.*

R. S., aged 36, an engine-driver, was admitted into the Middlesex Hospital on March 29th. He stated that his previous health had always been good. His present illness began about six weeks before his admis-

sion with pain and swelling in the right testicle; soon afterwards he began to cough and spit, his breath got short, he became feverish and sweated profusely at night.

On admission his pulse was 122, respirations 36, temperature 102°·6. He was in a state of restless talkative delirium; his hands were very tremulous; face flushed, lips somewhat livid, tongue dry and brown. On examination of his chest there was deficient percussion resonance over both pulmonary bases, with fine crepitation and general wheezing over the whole of both lungs; his expectoration was scanty, viscid, and rusty. Urine showed no deficiency of chlorides but contained about one-fourth its bulk of albumen and large numbers of epithelial casts. The right epididymis was much swollen, nodulated, hard, and tender; the testicle itself was not affected. The patient was muscular and well nourished.

He continued constantly delirious, and sweated profusely at night; the dyspnoea increased, and he became comatose and died on April 6th.

On *post-mortem* examination grey miliary tubercles were found scattered through all the organs. The pia mater at the base of the brain and in the fissures of Sylvius showed numerous very minute deposits, but without any exudation of lymph. Both lungs, from apex to base, were thickly sown with semi-transparent grey granules, which were also present in very large numbers immediately beneath the pleural surfaces. The lungs presented no old tuberculous deposits. The under surface of the diaphragm and the peritoneal surfaces of the liver and spleen were also thickly studded; and extremely minute deposits were found, on microscopical examination, disseminated through the substance of the liver; these were not visible to the naked eye.

The left kidney which was much enlarged, having apparently undergone compensatory hypertrophy, was also studded with tubercles varying in size from a millet- to a hemp-seed; they were found both in the cortex and in the medullary cones, and were generally surrounded by an injected halo; many of them were yellow and showed signs of commencing softening. The secreting tissue of the right kidney was entirely destroyed, the organ was converted into a group of saccules corresponding to the calices, which were filled with yellow matter of the consistency of soft putty. The ureter throughout its whole course was much thickened, its lining membrane irregularly ulcerated, and its cavity filled with similar putty-like matter. The right epididymis was enlarged and nodulated, and on section presented a yellow cheesy infiltration; the vas deferens was filled with yellow cheesy matter;

DESCRIPTION OF PLATE X.

This plate illustrates Dr. Murchison's description of Intestines of Pigs which had died of an infectious fever (p. 295).

Figure 1 is a portion of ileum, from near lower end, with circular epithelial excrescences like crusts of rupia, each excrescence presenting an appearance of concentric rings.

Figure 2. Portion of ileum, with flat aphthous looking patches on mucous surface, apparently an early stage of the larger excrescences.

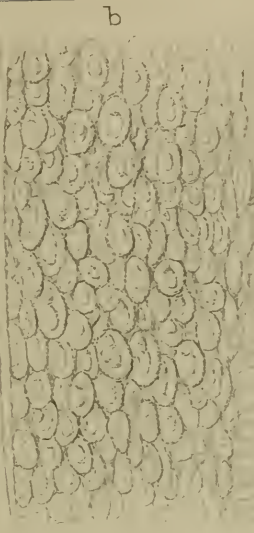


Fig 1

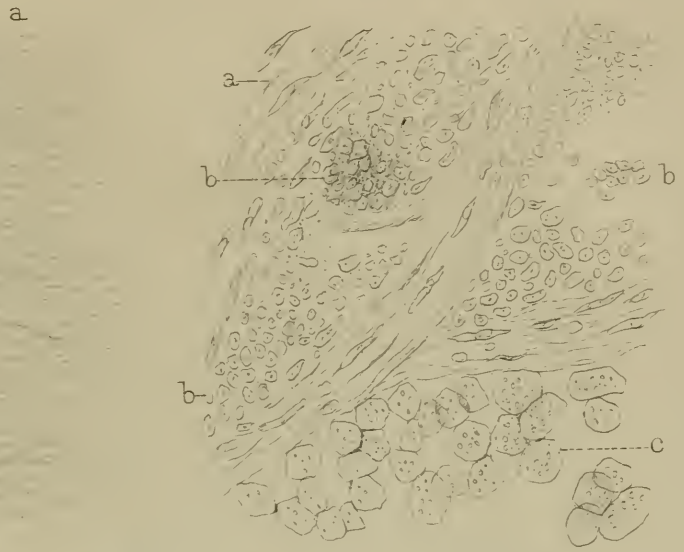


Fig 3

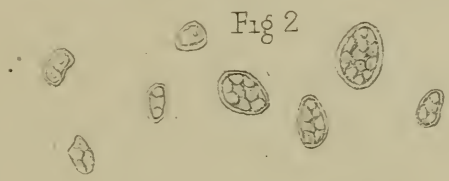


Fig 2

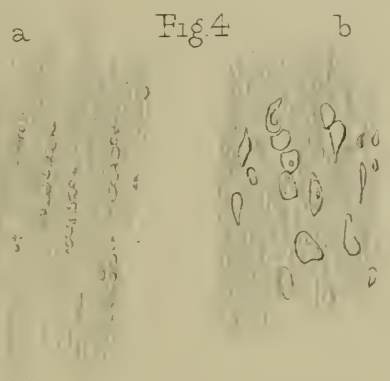


Fig 4

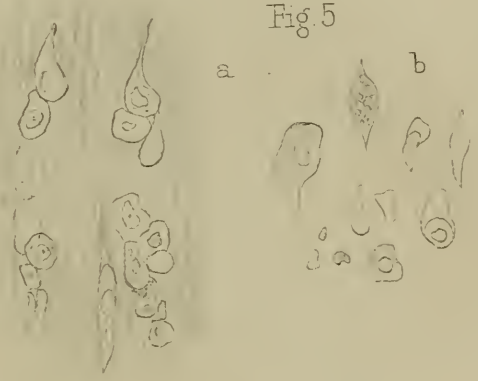


Fig 5

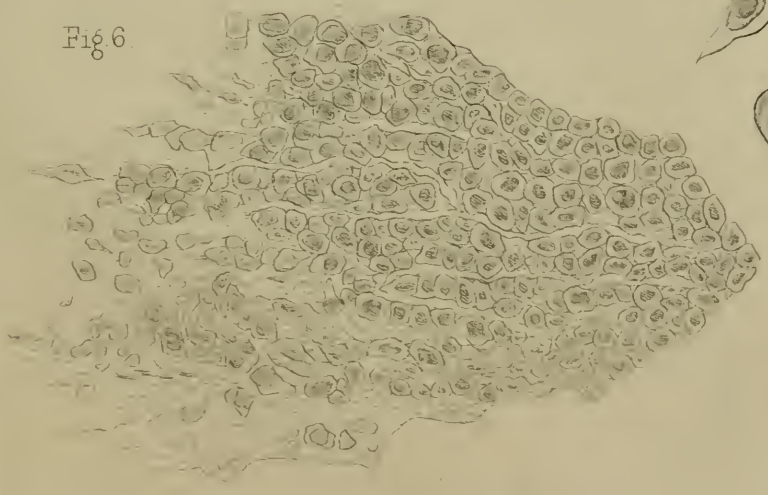


Fig 6

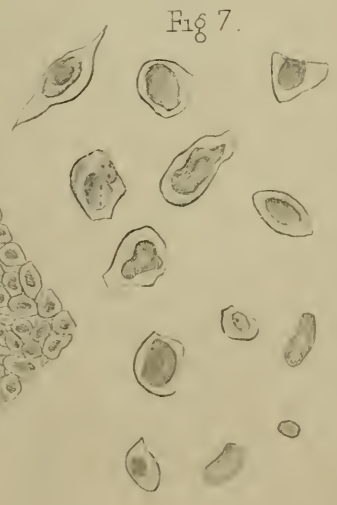


Fig 7

the testicle was normal; the left testicle, vas deferens, and ureter were unaffected, as also was the bladder.

This case presents the usual course of acute tuberculosis. There is first a primary formation of tubercle in some organ—here it was the pelvis of the right kidney, the ureter and epididymis—and then a sudden dissemination of tubercle throughout the viscera generally. It has been suggested that this secondary tuberculosis may, in some cases, be actually due to the dissemination of tubercle-germs from the seat of the primary tubercle, in the same manner as cancer-germs get disseminated from the primary cancer. The fact that the liver and kidneys proper are seldom, if ever, the seat of primary tubercle, but are generally found affected in acute tuberculosis, though in the case of the liver, owing to the extreme minuteness of the tubercles, this is often overlooked, seems to be in favour of this view.

I have made preparations for microscopical examination of the tubercles from the various organs. They consist of little aggregations of round and oval sharply-circumscribed bodies with homogeneous or slightly granular contents; they vary in size, but generally are rather smaller than a red blood-corpuscle. For the most part they present the characters of nuclei, but in some places, especially in the pia mater, distinct cells are visible about the size of whiteblood-corpuscles. In the pia mater (Plate IX., Fig. 1), in addition to masses made up of these cells and nuclei, which are visible to the naked eye, many of the small arteries are thickened by an infiltration of these corpuscles in their sheaths.

Figure 1 represents one of these arteries magnified seven hundred times, and beside it are some isolated nucleated tubercle cells from the pia mater (Fig. 2). Plate IX., Fig. 3, represents a section through the capsule of the liver, magnified two hundred and twenty times. The capsule is seen to be separated into layers by the tubercular deposits, in the neighbourhood of which the connective tissue corpuscles of the capsule are proliferating, so that a gradation may be traced between them and the tubercle-corpuscles. In the interior of the liver the tubercles formed little circumscribed deposits, the liver-cells being pressed aside by them. In the kidney the deposits were situated between the uriniferous tubes.

Some controversy has lately arisen as to the exact structure of the tubercle-corpuscle, whether it is a true nucleated cell or a nucleus. Virchow considers that it is originally a nucleated cell, and that the nuclear appearance of most tubercles is due to the delicacy of the cell-wall and the readiness with which it is destroyed either by a process of

degeneration or in preparing the specimens. Dr. Andrew Clark, on the other hand, appears to consider it as essentially a nucleus. Förster is of opinion that tubercles may be composed of both cells or nuclei, and that these elements arise in different ways, the cells being formed by division from the cells of the tissue in which the tubercle takes its origin, the nuclei similarly from the nuclei of the tissue and especially from the nuclei of the capillaries. I think that the specimens, which I show to-night from the pia mater, clearly prove that tubercles may in part consist of true nucleated cells.

There seems now to be a pretty general agreement that tubercle is formed, like other morbid growths, by a process of proliferation from the tissues of the different organs, especially the connective tissues and its allies, and that it is neither an exudation nor a simple degeneration.

Dr. CAYLEY, 16th April, 1867.

11. *Preparation (microscopical) of the Cyindrotcenium Cholerae Asiaticæ.*

This specimen, given to the President by Ph. Dr. Thomé of Cologne, shows in different stages of growth, as cultivated in glycerine, the microscopical fungus which Dr. Thomé has stated to be an invariable ingredient of choleraic evacuations, and, in his opinion, at once the essential (zymotic) cause of the morbid intestinal phenomena, and the contagium by which the disease spreads from the sick.

Mr. SIMON, for Dr. THOMÉ, 7th May, 1867.

N.B. The specimen was referred for examination to Dr. Sanderson and Mr. Hulke. And they were authorized to withhold their report till after the summer recess, in the hope that, if opportunities should arise during the summer, they would make for the Society observations of their own in test of Dr. Thomé's doctrine.

12. *A case in which the right leg has grown longer than the left, and the right patella has become hypertrophied.*

The male, the subject of this history, was first under the observation of the author in March, 1857, in Guy's Hospital, where notes of the case were taken by Mr. John Jones. The boy then was between 8 and 9 years of age. He was delicately formed, not healthy looking, and resided at Walworth.

About a year before, his mother had noticed a swelling of the right knee, and she said he had fallen from a height of about nine feet on to the floor of a passage and struck his knees. The account to be obtained of the injury at this time was, however, very obscure. After careful examination, it was quite clear that the right patella was then larger than the left, that the knee-joint itself was quite healthy, and that the right leg was longer than the left. The boy said the knee became painful after keeping it flexed for some time. The diagnosis at this time was that a cartilaginous growth was developed upon the right patella. He remained in the hospital about a month, and was discharged in the same state as when admitted.

In May, 1858, he was again under my treatment in Guy's Hospital, when the notes of the case were taken by Mr. G. D. Harding, as follows:—During his absence from the hospital (about thirteen months) the swelling of the patella has slowly increased, the right leg has grown more than the left, and consequently the pelvis is raised on the right side. The line of the spinous processes of the vertebræ is also curved. However, by placing a firm body under the left foot so as to raise it to the level of the right, the spine becomes perfectly erect. The whole right knee-joint appears to be at first sight enlarged, and the patella to be placed on its outer side. But on careful manipulation the increase in size is distinctly due to the growth of the patella, which feels entirely bony.

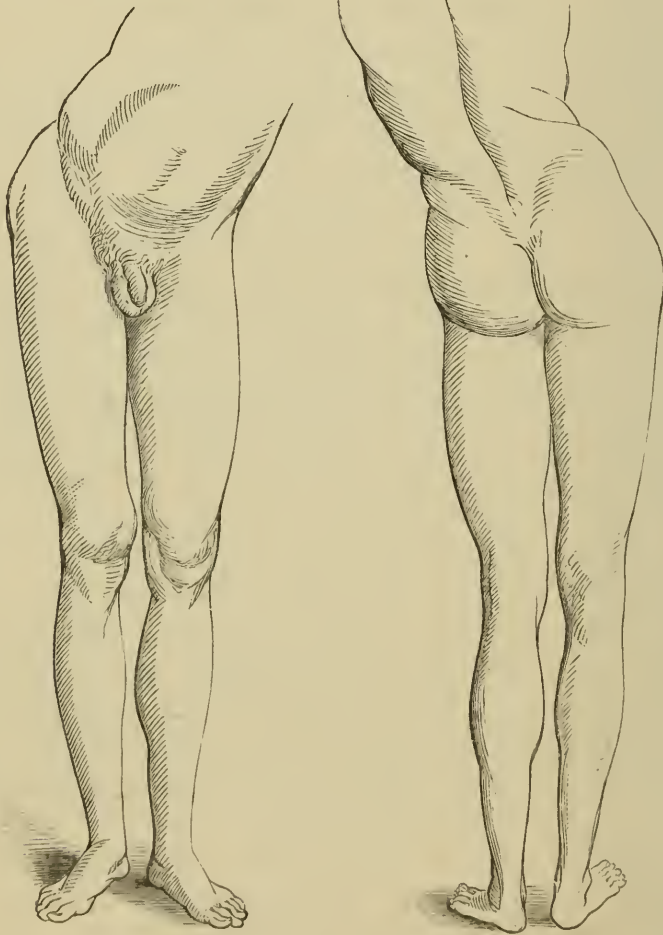
Measurements were taken at this time, and they are placed on the table of comparative measurements at the end of this report. Altogether the length of the right lower extremity exceeded that of the left by two inches. There was also a corresponding want of symmetry in the muscular development of the limbs. He was discharged from the hospital with directions to attend to the elevation of the left foot.

On the 13th February, 1867, this patient presented himself again at Guy's Hospital after the lapse of nine years. He came on account of having suffered much pain in the right hip and back, after having been occupied as a "pressman" in a printing-office. This employment caused him to throw considerable weight on the longest leg. The measurements of the two legs were carefully taken by Mr. George Eastes, the surgical registrar, and it was found that the right femur was two inches and a-half longer than the left; that the right tibia and fibula were one inch longer than on the other side; and that the dimensions of the right patella were greatly in excess of the left. (Figs. 15 and 16.)

The right patella is so much hypertrophied that on each side, internally and externally, it projects beyond the corresponding trochlear surface of the femur. To the lower part of the bone is appended a thinner prolongation in the ordinary situation of the ligamentum patellæ, which seems to form part of the hypertrophied bone. It is half an inch in length, and is probably nothing more than ossification of the ligament at the upper end where it is united to the patella.

WOODCUT 15.

WOODCUT 16.



The anterior surface of this right patella is irregular and extremely convex; so that the bone forms a most unsightly prominence in front of the joint. The convexity of the anterior surface of the bone is well demonstrated by the measurements, where the transverse diameter is three inches and three-eighths, while the transverse circumference of the anterior surface is six inches and a-quarter.

The cast shows the relative proportion of the sizes of the two kneecaps very well, and the drawings demonstrate the marked contrast between the muscular development of the legs as well as the deformity of the trunk arising from their unsymmetrical length.

Mr. Stanley refers to cases of this kind which seem to have resulted from inflammatory disease of the shaft of long bones; indeed, he specially alludes to this occurrence as a cause or origin of excess of growth in one extremity.* But in this case, if we are able to assign any satisfactory explanation of the excess of growth on one side, the injury sustained in the fall when the patient was about seven years old might be considered as the exciting cause. Individually, I am not inclined to place much faith on this circumstance. The case seems, however, worthy of record, especially as the opportunity has occurred of watching it for so many years, and since nearly every bone of the affected member participated in the excess of growth.

Table of comparative measurements.

	In 1853, aged 10.		In 1867, aged 19.	
	Right.	Left.	Right.	Left.
	Inches.	Inches.	Inches.	Inches.
From ant. sup. spine of ilium to head of fibula	15·25	13·25	19·75	17·25
Excess of right over left	2·	..	2·5	..
From head of fibula to point of ext. malleolus.	10·5	10·25	17·75	16·75
Excess of right over left	·25	..	1·	..
Excess of right tibia over left	..	..	1·	..
Patella, transverse measure, by callipers	..	..	3·37	2·
Excess of right over left	..	..	1·37	..
Over patella transversely with a tape	..	..	6·25	3·37
Excess of right over left	..	..	3·37	..

Mr. JOHN BIRKETT, 21st May, 1867.

13. *A case of abundant development of vegetable growth in the human stomach.*

On May 18th a patient was admitted into the wards of the Metropolitan Free Hospital and placed under my care, who exhibited symptoms which led me to believe that it was a case of lead-poisoning. The patient was a diamond-cutter, 40 years of age, and lived in very

* *Treatise on Diseases of the Bones.* By Edward Stanley, 8vo, 1849, p. 5.

poor circumstances. A few days ago he was attacked with pain in the stomach, which remitted and recurred several times during the day, and was associated with obstinate constipation, intolerable thirst, loss of sleep and appetite, dry tongue, livid gums with a grey rim, and great weakness, but intellect unimpaired.

On the morning of May 18th, the patient vomited about a pint of the fluid which is the object of bringing the case under the notice of the society. At first sight the bottle appears to contain a strong solution of sulphate of copper, but the chemical test shows that no trace of that metal is present. The dark green colour depends partly upon colouring matter of the bile, and partly upon the presence of innumerable sporules of a vegetable growth, of the nature of which I am yet ignorant. *Leptothrix*, *vibriolæ*, and other fungi are likewise present in vast numbers. The epithelial cells contained in the fluid are tinged light green.

On Monday the patient vomited again about a pint of the same fluid, somewhat lighter. I have examined it together with Dr. Lionel Beale, but we were unable to arrive at any definite conclusion.

Dr. HERMANN BEIGEL, 21st May, 1867.

XII.—SPECIMENS FROM THE LOWER ANIMALS.

1. *Small-pox in sheep.*

The investigations which form the subject of this paper were made in November, 1866, on two farms in the neighbourhood of Harwich, where the disease had been imported by foreign sheep arriving at that port. The investigator had also a sheep with the skin off (under careful protection) sent to his own house for more minute inspection. Sheep were seen in all stages of the disease. The symptoms are: intense fever in the first stage, followed by hard shot-like pimples on the skin which gradually enlarge and assume a white, raised, flattened appearance; desquamation takes place, scabs form, and the pustules and subsequent scabbing present appearances very similar to those seen in human small-pox. In many examples the wool was lost in large patches; hard knotty elevations could be felt on the inner side of the thighs and legs, and in some the eyes ulcerated and the sight was lost. In four examples purging was present and these were fatal; in others the excrement was of the natural appearance.

The sheep before alluded to, which died in the second or pustular stage of the disease, I examined with great care; it was in excellent condition. The face and the inner sides of the thighs were studded with pustules resembling much those of human small-pox, but having a more flattened appearance, and many of them of large diameter. No spots or pustules were present in any of the internal organs. The lining membrane of the larynx and trachea was red, as was that of the bronchial tubes. The lungs were gorged with blood, and the pulmonary veins were filled with firm coagula. The liver and kidneys were soft and congested; the spleen, pulpy. The mucous lining of the alimentary tube throughout was soft, and the epithelium readily peeled off. No patches nor ecchymosed spots similar to those in cattle-plague were present. The fourth stomach (abomasum) contained several pounds of earth and sand, and a large quantity was likewise found in the intestines,—not an unfrequent occurrence in some other diseases of sheep.

The disease, in most of the symptoms and morbid appearances, has a great resemblance to small-pox in men; it is highly contagious; but judging from experiments made by several physicians and veterinary surgeons, it cannot be conveyed to man by inoculation or by any other means. Inoculation is supposed by many to diminish the severity of the disease, and consequently the mortality; others, however, believe, and probably with much truth, that inoculation (as was the case in human small-pox) tends to spread the disease and add to the number of deaths. Hurtrel d'Aaboral (*Traité de la Clavelée, de la Vaccination et de la Clavelisation des Bêtes à Laine*, 1822), says, "That in forty or fifty days inoculation frees the whole flock from the danger of natural infection." Professor Simonds believes that the mortality by inoculation is reduced to five per cent. The two flocks I have spoken of present a remarkable contrast as regards the number of deaths. The one was attacked in August and many of the animals were put into a close barn; of one hundred and sixty of those attacked forty-eight died. The other flock was placed in an open field near to the sea, and the mortality among these was comparatively slight. The low temperature (November) probably had also a beneficial effect.

Wax-casts were exhibited showing the various stages of small-pox in sheep.

Dr. CRISP, 18th of December, 1866.

2. *Results of inoculation with tubercular matter.*

On two occasions within the last sixteen months, namely, on December 4th, 1865, and October 29th, 1866, Monsieur Villemin, of the Val de Grâce Hospital in Paris, has laid before the French Academy of Sciences particulars of certain experiments performed by him which purport to show that inoculation with tubercular matter, as derived from any phthisical lung or other similarly affected organ, will, at least to some extent in the animal kingdom, communicate from body to body the specific dyscrasial state in which tubercular formations arise. M. Villemin's positive results were almost entirely obtained in experiments on rabbits and Guinea-pigs; for sheep, dogs, and cats appeared comparatively insusceptible of the contagion.

Experiments on a large scale in imitation of M. Villemin's do not appear yet to have been made by other observers. Of a few, however, which were performed by MM. Hérard and Cornil (see their recent work on *Phthisis*, pp. 551 et seq., and previously, a paper in the *Union Médicale* for March 8th, 1866), the results, so far as they went, confirmed M. Villemin's statements: as did also the results of some performed by Professor Lebert, of Breslau, and described by him in the *Bulletin de l'Acad. de Médecine*, for November 15th, 1866. On the other hand, Dr. Alfred Vogel, of Dorpat, in vol. ii. of the *Deutsches Archiv für Klinische Medizin*, reports that he got only negative results from inoculations which he performed on a horse, a cat and a cow; and it deserves notice that in some of the other experiments, reported as confirming M. Villemin, tubercular matter was introduced far more freely than in what we should generally term inoculation. Thus, Professor Lebert's method was to triturate and dilute with water from half a gramme to a gramme of solid tubercle, and to introduce by subcutaneous injection the resulting dose of emulsion.

The specimens which I now lay before the Society represent the results of certain experiments with which I have myself, to some small extent, sought to verify M. Villemin's statements. Subject only to such qualification as an amended pathological definition of "tubercle" may hereafter render necessary, the present specimens justify me, I think, in bearing testimony to the genuineness of the very important pathological discovery which M. Villemin claims to have made.

The specimens are in two sets, representing two successive transmissions of disease; one set having been taken from a first batch of rabbits which I had infected from the human subject, while the other

is from a second batch infected by inoculation from the first. The history of the experiments (omitting a few which miscarried through thefts and other accidental circumstances) was as follows:—

First series.—Of fifteen apparently healthy, nearly or quite full-grown young rabbits, belonging to four different litters, and living with their respective parents in four separate, but similar and juxtaposed hutches, in the garden of St. Thomas's Hospital, ten, taken at random, were, on June 11th and 12th, 1866, inoculated with softening yellow tubercle from the phthisical human lung. On each occasion the patient whose lung was used to supply the tubercular matter had been about twenty hours dead, and the method of inoculation was in all cases this:—having first punctured the skin behind the ear, and having then gently thrust through this puncture a common cataract-scoop some little distance into the subcutaneous tissue, I next with the same instrument conducted to the bottom of the little channel I had made a small quantity of the tubercular matter—perhaps from half- to the whole of a mustard-seed in size. Immediately after this operation, the inoculated animals were put back to their former companions, with whom they then continued to live, and during the next five months they gave no obvious signs of illness, local or general. Early in November one of the fifteen (a non-inoculated one) died, and in the middle of November all the remaining fourteen, with one (inoculated) exception, were killed. Examination of the fourteen bodies gave results as follows:—the five which had not been inoculated showed no signs of tubercular disease; also, of the nine which had been inoculated, four showed no such signs; but five of the inoculated showed signs, more or less obvious, of what, at least provisionally, I will call tubercular infection of the lung. The lungs of these five, making my first set of specimens, unavoidably preserved in spirit, are now before the Society for criticism. I may add that the one not killed of my inoculated rabbits of this series was a doe, which appeared in good condition, but had twice since the inoculation had litters of dead young, and she, being kept alive, had afterwards other dead litters.

Second series.—Of seven old rabbits (parents of the preceding stock) three were, on November 17th, carefully inoculated in the above-described way, each with a very small portion of the supposed tubercular matter from a rabbit-lung of the former series. Unfortunately one of these three died, from some accidental influence, within a few days of the operation; but the other two, with their four non-inoculated companions, continued under observation in the hutches where they had

been for months. Last Thursday, 14th of March, one of the inoculated died, when, on examination, it was found that the lungs, to about two-thirds of their volume, were solidified with tubercular matter, that the spleen had prominent lumps of the same sort, that the mesentery had a tubercular gland as large as a hazel-nut, and (afterwards discovered) that the liver had a small quantity of tubercle. On the 16th the other inoculated rabbit was killed; its lungs were found solid with tubercle to about half their volume, and at the root of the mesentery was a tubercular gland about as large as a filbert. Of the four non-inoculated, three were then killed and found to have no trace of tubercular disease. The diseased organs of the two inoculated rabbits of this second series are now submitted, in a tolerably fresh state, for the examination and criticism of the Society.

A *third series* of experiments was attempted, but unfortunately miscarried: accidental exposure to the extreme cold of the prevailing weather having killed in one night a rabbit and two Guinea-pigs which I had just inoculated from the diseased organs of one of the last-mentioned series.

Proposing that my specimens should be referred to a committee of the Society for examination, I do not now enter upon the question of the intimate anatomy and chemistry of the morbid product which characterizes them, but merely invite attention to the fact (well shown in the fresh specimens) that the aspect and common physical properties of the product are entirely those of the matter which in man we call "tubercular," and in most parts are those of human "yellow tubercle." As regards the last point, however, it will be observed that a considerable part of one of the mesenteric masses is grey. And, since a characteristic appearance which belonged to the first series of specimens of lung-disease in the fresh state has been lost by immersion in spirit, I may state that in parts of those specimens, where small round spots of tubercular formation were beginning to become confluent into irregular solidifications of lung, each such spot, though it appeared all yellow to the naked eye, showed, when slightly magnified, that it had a semi-transparent grey circumference.

A point which I think deserves attention is the contrast between the two series of experiments. In the one series, directly infected from man, ten inoculations gave but five, or probably six, tubercular results; and those results (except in one case, where a small accumulation of soft cheesy matter was found in a cervical gland) were not noticed elsewhere than in the lung, even when five months had elapsed from

the time of experiment; and moreover the lung affection which I found was never in large amount. The result was certainly much less at the end of five months than M. Villemin seems generally to have found even after a much shorter lapse of time. On the other hand, in my second series, where the infection was from rabbit to rabbit, my (unfortunately) only two inoculations both gave tubercular results; and within four months these results had advanced, both in the lungs and elsewhere, to a magnitude very greatly beyond that of the older results of the first series.

Mr. JOHN SIMON, 19th of March, 1867.

Report on Mr. Simon's specimens showing the result of inoculation with tubercular matter.—Two recent specimens and four which had been kept in spirit were received for examination.

With regard to the recent preparations, one, which consisted of the entire trunk of the animal, showed the following facts:—

The lungs were free from pleural adhesions; they were collapsed; both were occupied, to about two-thirds of their extent, by an opaque, yellowish-white material, like crude tubercle in colour and texture; this matter was collected in somewhat irregular masses, which, looked at closely, were seen to consist of aggregations of minute granules, more or less distinct, of about the size of the smallest shot. These bodies projected above the surfaces of the shrunk lungs, and were the most conspicuous part of their exteriors. The formation was scattered pretty evenly throughout both organs from apex to base. Most of the masses were irregular in shape, and had points of contact with their neighbours; some were spherical and isolated; all were made up, as has been stated, of smaller granules, of the size of peas, or thereabouts.

A small, spherical mass of the same appearance, of which the centre was more friable than the outside, was found in the liver, besides several smaller specks, which approached the character of tubercles of the miliary kind.

A globular formation about the size of a nut, of opaque, cream-coloured matter, exactly resembling a mass of soft, crude tubercle, was found in the mesentery, apparently connected with one of the mesenteric glands.

Several bodies of a similar nature, but of a smaller size, were embedded in the spleen, projecting from its surface. The serous membranes were natural, as were the heart, kidneys, supra-renal capsules, and the remaining lymphatic glands.

In the other fresh specimen, the formation was less extensive. It was confined to the lungs, and in these organs it was chiefly in the lower lobes; the upper lobe of the left being nearly, the upper lobe of the right quite, exempt. With these exceptions, the same description applies to both the fresh specimens.

With regard to the preparations which had been preserved in spirit it may be stated that one of the reporters had the opportunity of examining the parts while fresh, and that the naked-eye appearance accorded in most respects with what has been said with regard to the others; the only difference was, that the masses of new formation, which, as in the recent specimens, closely resembled crude tubercle, contained much earthy matter in their centres.

The result of the microscopic examination of the several specimens was as follows. It is not necessary to describe their intimate structure separately, as in every case it was essentially the same.

The formation chiefly occupied the air-cells; it consisted of cells, nuclei, granular matter, and earthy substance. The cells were nucleated; they presented a great variety of shape: some resembled the natural epithelium of the bronchial tubes; some were ciliated; others were more or less fusiform; while some contained granules of oil. Detached nuclei were numerous; they resembled the nuclei of the bronchial epithelium. There was much granular or fatty matter scattered throughout. In the central part of many of the masses were rounded aggregations of earthy matter, which, with hydrochloric acid yielded abundance of gas. The proportion in which these several components existed, differed somewhat in the several parts examined. Some consisted chiefly of cells, others of nuclei and granular matter. The earthy deposit was not always present. There was most earthy deposit and granular degeneration in the second rabbit.

The formations in the mesentery, spleen and liver were the same, but for the absence of structures peculiar to the lung.

The fact that no characteristic miliary or grey tubercle was found in any of the specimens, together with the novelty of the views suggested by the history of the preparations, made it necessary to look closely into the nature of the formation before regarding it as tuberculous.

The reporters desire to draw attention to the following facts:—

The formation resembles crude tubercle in the ensuing particulars.

1. In granular structure, consistence, colour, and all other properties evident to the naked eye.
2. In the minute structure, as shown by the microscope.

3. In the tendency to induration and earthy degeneration.

4. In the coincidence of the same formation in other parts of the body, particularly in the mesenteric glands.

The only non-tuberculous products which could be regarded as resembling in any respect the structure in question, are the consolidation of pneumonia, pyæmic deposits, and cancer. With regard to these disorders as they affect the human subject, we have no hesitation in stating that they all differ essentially from the appearances which have been described.

The foregoing conditions appear to us to place the tubercular character of the formation beyond any reasonable doubt.

Dr. J. S. BRISTOWE,

Mr. SEPTIMUS W. SIBLEY,

Dr. W. H. DICKINSON, *2nd of April, 1867.*

3. *Bones of a dog affected with rickets.*

In the year 1863 I exhibited two Italian greyhounds affected with acute rickets, and the Fellows will remember the appearance of the specimens and the remarks I made at the time, and which are reported in the '*Transactions of the Society*,' vol. xiv. I now exhibit the ricketty bones of one of the animals. I have previously stated that rickets is a disease *sui generis*, and has no relationship with scrofula or syphilis. I wanted to push my researches further and to inquire, by experiment, if rickets be hereditary, and as both were bitches I had them copulated, but, unfortunately, both died in pupping from the ricketty state of the pelvis. I may here state, that rickets is only found in those lower animals which live chiefly on animal food, chemically rich in phosphorus.

Therefore, according to my experiments, the general practice of administering phosphoric remedies in cases of rickets is erroneous. The disorder comes from the stomach, and only by proper treatment of that organ rickets will be cured.

Dr. HENRY DICK, *16th of April, 1867.*

4. *Intestines of pigs which had died of an infectious fever.*

In a communication made to this Society in November, 1858, and

recorded in the tenth volume of the *Transactions* (p. 334), I stated, on the authority of Professor John Gamgee, that typhoid or enteric fever had been described by various German writers on veterinary pathology as occurring in pigs. I had never, however, had an opportunity of examining the intestinal lesions on which this statement was founded. On August 27th, 1864, I received from Professor John Gamgee, then of the New Veterinary College, Edinburgh, a letter informing me that "a severe outbreak of pure typhoid fever had broken out amongst a lot of pigs in the neighbourhood of Edinburgh"; that the "lesions were those of human typhoid"; and that the disease had been "introduced by stock purchased at Wolverhampton and starved for four days on the railroad, and was highly contagious." Mr. Gamgee concluded by offering to send me the body of a dead pig or specimens of the intestines. I immediately replied accepting his kind offer; but Mr. Gamgee was prevented at the time acceding to my wish.

It was not until November 1865 that I received from him in London specimens of the diseased intestines of the pigs, that had died of this contagious fever near Edinburgh, in the autumn of the previous year. At the first examination I was impressed with the essential differences between the morbid appearances presented by these intestines and the lesions of enteric fever in man; but as the specimens had been for more than a year in spirit I reserved my opinion until a more favourable opportunity offered itself of examining the disease in the pig.

That opportunity was afforded me also by Professor Gamgee, in February, 1866. I had then an opportunity of watching seven or eight pigs suffering from the disease in the Albert Veterinary College, and on February 15th I dissected the bodies of five pigs in which the disease had proved fatal. The intestines from three of these pigs, and also from the pigs that had died at Edinburgh are now submitted to the Society; and it will be seen that the appearances in both cases are identical.

The symptoms presented by the pigs during life were fever, indicated by increase of temperature and acceleration of pulse, loss of appetite, thirst, and indisposition to move. In several of the animals there was vomiting and in all there was diarrhoea more or less profuse, the motions being of a dark brown or chocolate hue, apparently from admixture of blood. In all a bright red rash was observed on the skin. This was most marked on the skin of the abdomen, and constituted so prominent a feature of the disease that I could readily understand Mr. Gamgee's statement to the effect that in Ireland, where the disease is

very common and destructive, it is known as the "red soldier." In the latter stages of the malady the tongue became dry and the abdomen tympanitic; and the animals at last sank from exhaustion. The disease was extremely fatal; in some of the cases death occurred within a week, and in almost all within a fortnight of the attack.

The appearances found after death may now be described. In two of the five pigs the red rash was permanent after death. In four of the pigs the skin of the abdomen, and to a less extent of other parts of the body, was also studded with dark brown elevated warty excrescences up to an inch in diameter. These excrescences consisted of an epithelial formation of almost horny consistence; with a little difficulty they could be separated from the subjacent cutis, the surface of which was raw and covered with elongated papillæ that had passed into the under surface of the horny growth. Mr. Gamgee seemed at first inclined to regard these excrescences as connected with the disease; but their examination induced me to conclude that they were of older date and of the nature of warts.

The chief internal lesion which I discovered consisted in an altered condition of the mucous membrane of the stomach and intestines. Throughout the greater part of its course this membrane was more or less injected. In three of the five cases the mucous membrane of the stomach was of a deep claret hue and in two of these three cases there were patches of sub-mucous ecchymosis half an inch or more in diameter. In all of the cases, but particularly in three where the muscular injection was greatest, the inner surface of the stomach was coated with a thin false membrane, which could be peeled off in patches and which was made up of epithelial cells. The mucous membrane of the intestines presented similar morbid appearances to those met with in the stomach, these appearances being usually most intensely developed in the lower part of the small and in the large intestine. In three of the five cases, the lower part of the small and the commencement of the large bowel presented an appearance which, at first sight, might have been mistaken for enlargement and sloughing of the solitary glands, but which it required little examination to show was essentially distinct. The appearance referred to consisted in a number of button-shaped epithelial crusts, for the most part perfectly circular or oval, with a diameter varying up to an inch, and of a brownish colour. Although mostly flat, they were all elevated above the surface of the surrounding mucous membrane, and more so at the centre than at the circumference. A nipple-shaped prominence in the centre was sur-

rounded by a number of concentric rings, as is well shown in the accompanying plate (Plate X., Fig., 1), the whole of the excrescence being not unlike a crust of rupia on the skin. The entire crust, on microscopic examination, was found to be made up of epithelial structures. The origin of these epithelial excrescences could be traced to minute flat, aphthous looking patches (Plate X., Fig. 2), which seemed to extend at their circumference so as to produce the characteristic appearance of concentric rings. The tissues of the bowel subjacent to these epithelial formations were thickened and indurated (like the cutis beneath a wart), but there was no evidence of any enlargement of the solitary glands, or of cellular deposit beneath the mucous membrane. At some places where the vascular injection of the mucous membrane was greatest and where the surface was coated with the croupal false membrane already referred to, the epithelial excrescences were partially detached, but the mucous surface below was not ulcerated and indeed, in not one of the five pigs, was any appearance justifying the appellation of an ulcer found in the intestines. It is further important to add that in two of the five pigs, in which the disease had proved fatal after at least a week's duration, all appearances of the epithelial excrescences above referred to was wanting. Mr. Gamgee and I searched for them in vain from one end of the bowel to the other. Peyer's patches, also, which in the pig are so well developed, were remarkably healthy; and this remark applied alike to the patches in the immediate neighbourhood of the ileo-colic valve, which I exhibit to the Society, as to those higher up. In one or two instances a patch was encroached on by one of the circular epithelial excrescences *but this was bounded as usual by its well defined outline, and the adjoining glandules of the Peyer's patches were in no way altered.*

The mesenteric glands were not enlarged and contained no abnormal deposit. The spleen was of about the natural size, but its tissue was unusually dark. In all of the five cases patches of collapsed tissue were found in the lungs; in one of the cases there were one or two small masses of pulmonary apoplexy; but the lungs generally were only slightly congested. In one of the five cases there was recent pericarditis.

There can be no question that the disease of which these animals died was what has been described, by some writers at all events, as typhoid or intestinal fever in the pig. The members of the Pathological Society, however have now an opportunity of seeing that the intestinal lesions bear no real resemblance to those of human enteric

DESCRIPTION OF PLATE X.

This plate illustrates Dr. Murchison's description of Intestines of Pigs which had died of an infectious fever (p. 295).

Figure 1 is a portion of ileum, from near lower end, with circular epithelial excrescences like crusts of rupia, each excrescence presenting an appearance of concentric rings.

Figure 2. Portion of ileum, with flat aphthous looking patches on mucous surface, apparently an early stage of the larger excrescences.

Fig. 2.

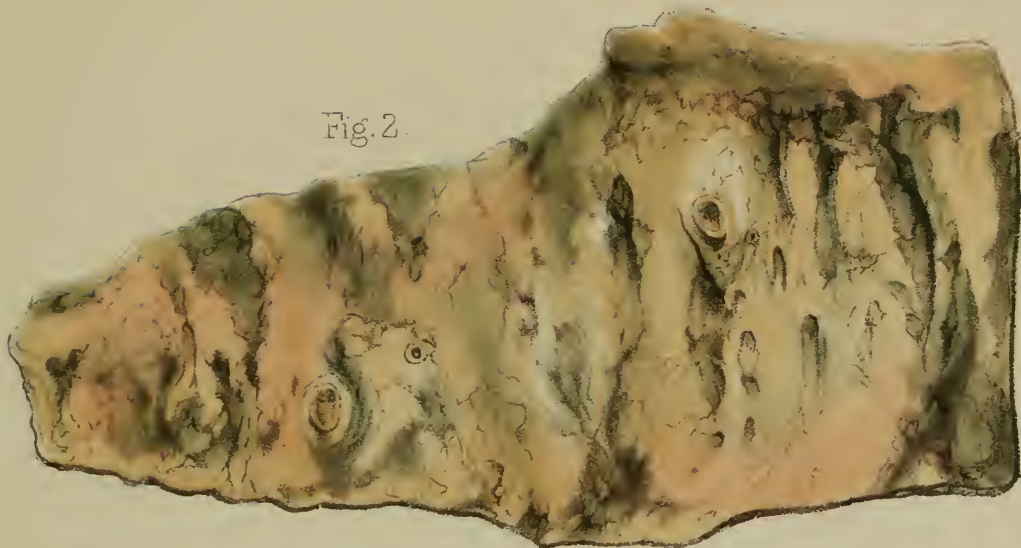
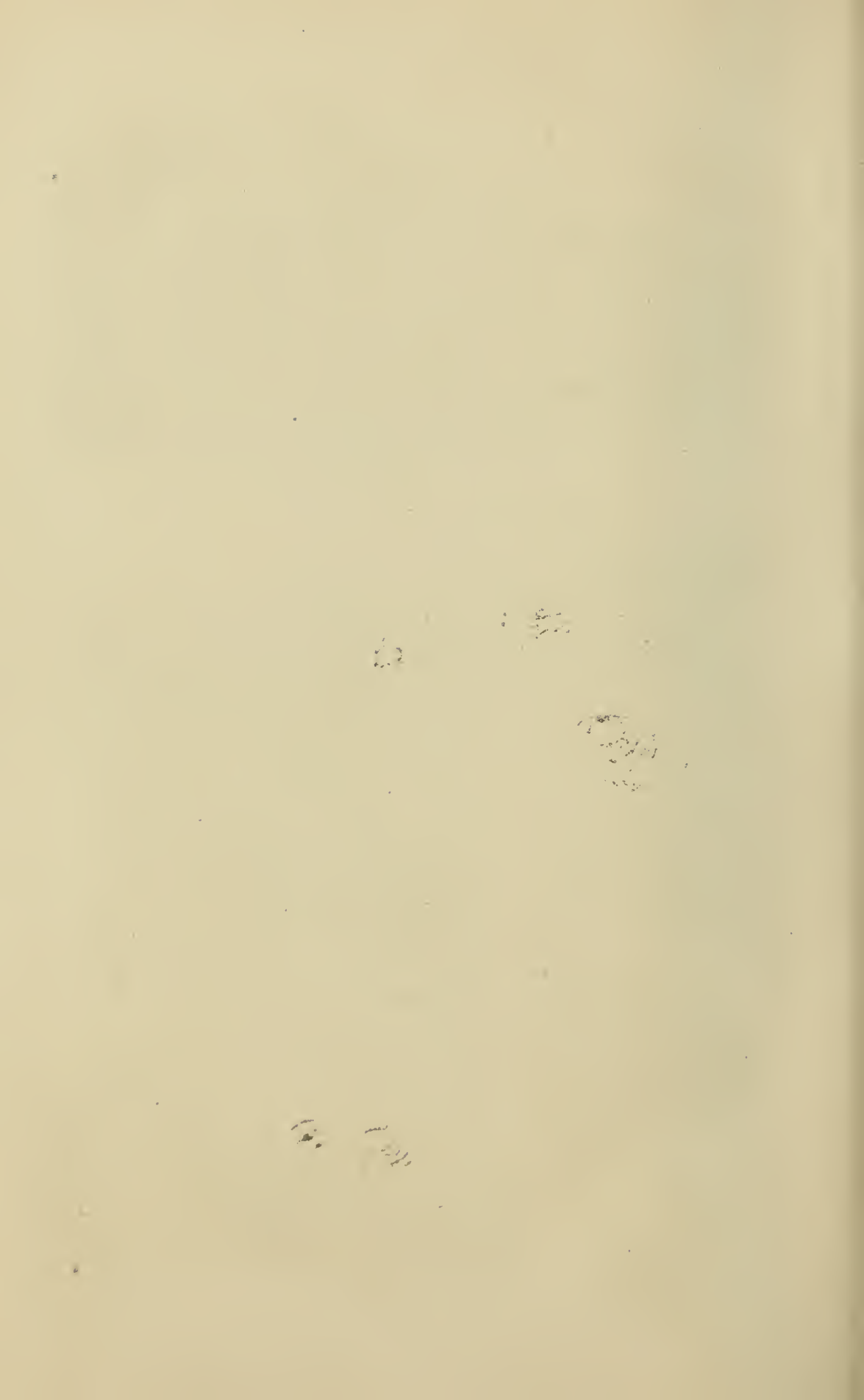


Fig 1





fever. There is no deposit in the interior of the solitary or agminated glands of the ileum or in the mesenteric glands, but the remarkable excrescences seen on the mucous membrane appear to be entirely superficial or epithelial. These specimens have been submitted to careful examination by several medical friends experienced in the pathological anatomy of the human body, and all have expressed the opinion that the lesions are essentially distinct from those of human enteric fever. My friend Dr. A. P. Stewart remarked, that even if "the very extraordinary testudo-like patches, so like rupia-prominences" were to be regarded as vegetative outgrowths from the solitary glands, "how the Peyer's patches should so completely escape, when the solitaries were so much affected, would be, on the typhoid hypothesis, quite an enigma." Conceiving it possible that the epithelial excrescences above described, might (like the chronic enlargement of the solitary glands in cattle, which led to the erroneous conclusion that the cattle-plague was the strict analogue of human enteric fever*) be an antecedent condition independent of the acute disease of which the animal died, I examined the intestines of seven healthy pigs, but failed to discover any similar appearance. Professor Allen Thompson of Glasgow, who, in his investigations into the minute structure of the intestinal glands, had frequent opportunities of examining the intestines of healthy pigs, also informs me that he never met with the appearance in question. It is probable, therefore, that these excrescences constitute one of the lesions of this contagious fever to which pigs are liable, and that, in fact, it is merely a modification of that tendency to epithelial exfoliation observed throughout the entire course of the stomach and intestinal canal in the disease. This opinion is confirmed by the circumstances of the excrescences being entirely absent in two of the five pigs which had died of the disease.

Dr. MURCHISON, 7th of May, 1867.

5. *Obstructions in the alimentary tube of several animals from accumulations of hay and straw.*

1. A hard, round mass of hay and straw from the stomach of an ourang, *S. satyrus*, in confinement. The accumulation, when dried, was about the size of the fist.

* See 'Pathological Transactions,' vol. xvii., p. 441.

2. Straw from the stomach of a lioness. The animal wasted and no important lesion was found after death.

3 and 4. The same from the stomach of a Civet cat, *Viverra civetta*. Another from an ichneumon, *Herpestes griseus*.

5. The colon of a Persian lynx, entirely obstructed by a hard mass of hay and straw.

6. A compact, hard, round mass of hay and straw, measuring when dried about six inches in diameter, from the third stomach of the young hippopotamus that was burnt at the Crystal Palace.

The above specimens were exhibited to show the connection between these cases and several that have occurred in the human subject, from the swallowing of hair, tow, &c.

The symptoms, when the extraneous body is in the stomach, are nearly the same—viz., general wasting and debility. When the extraneous body is in the intestine, as in the case of the lynx, the ordinary symptoms of intestinal obstruction are present. The mass in the third stomach of the hippopotamus, I believe to be an abnormal formation, in consequence of the dryness of the food. In a state of nature this animal feeds upon grasses, especially upon the rush. I believe, from the peculiar formation of the stomach, that all the food passes from the third to the fourth stomach in a globular form, and that, in this instance, it would have gradually accumulated so as to have occasioned the death of the animal.

Dr. CRISP, 21st of May, 1867.

6. *A large encephaloid tumour from the chest of a lamb.*

The animal was eight months of age. The tumour was first observed about two months before it was killed, and was of rapid formation. The growth consisted chiefly of two rounded masses, one within the cavity of the chest and the larger on the external walls; besides these, were several round, hard tumours, about the size of nuts, having their origin apparently from the periosteal covering of the ribs. The whole of the abnormal growth would weigh about six pounds. Externally the large tumours were vascular, and on cutting into them they were seen to be composed of a whitish, brain-like substance combined with a large amount of fibrous tissue.

The tumours had been for some time in Goadby's solution before I made a microscopical examination of them; but, as they have been

inspected by the cancer-committee, it will be better to await their report.

I may remark, that malignant disease is not of very uncommon occurrence in the lower animals. I have several specimens in my museum, some of which I have exhibited at this Society.

Dr. CRISP, 21st of May, 1867.

Report on Dr. Crisp's specimen of encephaloid tumour from a lamb.

—The tumour, forming a large lobulated mass, is attached to the thoracic parietes, a small portion being also in connection with the vertebral column. The growth is for the most part very firmly attached to the structures from which it springs, but some of the smaller masses may be enucleated from a cellular bed by a very slight amount of force.

On section the outer portion, for about a quarter to half an inch appears of a dark grey colour; is firm, tough, and elastic; and seems to consist of fibres arranged somewhat parallel to the surface of the tumour.

At the junction of this outer portion with the general mass of the growth are seen irregular spaces, formed apparently by a looser and less parallel arrangement of the fibrous elements, these spaces being occupied by cell structures.

The internal portion, constituting by far the greater part of the tumour, consists of a yellowish-white substance, tinged here and there with pink, and is of variable consistence, according to the extent to which it has been affected by the preservative fluid (Goadby's solution) in which it has been immersed; one portion especially, which has evidently escaped the action of the fluid, and which has undergone some decomposition, presents a pinkish-grey colour and resembles very closely œdematous cellular tissue.

Microscopic examination.—The outer dense wall of the tumour is composed of bundles of connective and elastic tissue, running more or less parallel to one another, the bundles being separated to a variable extent by masses of cells and nuclei (Plate IX., Figs. 4 and 5). The cells are small in size, varying from $\frac{1}{1500}$ th to $\frac{1}{4000}$ th inch in diameter. They are of two principal shapes—round or roundish-oval, and elongated or fusiform fibre-cells; the former are by far the most numerous. Under a quarter inch objective (magnifying two hundred diameters) they have more the appearance of nuclei than cells, their outline being very sharply defined, whilst, under

a higher power, they are seen to be really cells possessing one or two nuclei; occasionally however, when viewed *in situ*, an indistinct appearance of a cell-wall is seen surrounding them. The elongated fibre-cells possess oval nuclei, and are drawn out at either extremity into short tails. (Plate IX., Fig. 5.)

The internal portion of the tumour contained a smaller proportion of fibrous tissue than the outer, and the bundles are arranged rather in a reticulate manner than parallel, as in the outer part. The spaces are filled with cells and nuclei, the former being almost entirely of an ovoid or rounded form, and presenting similar characters to those described above. The microscopical characters of the inner portion of the tumour are delineated in Figs. 6 and 7 of Plate IX.

Dr. MORRIS TONGE,

Mr. ALEXANDER BRUCE, 31st May, 1867.

7. *The lower part of the leg of a horse showing rupture of the flexor tendon six years after "nerving."*

The specimen was taken from a horse that had about an inch of the nerve on each side above the fetlock-joint removed for lameness in the foot. The animal, a very valuable one, was at once cured by the operation and did constant work on the London stones and Macadamized roads for six years in a Brougham. When going at the rate of about eight miles an hour the horse was suddenly brought to a "stand still," and to use the coachman's expression, "the fore hoof was turned up and stared him in the face." The horse was killed after a few hours, and the subjoined is the result of the examination.

The vein and artery were injected, and on tracing the nerves below the knee they were found to terminate in bulbous extremities about the size of horse-beans; the lower portion of both nerves was smaller than natural, and there was a separation of about an inch between the upper and lower ends. The perforating tendon was found ruptured within an inch of its insertion into the coffin bone.

To the naked eye the tendon at the seat of rupture is seen to be in a state of degeneration. The microscope reveals separation of the fibrous tissue and softening at the ruptured parts, whilst the tendon above is solid and intact. The connection between the sensible and insensible laminæ of the foot was perfect.

I have known many examples of nerving (so called) in the horse, but this is the only instance I have met with where an animal for so long a period after the operation worked on a hard road. One effect of the operation is not unfrequently the loss of the hoof. In the case related the tendon had probably been in a softened condition for some time, and the loss of its nervous supply most likely occasioned the lesion. This specimen was also illustrated by a wax-cast taken soon after the rupture occurred.

Dr. CRISP, 21st of *May*, 1867.

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