University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1827. The individual dissertations were bound together during the 1840's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were: Richard J. Rehm, Historical Libraries Preservation Officer; Marla Milagros Pielago, Metadata Management Librarian; Angela Cochrane and Carol Harling Henry, Resources Division; Sarah Hovde, Alex Holzman and Megan Wolff, Services Division.

These dissertations were digitized in 2011-2012 and are available at the UM Digital Archive (archivehub.umaryland.edu) and the Internet Archive (www.archive.org).

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UNIVERSITY OF MARYLAND

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HSHSL 2011 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

*Text lost in inner margin during binding process

Owens, Thomas	Parabysma Splenicum
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UNIVERSITY OF MARYLAND

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An Inaugural Essay

on

Apoplexy

Submitted to the Judgment

of

The Provost Trustees and Medical Faculty

of

The University of Maryland

For the Degree of Doctor of Medicine

By

John C. Wright

of

Virginia

March 5th 1851

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Apoplexy

This is a disease of which Coma Constitutes the leading feature. It may be the Consequence of external injuries or it may occur without any assignable Cause. In the former Case it is an object of attention to the Surgeon, and is Remediable by a Surgical operation, In the latter Case it falls under the Cognizance of the Physician, and is by him denominated Symptoms of Coma or Apoplexy. The Causes which give rise to it are a life of Luxury, Idleness, a plethoric temperament, high living &c. It has also been asserted that those who have a short neck were ~~more~~ exposed to it; but this disposition does not appear so, but because of the Volume of the Soft parts of the Neck. This disease seems also to be Hereditary. Sometimes it makes its attack after violent passions; such as anger; or after a Copious meal; by long application of the Mental Faculties; by suppression of habitual evacuations. The frequent use of Narcotics will also produce it in some persons. It was supposed by some to be nervous; but I say that the nervous System is no more concerned than as the Medium of Sensation. The nerves are the parts acted upon, and not the parts acting. Apoplexy is the Result of increased action of the ~~blood~~ Vessels of the brain, Causing Congestion and pressing upon the origins of the nerves. The Symptoms are Various, because produced by so many Causes. The most Common are Vertigo, Violent Head-ache, and if the Patient is bled in this State he often Recovers; because there is a disposition to Rupture of Vessels in this State and bloodletting Removes it.

It is sometimes preceded by pain in the stomach, and sometimes a vomiting, great degree of restlessness, with a slow pulse. It is also sometimes preceded by affections of the Bronchia; also a sunden diminution of Muscular strength: Tingling of the Ears bleeding at the Nose, or sensation of weight and uneasiness about the forehead, sometimes of Occiput, heaviness and Redness of Eyes also blindness, all owing to the impetus of the blood to the brain. Here bloodletting is strongly indicated. Sometimes the patient is more disposed to sleep than in health which is unfavorable. Often indistinct articulation, loss of memory precede an attack. Various Paralytic affections may also precede and then you are warned to bleed your patient. It has been thought, and declared by some authors that this is incurable; and therefore many Patients have lost their lives. But it is no longer a question that a great many patients may be Cured by going to work Radically viz by Bloodletting Purging and abstemious Regimen. Prognosis. Apoplexy is to be distinguished from Inebriety, generally by the breath, and from there being a slow, weak pulse in the latter. Apoplexy is distinguished from Epilepsy by the Complete absence of spasms in the limbs, by the stertorous breathing, and the long duration of the fit in the former. It is distinguished from syncope and Asphyxia by the fullness of the pulse, which, in syncope and Asphyxia is wholy or nearly imperceptible. "I will here mention a few Circumstances to prove that the power of Sensation is not entirely abolished in Apoplexy. The pupil will Contract from light being applied — —

The patient will often refuse to take nauseous articles and take agreeable ones. There are many other proofs that could be mentioned if necessary. Convulsions are often not with in apoplexy tho not always. They generally take place at the commencement or just before death. When they occur in the commencement and the Patient is bled he generally gets well We need not despair so long as the pupils continue to contract. When you see your Patient putting his hands to his head you may consider it an unfavorable symptom as it denotes a deep seated pain. In the first stage of Apoplexy there are but few marks of inflamation, but in the second there is a very great change and the pulse is very quick whereas in the first it is seldom above forty or fifty. In violent cases there is a bleeding from the Ears and mouth, Then may be a sweating also but this does no good. When the pulse becomes quick and small we may be sure that death draweth nigh. Apoplexy has an influence on the secretory organs as upon the Kidneys for very often there is no urine secreted for several days; sometimes during the attack a Diarrhea comes on; also a profuse sweat which is said by some to be of great benefit, but I am of the contrary opinion. In some few cases the cases Patient lies in a state of quiescence and then recovers. Persons in a state of Apoplexy are often

in a full possession of all these thoughts but cannot find words to express them. After an attack of Apoplexy the Patient often loses some of one of his senses as the sense of swallowing &c. On Dissection we find the Dura Mater thickened and adhering to the Cranium. When the disease has existed for some time the Tunica Arachnoide instead of being transparent is opaque. The Pia Mater often evinces vascularity. The whole surface of the Brain appears of a light red colour. With Crimson spots in various parts. There is often a serous fluid mixed with the blood between the membranes. The brain is firmer than in other cases. There is blood on the surface and substance of the Brain. We cannot always discover extravasation of blood but may generally find marks of inflammation. Blood is generally to be found in the Hemisphere opposite the one Paralised. In Apoplexy the Liver is frequently affected especially in those who indulge much in spirituous Liquors. It has been supposed by some that a particular artery was Ruptured causing the extravasation. This is not the case. It is the consequence of a more general rupture. The predisposition of this disease may be transmited from one generation to another. Intemperance in eating or drinking predispose to it. Persons advanced in life are most liable to apoplexy, although young persons may also have it. Suddenly stopping long continued

evacuations frequently induce Apoplexy. Extreme Cold also as well as heat also predispose to apoplexy and then the Patient should not be brought suddenly to the fire or warm Room as it produces too much excitement. Large doses of Narcotics induce Apoplexy by their powerful action on the Brain. In fact whatever tends to fill and overdistend the Vessels predispose to the disease under review. Apoplexy frequently succeeds Gout and this Dr Cullen Calls immobility of the Nervous System. But in my opinion it is nothing but a Metastasis of Gout to the Head. Pregnant Women are often the subjects of apoplexy and if they are seized in labour it does not stop the parturient process and some fall in a state of apoplexy in which the symptoms are distinct. Hence the argument for bleeding in such Cases. I will now mention the Hypothesis of Various authors with respect to this disease. Weiffa undertook to explain the nature of the disease and determined that it originated in the substance of the Brain. Galen supposed that a fluid was only to be found in the Ventricles and supposed the effusion to Cause pressure upon the nerves. Hoffman assumes as a Cause the fullness of the Vessels and any thing that increases the fullness may bring on Apoplexy and strange as it may appear He Calls it a nervous disease. Boerhave Considered it as the effect of such Causes as impeded the flow

of nervous fluid in the Brain. Cullen says that whatever prevent the motions of the nerves from the Center of the Brain produce Apoplexy thus you see they all first locate the disease in a nervous fluid, without considering arterial action. Some writers have denied the distinction between sanguineous and serous apoplexy. Dr Cullen still retains the opinion that there is a distinction but he does not say how the disease is produced. Dr Cheyne says he never saw serous Apoplexy and the reason of this is that he considered it as nothing but Hydrocephalus. Some have considered it as only a variety of sanguineous apoplexy. They say that the two diseases are produced by Different Causes. Thus a sanguineous temperament induces a sanguineous Apoplexy — and a melancholic temperament will induce only serous apoplexy — but this like most general rules has exceptions for it is evident that a sanguinary temperament some times induces serous Apoplexy and vice versa. Some say that when a man dies with a pale face he has died of serous, but in those who die suddenly the face is always pale. Patient sometimes die suddenly where there is no serum secreted in the Brain, because serous apoplexy never kills suddenly. A number of writers have described a series of Symptoms for serous apoplexy

but they have been often mistaken, for when they have declared serous apoplexy to exist dissection has shewn that it was sanguineous. No man can tell the state of the brain from the symptoms unless he knows the history of the case, and when the patient has been attacked for some time then we may presume that it is serous apoplexy. Phrenitis, Hydrocephalus Lethargus Palsy &c are nothing more than modifications of apoplexy. The chronic state often continues for many months before the more acute comes on and then any exciting cause will bring it on and death in all probability will ensue. Treatment. If the disease arises from a hereditary predisposition as a prophylactic I would recommend hard labour. If I were called to a patient with a paralysis of any of the muscles and a small pulse I should consider him in an incipient state of apoplexy and in such cases we should prescribe an abstemious regimen together with labour. — It is dangerous when a person indulges in wine to break of suddenly — as it produces debility and then when reaction commences he will be apt to have apoplexy. In such cases he should take exercise on foot. He should not eat a great quantity at one meal, but should eat often and a small quantity at a time. He should drink water and sleep on a board or hard matrass and not be covered too warmly. Patients liable to apoplexy should wear flannel and keep the feet dry

and warm. There are some who cannot use exercise or horseback, as sailors for example. It has the same effect on them that riding in a ship would upon one of us, and sometimes nothing will kill a sailor predisposed to the disease sooner than ~~him~~ putting him on the back of a horse, and in such cases there is no cure but another sea voyage. Apoplectic persons should keep their bowels soluble as constipation increases ~~the~~ paroxysms. In addition to these means we are obliged to bleed, and ~~the~~ best plan besides these is to put a seton in the back of the neck. So soon as the symptoms of the disease come on the patient should be placed in a cool place, be bled and injections thrown up of such a nature as will operate quickly and the patient will then be prepared for any subsequent treatment ~~and~~ It is a good maxim to do every thing we do well and cannot apply better than in the disease under review. We ought to bleed as long as there is a symptom of the disease. Blistering and purgatives are only auxiliary remedies in the disease. It is said by some that bloodletting brings on palsey or dropsy, but ~~this~~ is founded on a false principle. I know ~~that~~ they do sometimes follow Apoplexy but it is only when the disease is chronic and has not been properly managed by bloodletting. We must bleed until we cure or relieve the patient of all symptoms without regard to weight or measure.

If that be as long as a drop will come. Unless we do bleed sufficiently the patient will become paralic. I do not think it makes any difference from what part we take blood provided we get it in quantity sufficiently large. Sometimes the action of the heart is so prostrated that you cannot get the blood to flow from the veins and then you may open an artery. One large bloodletting in the beginning is of more consequence than twice the same quantity by many small bleedings. If Paralysis comes on after Apoplexy you are compelled to bleed, before your patient will recover. The best cathartic you can use is Calomel and if you make the mouth sore you accomplish your object. Emetics in this disease are decidedly injurious. Some contend that when it comes on with a full stomach they are necessary but if you bleed sufficiently your patient will be sure to vomit let what may be in the stomach. Blisters are of no importance unless when we wish to stimulate.

An Inaugural Dissertation on Apoplexy

submitted to the examination of the Provost, Trustees and the Medical Faculty of the University of Maryland For the Degree of Doctor of Medicine

by James Armitage of the City of Baltimore

He that wishes to be counted among the benefactors of posterity, must add, by his own toil, to the acquisitions of his ancestors. — Rambler.

Anno Domini. 1831

To Corbin Amos M. D.
of Baltimore Md.

Dear Sir

With great pleasure do I avail myself of this opportunity of acknowledging how much I am indebted to you for the polite attention and valuble instruction I have received while perusing my studies under your direction. In return for which I beg you to accept of my warmest wishes for your future welfare and be assured that I always shall remain,

With sentiments of the highest esteem

Your Obliged freind and pupil

The Author

When we take into view the different diseases which affect the human system, and which have made their appearance in different ages and countries, none appears to be of greater antiquity and of more importance than Apoplexy. We find it treated of by Hippocrates and most practical writers since his time. Notwithstanding it has been elaborately treated of by many of them, its cause and what is of still greater importance its cure was badly understood and explained by many of them.

In a medical treatise, as it is usual, it is proper, first to give the reader a general introduction to the disease, then the state of the various functions during the attack, lastly the treatment and prophylaxis. It attacks both sexes, sometimes persons in youth and middle life, but more particularly those who are advanced in years. Some of the appearances observed before the supervention of this disease, which

are vulgarly thought to promise long life, are in reality the effects of disease; as the fulness of body, the ruddiness of the complexion, accompanied with a great susceptibility to bronchial affections, sometimes with langour, inactivity and muscular debility, which to the discovering observer indicates a morbid condition of the blood vessels. Apoplexy has been considered an hereditary disease by many medical writers and with great propriety we think, as several instances have came under our observation to confirm it. It is also acquired as is observed in persons who have lived an indolent life and are fond of the luxuries of the table, often it occurs in Gouty diatheses, generally it is preceded by a train of symptoms which are called precursors, they are, headach, vertigo, musca volitantes, tinnitus aurium, nausea, pain in the stomach, anxiety, palpitation of the heart, restlessness, often a feeling of weight, tightness or tensive pain across the forehead, with a painful throbbing of the temporal

and occipital arteries, flushing of the countenance, heaviness of the eyes, temporary fits of blindness and unusual flashes of light are complained of. Some have sensations of loud and discordant sounds, like the boiling of an immense cauldron, the roarings of the sea or the clamors of an unruly crowd, their nights are often restless from anxiety, incubus &c. Another on the contrary is often drowsy, sleeps longer than usual, doses during the day, his articulation is indistinct, sometimes falls asleep at the table, he has no mental energy, is forgetful, irresolute, timid and confused. Various slight paralytic affections occur, spasm of particular muscles, sterlor in persons unaccustomed, the complexion and pulse indicates an embarrasment of the circulation, which is increased by stimulants, Epistaxis often supervenes and if profuse relieves for the time, there is often observed great disorder of the Chylopoetic viscera, particularly when it arises in an intemperate person. But it is not to be denied that

Apoplexy sometimes seizes those whose health, to every appearance was unbroken, and who had felt themselves unusually vigorous some-time before the attack. Most of the foregoing symptoms generally precede an attack of apoplexy; though sometimes the patient is instantaneously stricken dead without a single primonition. Hence the disease acquired its name. The scene was considered portentous, and not to be explained by any of those marks or signs of decay, which are part of our constitution, in so much that the sufferers were called Attonite or thunder struck.

Great changes may be observed in the state of the different functions in the course of every attack of Apoplexy. It has every appearance to a common observer, of a profound sleep or rather like the sleep following intoxication, there is stertorous breathing, he cannot be roused by the loudest calls, by pinching or pricking him. The Vital functions are impaired, sensibility and voluntary motion are greatly diminished, articulation difficult or

suspended. the eyes are suffused and watery. the pupil obeys the stimulus of light. he starts when pricked with the lancet and the bowels in general are torpid. But as the disease advances the organs of sense entirely loose their faculty of recieving impressions. respiration becomes slow, laborious and irregular, the face livid, the pulse slow. full and heavy, the secretion of urine is suspended in others there is profuse perspiration. the eye has a deadly appearance, the function of deglutition completely lost and if he is not relieved promptly, the jaw falls. the countenance assumes a cadaverous aspect. the pulse is quick and small. the extremeties gradually become cold, the sphincters palsied permitting urine and faces to pass involuntary, convulsions supervene and the paroxysm terminates generally in death, sometimes palsy but rarely in health.

Pathology. There has been great diversity of opinion respecting the pathology of this disease. Hoffman thought

the arteries only were affected, they being distended prefsed on the sensorium and prevented the secretion of the nervous fluid. Boorhaave considers this disease as the effect of something that obstructs the distribution of the nervous fluid or halitus. Morgangni was of the impression that it resulted from an aneurism existing in some part of the body, from the circumstance of his having found one on dissecting a subject who had died of Apoplexy. Baille ascribes apoplexy to a deposition of bony or calcareous matter in the brain or any part of the body but more particularly when in the brain. Dr. Cullen says the proximate cause of this disease is whatever prevents or interrupts the mobility of the nervous power. Strictly speaking this disease arises from an impairment of the veins of the brain, which admit of morbid distention or congestion thereof, resulting in an increased action of the heart

and arteries, which terminates in an effusion of blood or pressure on the origins of the nerves, as is clearly proven by the symptoms and the appearances on dissection. Much has been said about what has been called Serous Apoplexy for our part we cannot admit of such a disease in this place, because we consider it to be a distinct disease, depending upon an increased action of the arteries, which assume the part of glands, and pour out a quantity of serous fluid in the ventricles of the brain or between the membranes thereof. It is nothing more or less than a Chronic Inflammation which in children is called Hydrocephalus Internus, in adults, Apoplexia Hydrocephalica, from the circumstance of its terminating suddenly in death on the application of a strong exciting cause. It is the impression of a Learned writer, that, the application of strong stimuli to a brain phenomena similar to those of concussion are produced and death

results from the same effect.

Diagnosis. There are several diseases taken notice of by Authors. under the names of Carus. Cataphora. Coma and Lethargus all of which are symptomatic or differs from Apoplexy only in degree. Apoplexy differs from Palsy by a suspension of all the powers of sense and voluntary motion, from Epilepsey by the complete absence of general convulsion and foaming at the mouth, by the stertorous breathing and long duration of the paroxysm; from syncope or asphyxia. by the fulness of the pulse, which is wholly or nearly imperceptible in them. It is distinguished from natural sleep, by its coming on suddenly without previous fatigue and the difficulty of rousing the patient from his Apoplectic sopor. Intoxication often presents phenomena analagous to those of this disease, and even the experienced physician may be deceived, Respiration

is generally rather more accelerated, the pulse more frequent at the same time the breath is generally saturated with the effluvia of the intoxicating potation. Apoplexy cannot be mistaken for concussion, because the pulse is an infallible criterion.

Predisposing Causes. The causes which predispose the system to be affected with Apoplexy, are all such as give rise to an accumulation of blood in the vessels of the brain and tending to produce plethora, as intemperance in eating and drinking, Indolence and a full diet, the suppression of any habitual discharge as Haemorrhoids, Catamenia &c. A peculiar conformation of body it has been observed by all writers, dispose to this disease, as a large head and short neck, Corpulency also it seems to act by pressing on all the vessels of the body, except those of the head and preventing the free circulation of blood through the lungs.

Great indulgence in sleep and sedentary occupations

have been ranked among the causes laying a predisposition and with great propriety. It is well known that long continued and intense study and despondence consequent to great misfortunes, have a tendency to produce Apoplexy. There are certain diseases which dispose to it as Gout, Epilepsy & Hysteria. Pregnancy according to authors lays a predisposition. Old Age seems to predispose in consequence a determination to the head, which takes place very often. yet the cause of it is not evident, and has not been clearly explained by writers. This disease mostly occurs in advanced life, yet when the remote cause acts powerfully it is developed in Youth.

Exciting Causes. Are all such as when applied either generally or partially to the body, are capable of exciting a paroxysm. Their operation is either to increase the velocity of the circulation through the cerebral vessels or prevent the free return to the right auricle of

the heart, thereby augmenting the quantity of blood in the vessels of the brain. and distending them beyond their power of reaction, cause them to give way to the propelling force of the heart. among these are first. Violent passions of the mind as anger and joy, great muscular exertion, general application of heat, long exposure to cold then sudden exposure to a high temperature by exciting violent reaction, partial application of heat as the rays of the sun to the head, as occurs frequently in Tropical climates. There is no cause more apt to excite it than eating a hearty supper, the warm bath and check of perspiration often excite it. The sudden stoppage of any habitual discharge, drinking freely of wine or Ardent spirits at night. Breathing in a crowded assembly, occasionally excites it. The sudden retrocession of any of the exanthemata, as small pox, measles &c. Retrocedent Gout sometimes falls on the

brain and produces it. Excessive use of Tobacco. Malt liquors and all the narcotics. The fumes of lead and exposure to carbonic acid gas, violent vomiting, severe paroxysms of coughing, violent shocks of Electricity. Secondly, Tumours of the neck by pressing on the Jugular veins impeding the return of blood from the head and giving rise to congestion, the sudden twisting of the neck. Tight cravats or other ligatures around the neck. Sleeping with the head low or stooping too long. Spicula of bone, tumours or fluids pressing on the brain. Hypertrophy of the heart. enlargement of the abdominal viscera by pressing on the aorta and impeding the free transmission of blood through it, by which a greater quantity is determined to the head. Asthma often acts as an exciting cause in predisposed persons. Lastly any violent impression either to the body or mind may give rise to this disease in those who are predisposed to it.

Appearances on Dissection. On dividing the integuments and removing a portion of the cranium, an unusual quantity of blood is discharged from the superficial veins and sinuses. the Dura Mater is thickened and adhesions are sometimes formed. The Tunica Arachnoidea is thickened and opaque, the Pia Mater evinces a great degree of vascularity; the veins are engorged with dark blood and the arteries seem to be greatly distended, the membranes generally exhibit marks of high arterial action, there is often observed between them an effusion of a Serogelatinous fluid often blood. The Ventricles are enlarged and contain considerable quantities of blood. it is also found effused in the substance of the brain in some instances. Extravasations of blood are not invariably found, but we never fail to find the remains of greatly increased action and great congestion in the arterial and venous systems of the brain. A detail of the above appearances which are usually

found in the brain after apoplexy, confirm we think the preceding remarks made on the pathology of this disease very strongly and clearly indicates the method of treatment we should follow.

Prognosis. In a disease so awful in its appearance and dreadful in its consequences as this, a physician should be very cautious in giving an opinion with respect to its favourable termination. As the brain is the seat of this disease our prognosis must be drawn from the quantity of sensorial power which remains. thus we should not despair until the retina ceases to obey the influence of light or the pupil becomes permanently dilated, if the coma and other symptoms begin gradually to decline after the energetic employment of remedies to be hereafter mentioned we may augur favourably, but if the symptoms continue violent for several days and the pulse becomes quick and tense, deglutition completely lost, and convulsions supervene the greatest danger is to be apprehe=

-ended. When the sphincters of the bladder and rectum become paralysed, and the urine and faces are suffered to pass involuntarily accompanied with a weak and thready pulse, cold and clammy sweat, cadaverous countenance, eyes sunk and dim, death is near at hand to carry off the sufferer in triumph.

Treatment. The cure of this disease is of the greatest importance and should be attended to with great diligence by every physician who values the life and health of his patient. As the disease runs its course so soon, that unless he is very prompt in the administration of the proper means without delay his patient, will soon be beyond the controul of art, and he will be compelled to stand and witness the agonies of death, without being able to administer any assistance. If a person has once laboured under this distressing malady however slight it may have been, he will scarcely ever enjoy his usual health of body and mind as before, and

he is forever after liable to a return. The treatment divides itself into two parts, First to relieve the paroxysm, Secondly to prevent its accession in subjects predisposed.

The remedies to be employed during the paroxysm, are,

1st. Venesection. the propriety of which the pathology clearly indicates, it should be drawn very freely and from any part where the greatest quantity can be obtained in the shortest time, the best plan is to open a vein in both arms and suffer the blood to flow through a large orifice until the system is sensibly affected. No precise rules can be laid down as to the quantity it will be proper to take. this must in a great measure depend on the circumstances of the case, of which the physician must be guided by his own judgment. If we should attempt such, the best would be "to leave as much blood within the system as will keep soul & body together"

by so doing we ward paralysis and in a great degree break up the predisposition. Many objections have been started against the free use of the Lancet, but we conceive them to be futile, because the very diseases which they adduce said to be produced by copious deplution (which are Palsy and Dropsy) are owing to a sufficiency not having been abstracted. If a sufficient quantity cannot be obtained from the arms we may open the Jugular veins or the Temporal artery and use Cups. Cupping and Scarifying the temples and nape of the neck, may be used as adjuvants, after general V.S. has been carried as far as the powers of the system will permit, without entirely removing the symptoms.

2ndly Purging has been considered of the greatest importance in this disease by all physicians who understand the pathology of it, it has been objected to, but experience (which is paramount to all theories and idle speculations) has conf=

irmed its great utility. A brisk purge should be given as soon as convenient, Chloride of Mercury is supposed to be best in all cases, but, more particularly in those connected with derangement of the abdominal viscera, to secure its prompt action it should be followed by large doses of the Neutral Salts, or it may be combined with some of the more drastic cathartics as Jalap, Scammony &c, If the function of deglutition is very much impaired and the patient is incapable of swallowing. the bowels should be unloaded by acrid & stimulating enemeta, which should be frequently repeated.

3rdly Emetics have been highly extolled by some of the practitioners of the present time, They are much used in France, for our part we do not consider them suitable remedies, and led to believe so from the circumstances that violent emesis often acts as an exciting cause, and the experience of many excellent physicians who have

employed them, is decidedly opposed to their use in consequence of no benefit having accrued and in a majority of cases the disease was aggravated. Many have attempted to restrict their use to those cases which arose from overdistention of the stomach, but we are opposed to their use in all, because we have a better remedy one which will relieve the distention of the stomach and at the same time cures the diseased action, it is Copious Venesection.

4thly External Applications, and first of Cold. It is very useful and may be applied in all stages, but more benefit is derived from it after V.S. has been carried to a great extent, and there still remains a slight tension of the pulse, indeed there are some cases in which the action cannot be subdued until it is applied, it may be applied in the form of Iced water or pounded Ice, Solution of Muriate of Ammonia or Vinegar and

water and suffer evaporation to go on freely. Next Blisters these are certainly injurious remedies in the first stage, in consequence of their stimulant action being imparted to the brain which is already in too high a state of excitement; they would rather accelerate than retard a fatal termination. In consequence of their having been indiscriminately used in all stages they have fallen into disrepute, yet we are not disposed to discard them altogether, reasoning from analogy we are led to believe they may prove beneficial in the latter stage, after the patient has been kept on a strict antiphlogistic plan of treatment for several days, and there remains general debility with uneasiness in the encephalon, a blister may be applied, the stimulant influence would be imparted to the weakened vessels, which would enable them to recover their natural tone. to this stage we would restrict them and think them injudicious in all others. Sinapisms and Cataplasms of

Garlic have been much spoken of by authors to rouse the patient from his apoplectic sopor, but, they are futile measures and seem to be of no use except, the patient has been depleted very much and great prostration ensues, when they may be used with advantage, but like the last mentioned remedies they are prejudicial in the first stage. The management of a patient during the paroxysm is of the greatest importance, he should be placed in a room well ventilated and of a moderate temperature, on a hard bed with his head elevated, all ligatures about the neck should be removed, he should be suffered to be surrounded by anxious visitors and at the same time keep him as tranquil as possible, then make use of the remedies as directed above.

Prophylaxis. We come now to our second division the treatment of Predisposition, a subject which has not been much attended to by authors, It is often in the predisposition alone, that the physician can confidentially interfere, and stand

as an obstacle between his patient and the fell destroyer; for when the disease has actually supervened it often withstands the most active remedies and best directed art. When a person has been attacked before or is threatened, he should avoid all causes that would tend to excite it, he should live temperately, no indulgences at the table or in bed should be allowed, his diet should be principally of vegatables, he should eat light suppers, avoid overdistention of the stomach, go to bed early and rise betimes, sleep on a hard bed with the head elevated, keep the bowels soluble, avoid the ass of crowded assemblies, all violent mental exertions, all deep and abstruse studies and passionate altercations, he should exercise freely and labour hard be careful to preserve a serene and placid temper and sacrifice pleasure, interest and duties to health. Flannel should be worn next the skin and the head bathed in cold water every day - all spiritous pota-

tions should be avoided. if he has been accustomed to them the quantity should be gradually diminished. Issues and Setons have proved very beneficial by keeping up an habitual discharge, thereby equalizing the condition of the general system. A change of climate has in some instances completely removed the predisposition. If after following the above rules any of the precursors should supervene it would be proper that he should ~~lose~~ blood take an active purge and confine himself to a spare vegetable diet. After the preventive means have been employed sometime. they produce a complete renovation of health and strength "the pampered and self-indulgent patient. who engages with reluctance in this active mode of living and is with difficulty inured to it; finds it at last, his happiest state. and is conscious of an alacrity of spirit. a clearness of intellect and vigour of health, which he would not exchange for all those enjoyments or that voluptous langour

in which he was wont to indulge".

Before I conclude, permit me Gentlemen, to express the gratitude I feel for the kind and polite attention shown to me, ~~and~~ and the advantages I have derived from your valuable lectures, and to breathe a wish that your laudable exertions may be crowned with success.

Dissertatio Inauguralis
De
Systematis Nervosi Officiis,
Quam, annuente summo numine,
Ex auctoritate Praefecti
Universitatis Lerae Mariae;
nec non
Amplissimi Facultatis Medicae consensu;
Pro Gradu Doctoris
Omnibusque in Medicina honoribus et privilegiis
rite et legitime consequendis,
Eruditorum examini subjecit,
ad diem 4 Martii, anno Domini,
MDCCCXXXI,

Carolus Franciscus Snowden

Viro Dignissimo,
Johanni Buckler, M.D.
Praeceptori optimo,
Cujus ope et ductu,
In arte medicinae progressus sum;
Mihi ob summam humanitatem et
Innumera beneficia
Semper colendo;
Nec non
Viro Clarissimo,
Nathanieli Potter, M.D.
Medicinae Praxeos Professori venerabili,
In alma Universitate Jenae Mariae,
Cujus praestantissimis consiliis,
Pathologiam morborum curamque
Investigando multum
adjutus sum
Hanc dissertationem
Dicatam voluit

Auctor.

De Systematis Nervosi Officiis.

Nervosum Systema constat ex medullari cerebri substantia, cerebello, medulla spinali et oblongata ac nervis denique, qui ad has partes, diversis corporis organis currunt.

Nomine cerebri, ea pars corporis significatur, quæ intra calvariam est. Quod vero cerebrum appellavimus, id in tres partes dividitur, quarum, quæ maxima ad superiorem partem sita est, cerebrum proprium est, quæ posterior ei subjacet, cerebellum, quæ media et inferior medulla oblongata.

Ad cerebrum venimus. Illud superiorem et anteriorem partem habet, et a processu falciformi duræ matris, in duo hemisphæria dividitur, in quibus, lobos anteriorem, posteriorem et medium distinguimus. Positum ad imam ac posteriorem partem capitis cerebellum, sub eo processu duræ matris, quod tentorium vocant. Capitis mediam et inferiorem partem medulla oblongata tenet. Medulla spinalis

est ea pars nervosi systematis, quæ per foramen magnum ossis occipitis exit, et per foramina vertebrarum ad tertiam lumborum descendit ac denique in plurimis fibris, cauda equina similibus terminatur. Pervia vertebrarum latera sunt, per quæ nervi à diversis corporis partibus intrant.

Sensus ex systemate nervoso oritur.

Sensus est idea simplex, quam quidem unusquisque intelligit, nemo vero verbis definire potest. Cum affirmamus systema nervosum sensuum esse organum, hoc dicere volumus, id esse partem eam compaginis nostræ, cujus ope res externæ a mente percipiuntur. Novimus, quinque esse organa, quibus, distincti sensus accipiuntur, lux nempe oculis, soni auribus, sapores linguas, odores naribus, et omnes alii quomodocunque dissimiles inter se superficie corporis percipiuntur. Nunquam nervi adeuntes cerebrum inveniuntur. Alii super fundum etiam oculorum, super internas nares aureasque expandantur. Extremi in lingua deprehenduntur nervi, qui tenui cuticula tecti, impressiones sapidorum corporum percipiunt.

Impressiones quamvis hebetissimæ, in nervos nudos factæ, acutissimum sensum dare solent; hujusmodi est dolor quem sentimus, quum cuticula sublata, aër frigidus in nervos cutis vera esse impingit eosque stimulat; nam puncti, lacerati, incisive nervi acerrime dolent.

Nervo in quacunque parte inter finem cerebrumque, vel deleto vel constricto, sensus ejus illico perit aut hebescit. Præterea, quæcunque sensum corporis imminuunt vel augent, imprimis per medium systematis nervosi agunt. Nervi multarum partium, veri sunt nuntii impressionis generalis, sed locum ejus non tam accurate monstrant, unde fit, ut sæpe cum Juvenale dicere possimus,

"Nequeo monstrare, et sentio tantum."

Et hinc adeo reperire difficile est sedem interni doloris; nec non eorum, qui procul a loco irritato, ob consensum nervorum partium, sentiuntur. Hinc quoque iste dolor quem membri quoddam post amputationem, sentit refertque ad partes excisas.

Quædam cerebri affectiones, compressio præsertim, sensum imminuunt abolentve, nervis etiamnunc liberis aut sanis; quod quidem sæpius

fracto vel depresso cranio, et in paralysi aut in apoplexia aut in hydrocephalo videre est.—

Motus etiam ex systemate nervoso oritur. Multæ quidem quæstiones de hac re sese offerunt. Mentem motum quorundam musculorum dirigere, certum est et inexplicabile. Vitales porro et naturales motus impressiones in organa horum factas consequuntur; sed nihil aut difficilius aut inutilius est quam causam proximam definire, vel vinculi naturam explicare, quo motus et impressiones inter se conjunguntur.

Philosophi in omni ætate hanc rem multum, at parum feliciter, ni fallor, explicare laboraverunt. Perpauci autem hodie sunt, qui motus animales censent, iisdem legibus obedire, quæ in chemicis mechanicisve obtinent— Motus in quavis parte semper impressionibus in ejus nervos factis excitari potest. Hæc ubique perspicere licet neque solum in musculis quorum voluntarii motus sunt, sed in corde quoque, in visceribus, aliisque partibus, animi imperio haud subjectis. Vis motusque musculi, nervo ejus compresso,

aut

ut a sedantibus affecto, imminuuntur. Contractiones quidem fiunt, stimulis infra illum locum, aut ad ipsos musculos applicatis, sed infiriores quam quæ, antea libero nervo, paragerentur. Functiones etiam cordis et stomachi, canalis alimentarii, aliorumque vitalium organorum, nervis cuique propriis sublatis, vel perturbantur vel cessant.

Convulsiones frequentissimæ et violentissimæ ex impressionibus in cerebrum factis oriuntur. Atque illæ quæ depresso cranio aut seco in ventriculos cerebri effuso subsequi solent. Qui epilepsia perierunt, in iis sanguis intra caput effusus, exostosis ab interiore ejus tabulas, abscessus, aut sæpissimé vasorum cerebri distensio inveniuntur —

Pari ratione, mobilitas omnium musculorum minuitur, ita ut voluntarii imperio voluntatis non pareant, involuntarii lentius moveantur. Musculi etiam, ut jam diximus, qui vitalibus functionibus inserviunt, lentius moventur.

Nonnulli sunt hodie, qui credunt phenomena systematis nervosi orii ex iis vibrantibus, quasi elasticis chordis solidis; atque alii, qui cerebrum esse organum secernens putant, cui nervi velut ductus excernentes serviunt.

ad primam sententiam venimus. Fusio nervorum tendit ex membranas eos tegente, quæ quidem non modo, non nervis opitulatur, sed etiam illis, ubi suo officio præcipue fungunur, omnino deponitur. Nervi per se non sunt elastica sed mollis materiæ; percussi musculum modo inferiorem commovent, partibus superioribus minimè affectis.

Præterea, in fascias nervi colligantur; sensus autem, ob multas inter se communicationes, confusos indistinctosque reddunt. Nec vero, hæc opinio, quare vires nervi præsumâ sen ligaturâ decrescant percautes, rationem reddere videtur.

Porro, in omni fere nervo, si ligatus fuerit et postea supra ligaturam irritatus, sensus sine motu excitatur; si vero infra ligaturam irritatus fuerit, tum sensus nullus, sed motus tantum in partibus musculosis excitatur. Hæc igitur opinio omnino rejicienda est. Ad secundam venimus sententiam. De fluido nervoso, plurimi, multum, at parum felicitè, ni fallor, loquuntur. Nervus ligatus, nec ultra, nec citra ligaturam tumet. Nervo resecto, nullus humor stillat. Multum igitur ab aquosis vel aereis fluidis, nervosum illud de quo disserunt, differre videtur.

nonnulli

Nonnulli in cerebro fluidum electricum vel magnet-
-icum secernere (a quo sensus motusque derivantur)
eui accumulationem per somnum ad reficiendas
vires et munera peragenda necessariam esse putant;
sed an tale fluidum, et ad eam finem secernatur,
juré dubitamus; nam somnus ac vigilia sæpe
fiunt manentque, ex causis, quæ, ut nobis videtur,
tale fluidum afficere nequeunt.

Compressio quoque cerebri statum somno similem
parit, ut in depresso cranio, in apoplexia, paralysi,
aut epilepsia, ex congestione vasorum cerebri, ex malé
formatis cranii ossibus, nec non etiam in Hydrocaph-
-alo videri potest.

Omnes equidem causæ, quæ somnum inducunt, tales
sunt, ut sensum motumque imminuant vel (quod
idem est) collapsum pariant.

Princeps et frequentissima causa excitationis,
est actio directa in systema nervosum, quæ, quidem
ab externorum rerum impulsu et etiam ab animo
ipso, fieri potest. Excitatio nimia debilitatem parit;
unde requies longior fit necessaria, quæ, vires ad
propria officia reparentur. Hinc

Quod caret alternâ requie durabile non est;
Hæc reparat vires, fessaque membra levat.

Hæc excitatio quoque ex impressionibus, non solum ubi facta fuerint, sed etiam alibi procul perceptis, fieri potest. Talia sunt exempla plurimorum sensuum et motuum, qui partium consensu seu sympathia exoriuntur.

Huic loci excitationem ex naturalibus appetitibus vel propensionibus ortam referre licet. Hujusmodi sunt, fames, sitis, tactus, singultus nec non sexuum appetitio, quorum omnia ex certis corporis statibus, vel quibusdam causis sensorium afficientibus, oriuntur.

Nec cerebrum alienis corporibus solum excitatur, sed potest etiam ab animo ipso (ut jam supra diximus) sine impressionibus in corpus factis excitari.

Nemo certe est, qui magnam vim consuetudinis ad regendos corporis motus statumque ejus mutandum, non persentiat agnoscatque. Exempli gratia, somni desiderium solita cubandi hora redit, præcipueque, cum per totum orbem silletur. Ita etiam corporis labor continuus, requiem tandem postulat, et requies post quoddam tempus elapsum, ad repetenda cætera vitæ munia hominem corpore et animo refectum demittit.

Hinc musculi motus voluntarii lassitudinem patiuntur,

debilitatem

debilitatem pariunt, et requiem postulant; naturales vero vitalesque sine lassitudine aut intermissu pergunt. Ex consuetudine oriuntur singulares illi gestus motusque corporis, quibus nonnulli homines utuntur. Ita quidam, in oratione dicenda, singulari quodam modo manus disponunt, et posituram totius corporis adhibent, quæ res, etsi nullo modo ad eloquentiam conferant, prorsus tamen consuetudine necessariæ factæ sunt, ut in oratione suas progrediantur –

Deinde nervosum systema imitatione excitatur. Hoc equidem melius exprimere nequeo, quam his verbis

"Ut videntibus arrident, ita flentibus adflent humani vultus."

Iam diximus, niniam excitationem debilitatem vel (quod idem est) virium vitalium collapsum parere. Hinc debilitatem vini magnos potus sequi invenimus; nam ubi bibendo indulgetur, tunc, ut omnibus notum est, cerebri functiones perturbantur: vis rationis et judicii acumen hebetantur atque retundunturi; Hinc gestus stulti sermonesque fere ridiculi fiunt; si ulterius bibatur, tum vero viribus sensum deficien-

-tibus

potator se ipsum sustentare nequit. Præcipuas autem ebrietatis indicias, nemo verius, nemo prefius elegantiusque Lucretio depinxit:

"..... Hominem cum vini vis penetraverit
Aeris et in venas discessit diditus ardor,
Consequitur gravitas membrorum, præpediuntur
Crura vacillanti, tardescit lingua, madet mens,
Sant oculi, clamor, singultus, jurgia gliscunt."

Vinum equidem, si moderate potetur, magnas præstat utilitates ad corporis vires confirmandas; (nam vitam quasi novam corpori ipsique animo dare potest) sed eodem nihil perniciosius, si modus absit. Quod quidem Plinius; "Nec viribus corporis aliud, si modus adest, utilius; nec aliud perniciosius vino, si modus absit." Horatius ipse quoque usum vini immoderatum non laudat.

Ne quis modici transiliat munera Liberi...

Sic denique canit poeta Anglicanus;

"Wine whets the wit, improves its native force,
And gives a pleasant flavour to discourse:
By making all our spirits debonair,
Throws off the lees, the sediment of care;
But highest Cordials all their virtue lose
By a too frequent and too bold an use."

Quidam

Quidam etiam animi affectus, inter causas collapsus frequentissimas enumerandi sunt. Istius generis præsertim sunt timor, et mœstitia et diversi utriusque gradus.

"Nor less the labours of the mind destroy
The solid fabric. . . . . .
But 'tis not thought (for still the soul's employ)
'Tis painful thinking that corrodes our clay.
The mind with various thought amus'd,
Nor aches itself, nor gives the body pain;
But anxious study, discontent and care,
Love without hope, and hate without revenge,
And fear and jealousy fatigue the soul—
Hence the lean gloom that melancholy wears;
The lover's paleness, and the sallow hue
Of envy, jealousy; and the meagre stare
Of sore revenge."

Nimia vasorum sanguine distensio, qualis fit in apoplexia, (secundum nostrum Clarissimum Professorem Doct. N. Potter, quo, nemo, omnium reverentia dignior, nec non ingeniosior in morbosum curando,) haud systema excitat, sed ejus actionem imminuit, atque omnia signa debilitatis prodit. Pari ratione,

viscera

viscera ex nimia distensione, nervis eorum compressis, fiunt paralytica. Absentia autem impressionum debilitatem collapsumque parit, quod nullibi tam evidentur quam in somno, (quum cuncta secretiones minuuntur) apparet.

Impressiones nullae in nervos factae vel leves somno favent. Ita ubi silentium ac tenebrae regnant ibi etiam somnus. Quidam soni leves semper somnum conciliant. Hujusmodi sunt zephyri folia agitantes, ac cantus avium in ramis arborum, apud fontis ripas undarum murmur, vox philomelae ab ulmo, aut lyrae cantus aut citharae. Cujus rei pulchram nobis imaginem Lyricus Poeta, carmine de felicitate vitae rusticae depinxit.

"Libet jacere modo sub antiqua illica,
Modo in tenaci gramine:
Labuntur altis interim ripis aquae;
Queruntur in sylvis aves;
Fontesque lymphis obstrepunt manantibus,
Somnos quod invitet leves."

Somni status exemplum est notabile vis nervosae diminutionis; nam motus cordis et arteriarum non cessat sed tardatur. Fatigatio laborque vim nervosi systematis imminuunt, soporque invadit. Exempli gratia,

gratia, durus agricola qui quotidie in terra colenda versatur, nautaque audaces per omnia maria qui currunt, post labores peractos, citò obdormiscunt. Nam oculi jamdudum graves paulatim connivent, denique occluduntur.

"Blanda quies furtim victis subrepsit ocellis."

Omnia, quæ cerebrum et nervosum systema stimulant excitantve, somno advenienti inimica sunt. Lux Coeli, cantus galli, et strepitus quivis homines suscitare somnosque rumpere solet. Oculi adhuc connivent, sed brevi, musculis extremarum partium iterum iterumque extensis, sopor omnino excutitur. Mens ad rem quamvis attenta, etiam hora cubandi nervosum systema stimulat et somni desiderium fugat.

Tentamini huic jam finem impositurus nihil nunc restat dicendum, nisi ut Professoribus universis illustrissimis, qui almam hanc Universitatem, scientia, virtute, moribus suis ornant, gratias agam amplissimè fuerè debitas, non solum, ob fructus cognitionis, quos ab eis utilissimos percepimus, verum etiam sluvima consilia praestantissima, non austeritate tristi dictata sed obvia illa sermonis comitate, qua maximè eminent aspersa; et in primis, eximio nostro Professori Potter (cujus nomen sine reverentia nunquam nobis dicendum est.)

dignissimoque

dignissimoque Praeceptori meo, Johanni Buchler, quibus, in arte medendi, perpauci, siquidem pauci, praeunt; quibusque, nemo est, cui magis beneficiis devinctus, magis grati animi recordatione et amore conjunctus sim. Quantum alteri debeam, propter praestantissimas instructiones, in praelectionibus inspertitas, verbis exprimere perdificile est; Quantumque alteri praeceptori fidelissimo, amico optimo, meo nunquam ex animo effugiet—

Sat erit mihi, si hoc opusculum, Professoribus nostris praeclarissimis, hisque eximiis viris, quibus dicatum est, non indignum esse videatur.

Iamque, valeas celebratissima Jenae Mariae Universitas, sis incolumis et florens semperque, laus et nomen tuum maneat: vosque, Professores illustres semper honorandi semperque colendi, valete; longa et felix sit vita: Iuventutem Americae lenire dolores, et morborum furores compescere, pergite docere, valete.

An
Inaugural Dissertation
on
Cholera Infantum
Submitted for Examination
to
The Provost Trustees
and
Medical Faculty
of
The University of Maryland
for the degree of
Doctor of Medicine
by
John R. Ferguson
of
Maryland

March 2nd 1831

In contemplating the condition of man while under the influence of external agents: in viewing him as a being created and sustained amidst the varied operations of causes incessantly tending to his destruction: we not only cease to be surprised at the feeble resistance which he offers to the noxious properties of those causes, but come at last to wonder at the tenacity of life. Thus surrounded and beset by agents inimical to life, - insensible in their nature, known only by their effects: we no longer wonder that men, whose minds have received the best aids of education, should upon the subjects of medicine betray an ignorant infatuation and superstitious credulity characteristic of the untutored savage. That cause, which at the present day, are found saturated with the elements of disease and death should for a long time elude the detection of the most learned and inquisitive. Of all the calamities in the quiver of disease to which humanity is obnoxious, perhaps, none has excited more our sympathies, or more generally led the physician to upbraid his profession with the incompetency of its resources, than the subject of these remarks viz Colic Infantum. This disease occurring only in summer, makes its appearance first generally, in June, and continues to prevail as long as hot weather lasts.

It is confined exclusively to children, and said by respectable authorities to be known only in and near Country. It is always distinctly febrile. In some rare instances the harbinger of the disease, is a slight chilly sensation, though chill properly speaking the ordinary phenomena is not one of the essential attendants. The disease most generally commences in a slow and insidious manner, commonly diarrhoea for several days, then attended by vomiting & loss of appetite is the order in which the symptoms display themselves. The child soon becomes listless and indifferent to every thing around it, and even the toys, which once held its little mind in ecstacy & delight are, through the medium of its new morbid changes robbed of their wonted enchantment. The tongue becomes white, skin hot, pulse frequent, and vomiting and purging increase, and the evacuations which at first might have been colourless and frothy, soon become green, and in some cases black. Not that the liver unaided by the second, thus early disengorges itself (and it is questionable if this could occur) but the peculiar aspect of the discharges is owing I think, to a secretion sui generis from the stomach and bowels. For those to the seen the discharges of a child in cholera, and whether they were green, or black at first, they will soon become white or pale coloured, and in very many cases, the ejections will put on

his appearance without any exposure. But, by a similar process
exposure to the sun, or even to the air, of the discharges of a child
labouring under ordinary bowel disorder, whatever might have
been their appearance when first voided, they will certainly, generally,
so I believe always, assume a greenish hue, probably indicating
acidity. In the advanced or second stage of the disease, the pulse
becomes more frequent and small, heat partial, accumulates about
the abdomen, and often, about the head, while the extremities become
cold sometimes cold. The countenance looks pallid, features either
sunken and apparently worn down by distress, or sharp and con-
tracted indicative of anxiety and pain. Tympanitic evolution of
the abdomen soon follows, attended by so high a degree
of sensibility, that the little sufferer cannot endure the tenderest
touch of a fond and anxious mother. I think in a majority
of cases, this condition of the abdomen precedes the more explicit
signs of cerebral pathology, and they might perhaps with propriety
be regarded, as standing, in the relation of cause and effect.
In other cases however, the symptoms of head affection present
themselves so early in the disease (and even before the painful
tympanitic distention of the abdomen is manifest) that grounds
are afforded for the belief that the exciting cause spent its force

mainly upon the brain. I am disposed to believe, though observation
wanting to settle the question in my mind, that when the disease
w be fairly referred to heat, as the sole agent in the production of
primary symptoms, that is, when no other cause than a high
gree of temperature has existed to produce the affection, the cerebral
mptoms will present the highest grade of pathology, and generally
e enter the state of abdominal Tympanites. Whatever may be the
act in regard to this question, certain it is, that no very
nsiderable time intervenes between the two, and that when they
both present in a high degree of development, the ground
our hope is indeed narrowed. The first indication of
atured brain disorder, will I think, most commonly be found
consist in excessive heat about the head, with a proportional
alling off of temperature in the extremities, the temporal and
rotid arteries beat high, eyes look wild and vacant, child
eams while seemingly asleep, and often rolls its head quickly
o incessantly upon its pillow. Eyes become obliqued, convulsions
ensue, and soon put an end to the sufferings of the little
tient. Or else it sinks down into a dull lethargic comatose
ate with an apparent mitigation of all the symptoms
hen after a period of uncertain protraction, its little spirit

uits its Clayey tenement forever, and wings its way to the
orld of spirits. If the disease kills before the supervention of Coma
Child seems to die, more by exhaustion than extensive lesion. f-
pulse becomes so frequent and quick, often sharp, as to be incalculable
t when Coma comes on, the pulse looses its frequency and quickness
not unfrequently, becomes even slower than natural.
Child falling a victim to the disease under the symptoms last
umerated, will almost invariably be found to have died, by
effusion of water in some part of the Encephalon. Superadded to
symptoms above we not unfrequently find the alvine discharges
coming so acrid as to excoriate the rectum, and by a smearing
blood, simulate Dysentery. If the disease be not so
olent as to kill in either of the modes above mentioned
runs a slower course, or passes into what is generally
led the Chronic Form, and here there is by far less danger
lesion in the brain. The Child now much more rapidly
ciates, because the Aliment however nutritious, passes off
changed. Edema makes its appearance, aphthæ appear
the mouth, and towards the closing scene petechæ or
icles are seen in different parts of the body most
enerally I believe on the Chest or abdomen.

In accounting for the mode, by which the disease kills in its acute form, it will be seen I have made no mention of the gastric or intestinal pathology as revealed by post mortem examinations; for although in a large majority of cases the symptoms belonging to that pathology appear first, the degree of inflammation found in the Stomach, bowels and liver, will often be insufficient to explain the fatal mode of a fatal termination. But, in the more protracted form of the disease, these organs appear to bear the whole onus of the disease, giving rise to thickening or ulceration of the mucous membrane, and in some cases even mortification. By far the most common morbid condition will be found to consist in ulceration commencing I believe in the muciparous glands. But, although ulceration seems to commence here, it not unfrequently extends far beyond the narrow limits of these little glands, and in some cases so entirely strips off the delicate mucous tissue, as to give the appearance, as if an infinitely neat dissection it had been taken away sometimes to an extent apparently of an inch. In other cases the innumerable points of ulceration will be discrete, though so minute and often so aggregated as scarcely to be distinguished by the naked eye. Often they will seem to vary from this state of infinite minuteness, in different subjects, and often indeed in different portions of the intestinal canal in

he same subject, up to a large surface of continuous abrasion. In some cases, the delicate mucous tissue bounding these ulcers, will be found exhibiting a slight inflammatory blush, whereas, in others, they seem to be elevated above the surrounding level, and exhibit a wart like aspect. This diversity of appearance, seems to depend more on the duration of the change, than upon the degree or intensity of the action which it is doing. The uniform appearance of this kind of degeneration in the mucipparous glands of the stomach and intestines, most common in the latter, has led Dr Horner in his pathological anatomy to presume that the essential pathology of this affection consists in an inflammatory action first set up in these little bodies. With all due reverence to and who has indefatigably devoted himself to the cultivation of medicine; I would respectfully ask, if the Dr may not like Broussais have mistaken effects for causes? It seems to me probable that the subjects, from which the plates (representing this kind of degeneration) were taken, must have died in the chronic form of the disease; for so far as my observation extends ulceration does not obtain in the acute stage - nor is it a necessary thing in the chronic: yet Dr Horner sets it down as invariable. In some cases of the chronic form of this disease the mesenteric glands become first enlarged, and are afterwards found nearly deliquescent, or hard and looking much like cheese. I think it not

improbable, that when these glands are found in this Condition, tumor may generally be found lurking in the Constitution, though I have no doubt it may exist, and certainly does independently of such a diathesis: For we know that any high degree of irritation long continued, will frequently produce enlargement of the Lymphatic system, sometimes producing a change in their structure, at other times producing distinct suppuration. Since these post mortem examinations so often detect structural lesions in parts, whose healthy offices are absolutely essential and indispensable to the well being of the Animal Oeconomy, we need not upbraid ourselves of ignorance or impotency, when we fail to cut short an obstinate diarrhoea, oedema, emaciation, and the long train of melancholy phenomena inseparably connected with a state beyond the reach of medicine, and I had almost said necessarily fatal structural lesions of parts intimately associated with life, (whose functions in toto, cannot be suspended even for a time, without inflicting injury upon the system) must always be attended by danger and premonitory of death. Such is the condition of the Heart, such the condition of the lungs, and such in no small degree is the state of things with the stomach and intestinal canal. Constantly called into action for the support and maintainance of the general system it has no

portunity afforded it to rest quietly from its labours, and call in its aid the healthful resources of other organs. Few it is that a large tions of the intestinal tube have been said to have mortified, and to have en cast off without causing more than a temporary inconvenience. But here the cause which produced the lesion was local. (I allude strangulated Hernia) but it is a question exceedingly doubtful, and mind, whether or not mortification, or even ulceration of the chance we see, in the disease before us, attended as it most commonly by a falling off in all the functions of the animal economy d, or ever does heal or unite. Bichat I believe thinks it never can. is question however I cannot be expected to settle; it has enlisted experie e and talents on both sides, and so far as my knowledge extends thus sub judice lis est. It has been and now is, supposed by e highly respectable Physicians, among whome may be mentioned ondie and Rush, that marsh miasma is one of the fruitful sources Cholera Infantum. But however plausible this opinion might once e been, it seems to me to be satisfactorally subverted by the fact this disease is much more rife in summer, before Marsh isma, which is the product of vegetable decomposition even begins be evolved. It prevails also in locations, where marsh effluvia its diseases scarcely exist. Heat beyond a question of doubt is

the Common predisposing, and not unfrequently the exciting Cause
By the Continued Operation of a high degree of temperature general
Languor and debility are produced, giving rise to Congestion in the
Vascular tissue of of the Stomach, bowels and Liver and in some cases
the brain also. In a majority of cases, something superadded to heat is
necessary to excite the disease, and among these dentition may merit a
place, improper articles of food or drink, impure milk of mothers or
nurses, worms, or impure air &c. It is supposed by Brown and
his followers, that as heat produces indirect debility excitability is
lessened, whereas the very Converse of the case is true; for an article
of food will excite vomiting and purging and the whole train of
symptoms belonging to this disease after the action of heat, which
prior its Operation the child might have taken with impunity.
The French in this Country have much less Cholera that the Americans
because, they use flannel, and remove the debility on which the
disease depends by the use of the Cold bath. Could the Cold bath be
generally employed subject to prudent discrimination, I am
disposed to believe the list of mortality from this dire Calamity
would be lessened in a ratio proportional to the extent of its
judicious employment. It Certainly is the duty of every
Practitioner to extend his influence as far as possible

o impress upon the mind of every mother the absolute necessity
garding with Care and attention the diet of her little Ones. For little
s maternal tenderness suspect that in diet, Compositions for the
atification of appetite often Contain the rudiments of disease and death. In
ubating the symptoms of this disease, if we are Called to attend
ildren in populous Cities or Crowded Hospitals, illy Ventilated
Circumstances allow us to employ the surest means in the
ortest time; dispatch at once the little sufferer to some section
f Country, where he may enjoy the full benefit of a pure
d salubrious air, protected as far as possible from
icissitudes of temperature, but especially withdrawn from
influence of Heat. Not unfrequently, by taking advantage
f this seemingly trivial Circumstance, we shall at once
rangle the monster disease in its nascent state.
f however our services are still required, we should recollect
hat this is a disease in which no time is left for Change or
ial of remedies. For unless our first efforts are skillfully aimed
e our artifice or science will prove abortive. If then our
tient be recently attacked, and we find him puking and
nging as, under these Circumstances we generally will, we
hould not like some have done before us, supposing

offending matter in the stomach add fuel to the fire
y drenching and little sufferer with a brisk emetic. Nor can
dare as in Cholera of adults to pour down Laudanum in
gantic doses till we shall have subdued the disease. From
hat I have already said in regard to the great liability to
o affection, no additional emphasis seems to be required
Condemning as worse than hurtful the practice of opium
ibition. But even waving this strong tendency to brain
ngestion, (of which the practitioner should never lose sight)
very Condition, on which all the morbid signs depend and
engrafted, Could not possibly be alleviated but must necessa
be rendered worse by Opium. For so long as Congestion
the portal circle remains, all the Opium the patients stomach
uld Contain would be inadequate to stay its irritability,
lep by destroying its vitality. We must then look abroad
search of some other article, which while it quiets the
omach removes the foundation, on which its irritability
as built; I mean Congestion. Perhaps, no remedy of which
have any knowledge, so happily blends these qualities as
ie Mercury Hydrargyri or Calomel. And, although this
oint is Conceded on all hands, few, then are who agree

to the best mode of its exhibition. Some contend that
soon as you have the first warnings of the affection
full and decided impression must at once be made: While others
que the propriety of small doses frequently repeated. It would seem
be rather difficult to settle this dispute for each party adduces
our experience and observation in support of its premises - and so
ide is the disparity between them that an harmonious compromise
scarcely be hoped for. The fashion of generalizing in medicine
perhaps too prevalent, and, in many instances I am disposed to
lieve does no good - It is certain that in many cases of the disease
question, so much is the patient worn down by the continual opera
of a high temperature that the debilitating effect of a full
of Calomel would at once depress him below the point of
ithy reaction. Yet it is equally true that in some cases, we
ever tempted to bleed, with advantage. And surely such cases
uld illy prosper under a half or a quarter of a grain of
lomel three times a day. Trifling and inefficient as the
ction of half grain doses three a day may at first seem,
tain it is that in a large majority of cases it is the
fe and proper mode of proceeding. There is something
sensible in the operation of Calomel, for without producing

ny sensible evacuation, it quickly puts a stop to all the
mptoms of the disease. Often after the exhibition of a few
es in the small quantity above specified, from being prostrate
animate and lethargic, the little sufferer will promptly erect itself
the vivacity of health again. True it is there are cases in
ch we can effect nothing. But this we find true in every disease
n Intermittent fever, though generally regarded as harmless,
metimes from the very beginning, wears upon its front the
pes of fatality. It will be obvious that by these general
marks, I mean to apply this practice to the disease as it gene=
lly appears and not to particular cases, which from peculiar
cumstances often require a special management: Such
or instance as Cholera excited and kept up by impure
ilk or tedious dentition or any other plain and palpable cause -
r here common sense would dictate the first step to be taken
, Restore the Child pure milk, or scarify its gums. Indeed it
, been highly recommended by some, to employ scarification
every case, as one of the means, by which to quiet irritation
the Stomach and bowels - alleging that the small quantity
blood thus abstracted will often be found eminently
viceable. In addition to the means already cited we shall note

—

nfrequently find a valuable adjuvant in the judicious
mployment of the warm bath. When we have preternatural
at on the surface, painful evolution of the belly by gases and a
ttlesp unquiet throwing about in the bed, attended by a sharpness
d contraction of the face, if we can opportunely place our patient
warm water for a few minutes and produce a slight relaxing
ect. at the same time the Calomel is producing a soothing
ently apperient influence. I think in many cases the fate of
e case will be determined in our favour. It might be inferred
rom what has already been said that the general plan of
rgative influence is of doubtful efficacy. Under all circumstan
Jalap, Salts, Butter Nut so highly lauded by some, and the
hole class of purgative agents except Calomel must be with
eld. True it is that an accumulation of morbid secretions will
ritate as long as they are retained. But there are qualities
ill often be found sufficient to provoke a quickened action
f the intestines, or if not we may exhibit a small quantity of
lum Ricina for it certainly possesses some virtue of protecting
e highly excited mucous surface over which it passes. The use
f the bath in cases in which the head is highly concerned, if
ot always inapplicable at best requires an additional caution

Perhaps Leeches and Cold applied to it and the abdomen, while
drefs is made by means of some exciting warmth to the extreme
, would under nearly all such circumstances promise most
lain relief. We come now to speak of the mode of treatment
st to be relied on, after the disease has passed the stage of active
xcitement and immediate danger. Although a wider range
remedial agents is left us, perhaps nothing now remains to
done that can avert the final accomplishment of a fatal Cover
The great dread of head affection has now commonly subsided
ough even in the chronic form the brain labours under the Conseque
of previous exalted excitement. But in the general we are not
ured from the entire use of Opium in some of its less exceptionable
ubinations with other means. Calomel which was our shut anchor
hope, now promises little, unless some hepatic obstruction has
n left behind. The cure of the disease is now thrown upon
mucous lining mainly of the small bowels. Hence obstinate diarrh
while Vomiting is now rare. Our means must now be of
Cordial kind, bland nutritious food, and in some cases slight
ndiments may be given with advantage, though they should
of the least exciting kind. Frictions over the Abdomen
exciting the surface, which is now universally pale and

ceed often benefits, while the feet are immersed in some excitant agent
he nitro muriatic acid bath. This indeed will be found an excellent
ly if any engorgement remaining about the liver: not only in this affection
in many others, where we wish to excite the skin, and promote
the secretion. The Flowers of Zinc in small doses from half
grain to one or two grains in union with a fractional
t of opium will sometimes stay the bowels when nothing else
~~If this should fail~~ we may add ½ gr Clove powder or even a
in in some cases. The Chalk mixture is often signally benefi
The Bark Jacket has been recommended in this state, often
ved, and upon each renewal moistened with Whiskey or brandy.
t, if the diarrhoea and emaciation with all the concomitant associated
ptoms depend as they frequently do upon an ulcerous condition
the mucous tissue, I fear all and remedies will be alike useless,
ept so far as they may afford a temporary relief from pain,
t even this is something, and since a possibility of recovery is
ant by some Let us not despair tile all is lost

Respectfully

John R. Ferguson

Mr. Dent

Fracture of the Neck of the Femur

An Inaugural Dissertation
on Fracture of the Neck of the Os Femoris
within the Capsular ligament.

Submitted
to the examination of the
Provost ~~and~~ Medical Faculty
of the University of Maryland,
for the Degree of Doctor of Medicine:
by Stouten W. Dent
of Maryland.

A Dissertation on Fracture of the Neck of the Femor within the Capsular ligament.

Every fracture to which we are subject is attended with inconvenience both to the patient and Surgeon, but none more than the one under consideration. The Surgeon is oftener foiled in the treatment of this than any other; so often indeed are Surgeons foil'd in this fracture, that many have come to the conclusion, that it cannot unite by osseic matter under any circumstances. The Patient is doom'd to be an invalid the remainder of his life. But, if Surgeons in former days have been foil'd, that should not prevent the younger of the Profession from attempting to restore the limb to a sound state, and even if we fail, it cannot possibly cast any reflection on us as skilfull men, since so many have fail'd before us, and should

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1st. The Hip Joint is composed of two bones, the Os Innominatum, and the head of the Femor. There is a large cavity in the Innominatum, called the acetabulum, from its supposed resemblance to a cup used by the ancients to hold Vinegar. This Cavity has a ligament arising from its edges, which surrounds the head of the Femor and is inserted into its Cervix near the Trochanter Major, which is called the Capsular ligament. It has a round ligament arising from within the acetabulum and is inserted into a depression in the head of the Femor. The Fracture of which I design to treat, takes place within the Capsular ligament.

2ndly. The characteristic marks of the Injury, are as follows viz. The limb injur'd is from two to three inches shorter than the other, and if the patient has been trying to stand or walk on it, so as to relax the

ligament

ligament, it becomes as much as three or four inches shorter, the Foot and Knee is everted, the Patient cannot bear any weight on the injur'd side without pain, the rotundity of the Joint is in some measure destroy'd. If you attempt to rotate the limb, the Patient complains of some pain, owing to the rough surface of the fractur'd bone rubbing against the smooth surface of the Capsular ligament; also the bone may be felt on the ilium, particularly, if the accident has occur'd for some days and the patient has been trying to walk, or pressing much on the injur'd limb so as to relax the ligament, the muscles will draw it up. In ordinary cases where the patient has not exercised much, or the accident has not long occur'd, the fractur'd bone will be found resting on the edge of the acetabulum and ilium above it. If the Patient be placed on his back, and

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compare the Malleoli, we can best observe the difference in the length of the limbs, the heel of the injur'd limb will be found to rest in the hollow between the Maleolus Internus and tendo achillis of the other limb. There is three causes why the limb is everted - first - The natural tendency of the limb, which is to fall outwards - Secondly - The rotatory Muscles which carry the limb outwards, which are, the Obturators, Pyriformis, Gemini, Quadratus, Pectinalis and Triceps, those Muscles all have that tendency, the principal opponents are part of the Glutens Medius & Minimus and the Tensor Vagina Femoris - Thirdly and lastly - the fractur'd portion of bone resting against the Ilium operates mechanically, so as to prevent the Trochanter from being drawn inwards. There may also be a Crepitus discover'd, by extending the limb, so, as to bring the fractur'd portions in apposition, the limb

(is

is easily extended, but so soon as the force is taken away, the limb is drawn up again to the former situation.

3rdly This Fracture rarely ever occurs until at a late period of life, According to a late Writer, out of two hundred and twenty five cases, there was only two under fifty years of age, but from fifty to eighty is the time of life they usually occur. Females are more subject to them than males, owing, to the greater width of the bones. The reason they are more apt to occur at this time of life, appears to be owing to the bones becoming thin and brittle, in consequence of absorption being greater than the deposition. The most trivial circumstances generally cause them - such, as walking on foot pavement, and slipping suddenly off. I once knew an Old Man, by kicking at his Dog, the Animal at the same time getting between

his

his legs, threw him, the result of which was, he arose with the Neck of the Femur fractured.

4thly. Distinction between this and fracture without the Capsule. In Fracture without the Capsule, there is considerable tumefaction, the limb is not generally so much shorten'd, as in the other case, it does not require so much extension to produce Crepitus as in the other case, and is attended with more pain than in the former - happens earlier in life, and requires greater violence to effect it.

5thly. From Dislocation, it may be distin-guish'd, by the Foot being inverted, and by the bone being permanently placed on the dorsum of the Ilium, - in this case you cannot extend the limb, nor can you rotate it easily, besides, you may feel the head of the bone, and there is no Crepitus, this, also occurs early in life -

Sixthly

Sixthly and lastly - In the treatment of this formidable Fracture, the limb should be kept as quietly as possible, The best apparatus for this purpose, is the apparatus of Dr. Smith - I cannot do better in describing this apparatus, than give the Dr's own words, taken from his Medical Journal No 8. "The material which I prefer, is the very thick bender's board. This I cut in two pieces, one for the thigh, and the other for the leg. The thigh piece ought to be, for an adult, about sixteen inches long, thirteen inches broad at its superior extremity, and ten at the lower. The leg piece should be about nineteen inches long, and ten broad at both extremities. These pieces, are then to be very slightly moistened with a wetted sponge, or cloth, and then to be bent into a semi-cylindrical shape with the hand. The concavity, however, should be a little

deeper

deeper than a semi-cylinder, in order that the sides may rise a little above the middle of the thigh, and be somewhat flattened. I have been accustomed to shape these pieces on blocks of wood of the proper form. I warp them over these whilst moist, and binding them firmly with a cord, leave them till they are dry, when they will retain their shape permanently. The block for the leg may, if a very apparatus be desired, be shaped, at its upper and back part, like the calf of the leg, swelling out like it. When the board is bent upon it and properly moulded, it will be adapted to the calf of the leg.

The upper part of the thigh piece is now to be carefully pared away, in such a manner as that, when it is applied to the member, the superior margin shall be properly adjusted to the perineum on the inside, and to the tuberosity of the ischium behind.

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On the outside it may be suffered to project in the form of an angle a little above the trochanter. It is obvious that it must be deeply cut away on the inside, to fit the perineum. A glance at the plate will give a better idea of this than words can convey. The lower extremity is also to be truncated obliquely, so that the lower convex part shall not project so far as the angle, by about an inch and a half.

The angle of the thigh piece, which projects above the trochanter, is now to have a piece attached to it, which may extend up along side of the body, and be bandaged to it. Sometimes I have done this by nailing a piece of wood to the side of the splint, so as to make a suitable angle. But the better mode is to use a piece of iron, of the thickness of an eighth of an inch. This may be made without a hinge, having an angle at the corner of the thigh piece, the

lower

lower leg of it being four or five inches long and applied to the side of the splint – the other, six or eight inches long, and ascending on the side of the body; – or there may be a hinge made at the angle, by merely making the two pieces, which there will then be, a little broader, and rivetting them together at the angle. This will enable the operator to adjust the angle to the attitude of the limb. The lower piece of this hinge may be continuous with the piece which extends down to the lower extremity of the thigh piece, to fortify one of its angles there; this will render the whole firm.

The iron should have numerous small holes made in it. – Through these it is to be nailed to the splint, which can easily be done, with great firmness, by placing an iron upon the inside of the splint, and clenching the tacks securely on the inside. – The upper piece of the iron hinge is to be nailed,

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in the same manner, to a piece of binder board, a little broader and longer than itself, and then to bent a little inward.

The two longer angles of the thigh-splint are also to be fortified with thin pieces of iron, extending up, along the sides of the splint, on the one on the inside about six inches - that on the outside continuous with the hinge above. They should project beyond the angles, about two and a half inches, and be pierced with holes half an inch apart.

Where the thigh piece is applied to the perineum and tuber of the ischium, the margin should be wrapped with three or four folds of soft, old blanket, and then covered with leather.

The leg-piece should be shaped at its upper extremity, like the lower end of the the thigh-piece, and fortified in the same manner with pieces of very thick sheet iron; these however, not projecting beyond

the

the angles, nor having holes, but, instead of them, having short strong pins projecting ~~beyond the angle, nor having holes, but, instead of them, having short strong pins projecting~~ from the outside, adapted to the holes in the irons attached to the thigh piece. I think it well that the concavity of the upper end of the leg-piece should be a little deeper than that of the thigh.

When I have been desirous of making the apparatus a very complete one, I have appended to it a contrivance for fixing the thigh and leg pieces at any angle that might be desired. This consists of two pieces, which are attached, the one to the thigh piece, and the other to that of the leg. The former is a piece of flat steel three fourths of an inch broad, and about ten or twelve inches long. At one extremity it is broad and pierced with holes, for

(nailing

nailing it to the back part of the thigh piece. The other end is narrower, and at a quarter of an inch from its extremity, it is bent up at a right angle. This piece when attached to the thigh-splint projects beyond it, down four or five inches on the back part of the leg-splint. It should have a spring temper. The piece attached to the leg-splint is merely a piece of sheet-iron or tin, fastened to the back part of the leg-splint. In this there are transverse slits, half an inch apart, to receive the bent extremity of the spring. Whenever the leg-piece is bent upon that of the thigh, the spring will catch in one of these slits and immediately fix the two splints at a permanent angle; and by adjusting the spring to one or other of these holes, they may be fixed at any desired angle.

I would observe, that in using tacks on the binders board, for the purpose of

fastening

fastening the various appendages, a little piece of leather should always be put under the head of the tack. When this is done they hold very securely.

When the various pieces of the apparatus are thus put together, the paper should be brushed over with strong glue-water, and as often as it dries this should be repeated three or four times. At last it should be varnished with black spirit-varnish used by saddlers, to prevent its imbibing moisture, and sticking to the limb and the bandages.

The mode of applying the above apparatus, is very simple. You place a linen cloth within the thigh piece, to keep the skin from contact with the splint. You place across the leg-piece, two bands of linen, one of these, is across the upper part of the leg-splint, just below the joint, and is suffered to drop deep in the cavity of the splint, but not to the bottom; it supports the

upper

upper part of the leg - the other band, is to be laid in the same manner, at the part which will receive the ancle, and will prevent the heel from touching the Splint; a circumstance which creates pain and may cause displacement of the fractured bone. Now, the limb is to be raised, and kept distended at the same time; the thigh piece is first adjusted to the limb, then the leg-piece, after placing the limb in the splint, it will be perfectly quiet, and you proceed to apply the bandages, one, for the leg - the other for the thigh - each of which, is to be, about four yards in length - commencing with bandage at the foot, it is continued to the knee, when, you commence with the other, above the knee, and carry it to the body, taking care to confine the Splint to the body, in order, that when the body moves, the

splint

splint also moves, consequently, prevents displacements of the fractured bones - After applying the apparatus, the patient should be kept quiet as possible, the bowels should be kept soluble by laxative medicines or by injections, the patient should have nourishments, that are mild and easily digested - Although, we are told, that bony union never will take place, yet, I am apt to believe that it will, at all events should I ever meet with a case, I will try, to effect such a union, but, I should not promise to my patient, too much success, there cannot any harm arise from attempting to restore the limb, and there might be a good deal of good - With these remarks, I shall conclude this subject, confidently believing that the time will be, when this fracture will be as little thought of, as any other to which we are subject —

An Inaugural Dissertation On the Effects of Music In Curing and Palliating Diseases,

Submitted
To the Examination of the
Provost, Trustees, & Medical Professors
of the University of Maryland
For
The Degree of Doctor of Medicine
On the 5th Day of March 1831

By
William H. Selby
Of Maryland

"There is a charm, a power that sways the breast
Bids every passion revel — or be still;
Inspires with rage, or all our cares dissolves,
Can sooth distraction, and almost despair;
That power is Music." — Armstrong.

To. Nathaniel Potter M.D.

Professor of Theory & Practice of Medicine
In
The University of Maryland.

Dr. Sir.

A public declaration of the pleasure and satisfaction which I have derived from your instruction, is only announcing to the World, what I presume you have witnessed yourself; and in a more impressive & satisfactory manner than formal letters could convey, or inadequate language express.

Permit me therefore to dedicate to you, as a mark of Gratitude, friendship and esteem, this imperfect Essay.

The Author.

To Samuel Baker M.D.
And
Elisha DeButts M.D.
Professors in the
University of Maryland.

To commemorate
The particular favour and Attention
With which
He has always been Honoured from them
This Essay
Is gratefully inscribed. By
The Author

To.

Nathan R. Smith M. D.
Professor of Surgery
In the
University of Maryland.

Sir

In prefixing your name to this essay, I have only fulfilled a duty, which every pupil owes his Preceptor, but should accuse myself of ingratitude, were I to pass over obligations of a superior nature unnoticed. As it was from your friendly counsels, and generous exertions, that I learned to appreciate the superiority of intellectual acquirements; but for your liberal & disinterested zeal, science, would to me have been an empty and unmeaning sound. Under your tuition I have had the most extensive opportunity of improvement in that profession so successfully pursued by yourself, and to which, my future life will be devoted I feel indebted to you for the basis of those principles, which are to conduct me in the arduous, though pleasing task, of alleviating the distresses of humanity. Permit me therefore to dedicate to you as a mark of gratitude, friendship & esteem this imperfect Essay, the first product of a Medical education, conducted under your direction

and be assured it comes from a heart deeply impressed with a sense of its obligations, for your Goodness

Please to accept also Sir of my warmest acknowledgements for the many opportunities of improvement afforded by yourself, and believe me, the many convincing proofs of disinterested friendship & polite attention, with which you & your amiable Consort honoured me during my residence in your family, will ever be held in lively recollection. With impassioned wishes for your future health and happiness, together with an extension of that professional celebrity to which you may so justly lay claim I subscribe myself, your ever grateful

friend & Pupil

The Author

On The Effects of Music &c.

In entering upon the subject of the present Essay, I feel as if I were about to tread a path thickly strewed with thorns, but I am encouraged at the same time by the hope, that fortitude will enable me to withstand the severity of their points, though I should not succeed in obtaining them. From the subject I have selected for the following thesis, it may be expected of me to enter upon the consideration of the mutual influence which exists between Body and Mind, but as it will be read by none who are ignorant of their intimate connection, it would be injuring their understanding, and impatiencing on their patience to dwell any time on it. Great indeed is the goodness of providence and various parts of his benevolent plan have been unfolded, through the aid of scientific experiments, and doubtless many important discoveries yet remain to be known, but I am equally firm in the belief that there are certain phenomena in the human system which will never be clearly explained. The noble Science of Chemistry, has furnished many highly usefull improvements, and has elucidated subjects, that but a few years ago, were not even imperfectly understood, but here we have evidence of the senses to conduct our enquiries, and are enabled by analytical and synthetic experiments to ascertain the component parts of many visible, as well as invisible objects with which we are surrounded. But how is it possible on Chemical principles to explain the opperation of intellectual faculties-

And where the Chemist, who, by any experiments which alm
t ingenuity can devise, is able to elucidate this wonderful Phe
omena. But a beneficent Creator, whose paternal Care is con-
icuous throughout his works, whilst reserving some subjects with-
his sacred Arcana, has endowed man with capacities to acquire
owledge, and with judgement to apply it, hence the more he becomes
quainted with subordinate causes and their effects, the more
is qualified for being extensively useful, and perhaps no class
society have greater occasion to bind their attention to this
bject, than the practitioners of the healing arts. It leads them
once from unavailing attempts to investigate the essence, instead
attentively observing the opperations of Nature, and should tea
h man, that the more he becomes acquainted with the order, and
mony established throughout the works of Creation, the more
should be disposed in humility to acknowledge the limited
wers of human comprehension, when compained with the bou
less intelligence of omnipotence itself.

Having premised those general
marks, I shall now proceed briefly to speak of the effects of Music
t previously to this, I shall make a few remarks relative to the
ves, both in a healthy, & in a diseased state. The nerves in their
lthy state, may be aptly compared to a well tuned string in
rument, in the hands of a skilful performer, where all its
brations are conducted with regularity, & harmony, and where
strains precisely accord, with the desire & expectation of the

musician. This is very different from what we find the nervous system in disease, here we behold the instrument, by mismanagement or casuality, with some of its strings, relaxed, and others emitting harsh tones far from corresponding with the expectation or wish of the performer; by striking those keys which form a charmed by their unity, and harmony, we are quickly assailed by rough discordant, vibrations, which rather tend to injury without imparting the minutest pleasurable sensation

"A harp whose chords elude the sight,
Each yielding harmony, disposed aright,
The screws reversed; a task which if he please
Sox in a moment, executes with ease
Ten thousand times ten thousand strings go loose
Lost, till he tune them, all their power and use."

Let us now take a cursory view of some of the diseases in which the nerves are materially affected, and observe how far the above comparison will hold good. In their healthy state do we not find the muscles of the will performing all their functions with regularity and ease; how widely different do they appear in some diseases, such as Chorea. where there is irregular & convulsive action of the parts affected. when under the influence of the will, Again in perfect health I would ask what two senses impart greater satisfaction, and delight to man, than do those of seeing & hearing; yet in Phantasm, how distressing is their operation. In this disease we observe impressions made

n the senses above mentioned, conveyed to parts of the brain
ot accustomed to vibrate with them, and thus produce false
ceptions: here precisely does the same action take place in
he brain, as does in the disorganized instrument. Now in the
he part which was formerly acted on, has lost its power, or
mits perception so feeble as not to be observable, and the part
l the impression not being received as usual by its proper seat
f action, passes by, and is expended on the next weakest part
from which the false perception arises. In the second or instru-
ments, by touching the key whose corresponding chords are relax
e, we either obtain no tone, or a very imperfect one, at the same
ime, the power applied to the key will be so forcible as to dis
lace the relaxed string, and exert its influence on the ad
ining, thereby producing morbid action or discord. Mr. de
airan, in the memoirs of the academy of Sciences for 1737
peaking of the medicinal powers of Music, reasons in the foll
ing manner: "It is (says he) from the mechanical and inve
tary connection between the organs of hearing and the conso
nce excited in the outward air, joined to the rapid commu
cation of the vibrations of this organ to the whole nervous system,
t we owe the cure of spasmodic disorders, and of fevers attend
with delirium and convulsions" — From the above opinion or
otation it would appear, that the medicinal effects of this rem
y depended exclusively on its mechanical operation; but I flat
myself, there are very few of the presents day who will assert
t the rams' hors, used as musical instruments at the siege of
richo, would prove so efficacious in the cure or removal of

iseases as the Flute, Violin, or the Melifluous Strains of the en
hanting female. I must Confess that music is of service by its
echanical action, this I believe will be admitted on all hands,
t that its sole effect is from its Mechanical action, Is an opin
n I can by no Means subscribe to, and hope from the following
marks, aided by my gleanings from the works of respectable
thors to satisfactorily prove that the Modus ~~Operandi~~ Operandi of Music
the body is twofold, in the Cure of diseases, first as it effects
ose who are musically inclined, and secondly as it respects —

"The man who hath no Music in himself,
"Nor is not moved with Concord of sweet sounds"

the first those musically inclined there always subsists
- exact unison between the tones employed, and the state of
e nerves, otherwise, the application would have an injurious
dency. If, in irregular or morbid action of the nerves, the
plication of sounds not harmoniously arranged, or not suited
the patients Condition be made, the Malady will be increased
ese the effect may be Compared to that arising from an un
ilful performer thumping on an instrument out of time, but
the other hand, If we observe in the administration of it, that
gularity and order which Constitutes harmony, and also attend
the Condition of the patient, we shall find by its influence &
attraction which it has for Corresponding motions in the nervous
stem, that by & by it will overcome the morbid action, and es
blish regularity and concordance in them. In order to
ake valid my position, with respect to the necessity of harmony
will mention an interesting narration given by Baglive

his cases of the effects of Music in curing the disease
duced by the bite of the Tarantula in which he informs
that the patient, after shewing evident signs of its happy
fluence, suddenly relapsed by the instruments getting out of
e; nor could he again be affected, till the performers restored
rmony, by tuning their instruments, when he was a second
e relieved, and finally cured. From this case, as well as
rm Burney's General History of Music, we receive convin
ing proofs of the ancient and effectual use of our remedy, in
e cure of diseases Mr. Burney informs us, that Music "was
ed as a remedy by the ancient Egyptians, Hebrews, Greeks
d Romans, not only in acute but chronical disorders".
e also tells us that "not only Mr. Burette, but many mo-
rn philosophers, physicians, and anatomists, as well as
cient poets and historians, have believed that music has
e power of affecting not only the mind, but the nervous system
such a manner as will give a temporary relief to certain
seases, and at length operate a radical cure". In the fol
ing pages I intend to consider the effects of Music, first, in
seases of the Mind, and here I shall confine myself to its in
ence in the Hypochondriacal, and Maniacal States of men:
d secondly, shall mention a few facts which will shew its
icacy in the low diseases of the body, In this part I shall
fine myself wholly to its mechanical action. According
the above arrangement I shall commence with the consideration
Music, in Hypochondriasis. And here, it will be proper to ob
e, that it is not my intention to enter into a detail of the

ymptoms and Characters of the diseases to be spoken of, fur
er than is absolutely necessary to the introduction of the
edy under consideration. In Hypochondriasis, when the
ind is constantly engaged in contemplation on one subject,
a where every interruption, which is not calculated to excite
reeable emotions, is received with displeasure, the exhibition
Music as a remedy should be attended with the utmost
re and nicety; and we should be particular in having the notes
comodated to the excitability of the patients mind. With this
cautions, we may gradually raise the times from those we
dge proper in the commencement, to those of a more lively
tem; and imperceptibly draw the patients mind from himself
e thus obtain for him, a temporary respite from his mental
guish. This is not mere speculation, or theory without
pport; nor is it intended to place the subject of the present
sis in a more favorable light than it deserves, by shewing that it
ould be used with more nicety than is really necessary, but it is
a caution that should be attended to. The following cura
ated by Professor Rush, being directly in conformation of the
ve opinion, I beg leave to subjoin. A gentleman in the
m next to the lodging of an hypochondriac, intending to am
- himself with playing on the flute, accidently commenced
ively tune; which so engaged the Hypochondriac, that he
shed into the room, seized the instrument from the performe
hands, and broke it over his head — How differently wo
d that man have acted, had the time been accommodated
the state of his nerves — Had the above advice been in this

ase pursued, he would not only have listened, and that
ith pleasure, but would have exclaimed,

That strain again; — it had a dying fall:
O, it came o'er my ear, like the sweet South
That breathes upon a bank of Violets
Stealing and giving odour —

lthough we have from History many striking proofs of the
ficacy of our remedy when properly administered, yet we
ten have the mortification, of finding our most sanguine
pes of success baffled, and our labour lost. This however
ould not deter us from making further and varied trials
hus if the application of instrumental music of various kinds
s not the desired effect, we should resort to vocal. The validity
this observation will appear, when we consider how different
opinions of mankind, are with respect to the excellency of
ferent instruments. We often find persons who are charmed
th the sound of one, and showing perfect indifference to all
hers, again we find persons delighted with the melody with
e humane voice, and not, or moved in the smallest degree, by
most harmonious concert. We are informed by the biographer
of Mr. Cooper; the English Poet, that he in a fit of melancholy
a could be roused by no other means, than the musical voice
Mr. Paleys Son, a youth of about twelve years of age. Having
ished the consideration of the mode of administering, and
effects of Music in Hypochondriacs. I next proceed to
eak of it in. Tonic Mania. In this however,

Shall be very brief, as I consider it as a higher grade only
the same disease, and of consequence, nearly the same remedies
plicable, with an additional degree of care and circumspec-
tion in using them. In this disease as we often find the mind
a state so highly excitable as to render it necessary to preclude
slightest intercourse with the patient, the stimulus of conver-
sion even of the keeper must be prohibited untile the morbid
citability is either reduced by judicious management or
been expended by the furious exertions of the unhappy suf-
er. From the above remarks, it is evident that the applica-
of music must be attended with great hazzard; and would
success will often be the result of our attempts to relieve
t if we credit holy writ; it would appear from the following
sage, that music was regarded by the Hebrews as a common
e for madness: "Let our lord now command thy servants
o are before thee, to seek out a man who is a cunning play
on a harp, and it shall come to pass, when the evil spirit
god is upon thee, he shall play with his hand, and thou shal
well" It is not a little surprising, in my opinion, that
beneficial effects of music should have been so well
own in such remote ages, in relieving mental diseases,
d yet so little attention is paid it in an era in which
ry science is rapidly advancing to perfection. Under our
cond head, or the consideration of the mechanical action
music, I shall view it as a sound only, without supposing
to act in any other manner than as an external
imulant. As life is the effect of certain stimuli acting

on the sensibility, and excitability, which are extended
different degrees over every external and internal part
the body; and as sound has an extensive influence upon
man life, I flatter myself, the application of this last in
low diseases of the body, may be attended with success.
ly reasons for this belief are the following — 1st. From the many
ses to be met with of persons being resuscitated, by the stim
ating action of the shrieks of their friends, and sorrowding
ations 2nd. From the practice of the Malays, who are in the
bit of beating a drum before the doors of persons ill of fevers,
which I think must be often attended with success or they
ld not continue the custom. And 3rd. From the happy effects
the firing of cannon on board of a French Ship of war —
which there were many in those low state. Sound also
leviates the pains of death, when as a remedy it is ineff
tually administered. Here its stimulus counteracts that
pain; and if it be greater will entirely subdue it. This
et may be explained by calling to mind a law of the
imal economy, which is, that "no two impressions of
equal power can be felt at the same time, but that the
ker must yield to the action of the greater". Now in
osing this imperfect Essay. I will make a few remar
upon the Effects of Music, on the brute creation —
ry evident indeed are its effects upon some of our
nestic animals. Can we imagine any thing more ple
ing and delightful, to any creature on earth, than the thre
s of the horn saluting the ears of the Hound. Again

, we not see the horse when his ears meet the yell of
e hounds, inspired with new life, is it not more evident, when
- see him betake himself across the plains, with the Velocity of
ghtning, forgetting his food, and unmindful of labour.

"For do but note a wild and wanton herd
Or race of youthful, or unhandled colts
Fetching mad bounds, bellowing and neighing loud
(Which is the hot condition of their blood)
If they but hear perchance a trumpet sound
Or any air of music touch their ears
You shall perceive them make a mutual stand
Their savage eyes turned to a modest gaze
By the sweet power of Music"

Shakspeare

Nor are its effects confined to the human species and brute
eation, if we are to place confidence in the writings
- many; thus Pope informs us:

——— "in air the trembling music floats
And on the winds triumphant swell the notes
So, soft, though high, so long, and yet so clear
Even listening angels leave a from heaven to hear"—

— Finis —

An

Inaugural Essay on,

Erysipelas

Submitted to the examination of

~~Rev. J. B. Inglis~~, Esq. Provost

The

Trustees and Medical Faculty

of the

University of Maryland

~~On the 25th day of February 1831.~~

For the Degree of Doctor of Medicine.

By

Richard Mott of Baltimore Md.

On the of March 1831.

Ad Johannem P. MacPense. M.D.

Hoc testamentum meae amoris dedicatur

Ricardo Motté

Eos, qui per terram faciunt pedes, multa mala fliquunt: eumque auctor illis sociari escofstat, qui certant flictos levare morbis omnibus illis, procumentibus Ei cujus spore escanimi oculoque vitreo vestigia denotantur, cu-s sub glaciali aspectu sanguis calidus pulchrum, a nantiumque amatorumque fregescit; Hæc Thesis, manus venalis opus judicio illorum, qui eum assentate libe-ue et honores afferre possunt, quos anhelante corde longé stavit, subjicitur: si quæ scripsit, sit in auxilio al-ui morbum gravem sublevare, si frontem ferventem mitiget, et capiti dolenti et pectori tristi delicias somni impertiat, li oblectabit non frustra laborasse. ———

Erysipelas, anglice St Anthony Fire, prevalet in une portione zonæ temperatæ qua mihi cognoscitur,

iamque sæpe obvenitur in regionibus torridis idque tanto
olentior quanto temperies urentior. Hauset nomen Egro
ræcé traho πελας prope, quippe partes adjacentes contra
untur vel eruptione vitiantur. Fere insidet in Peteru
so, tametsi nonnunquam diffunditur cuti veræ membranæ
e cellulare excitans in eis inflammationem pravam et
ufficilem sanationis. Priusquam ulla indicia externa mor-
i prehendantur, æger alget, languet pulsu arteriarum
sprepa magnaque studio oscitandi. Exinde omnia indicia
utantur, firmus plenus durus fit pulsus, in hepate, stom-
cho capitique angitur, facie rubefactâ, cutè aridâ cali-
ãque, linguâ albidâ et fœdatâ fere cum retentione fecum.
Brevi tempore cutis, plerumque facialis, quia vasa capilla-
ia sanguinem ferre assueta, (cujus ardens rubor modestiæ
identia est rubescens), colore peculiari rosacea suffunditur,
um pruritu, rapidaque extensione, ex quo oriuntur mul-
e papillæ pellucidâ lymphâ refertæ. Hæ, nisi inci-
e sumpuntur, et partes exhibent livida colore, quæ

gligentiâ exulcerant ~~ato~~ mortua esent occidunt. Pulsus
ost eruptionem, et inutabilitatem frequentior fit sed minus
rmus vel durus, mitigatione omnium indicium. Pertur,
ruptionem semper apparere tertia vel quarta in die, et mi
i videtur regi violentiâ exempli, quoniam in homine, qui
aneros ediderat, cognovi primum accepum sequeri eruption
ndquaquam longius modo unius horæ. Parcter falsè
ictum impertire contagione quia multi periclitabtur
ii nequaquam infectione laborant atque omni in exem-
lo citato mihi cognito, omnes ægroti una atrpi du-
untur: in queis haud dubie consortio cibi et originis
git; quoniam liçet existimare hospites unius mensæ
adem victu frui, sobolem ejusdem familiæ virtutibus
itüsque consociari.

Feliciter venit reputatione medicorum ipsam
existimationem nequaquam magnopere prævaluisse, mihi
e videtur ejus derelictionem in morbo de quo loquimur, præ-
ursor fato impendenti in omnibus aliis; etenim quando
cientia clarissima chymiæ potestate instruxerit genus

umanum (quod credo esse in fatis) investigare principia va-
orum pestiferum, qui veluti cacodemones pertabuntur sine
isu campos aereales mundi invisibiles; cumque pro nostra
redulitate existimando aerem respirabilem, de quo nostra
erceptio tam exigua, constitui oxygene, nitrogene, car-
one, prompte persequemur ad principia sub innumeris
rodis pro diversa conditione in qua invenitur: denique
um elementa miasmatum palustrium patefacta fuerint
ori investigatione physici infatigabilis, tunc univer-
ali escultatione colentium scientias mostrum contagiei
bigetur ea terris.

Propensionem huic morbo saepe duceri parentibus
emo dubitet quoniam cutis clara teneraque in saepissime
sperituv similitudo liberorum parentibus praevalentissime
igo diathesis. Insuper insolita irritabilitas tam men-
tum corporumque eorum, etiamque proprietas saepe an-
otanda peractione diversorum functionum animalis oeco-
omiae fere potest observari in eo parente. cui masci-

nam similitudinem referunt.

In nostris prognosticis debemus ducere magnitudinem 6.
tate et morbus ægrotantis: ne obliviscendum etiamsi
desinit cum effusione seri et desquamatione cutis in
ossis non aliter invalidis; apud constitutiones debiles aut
exsaratas suppuratio insalutaris et gangræna crebró in-
sequuntur mali impetui haudquaquam minitanti. Hic
licet inferre comparationem ab artibus mechanicis, medicus
ac fabro operante in ligno carioso; instrumentis inculpatis
nihil habet in quo laboraret. Quoque necessest annotari
quotiés ægro afflictus fuerit, quoniam quisque invasio
reddit obnoxiosiores altera sequenti deprimisque reversio
difficilius remedium. Ideoi simul ægrotans affligatur
chronica inflammatione hepatis, raro vel nunquam con-
valescit.

De pathologia mea distat opinio omnibus aliis
ihi cognitis; etsi sapiat antiqua principia humoralium
pathologorum confido non minus esse veram. Credo
quotiescunque morbus non restrictus fuerit ad locum,
ute minus hepaticum impeditum vel affectum esse

juria alius modi. Non potest existimare contradictio praecare morbum nunquam restrictum esse unae quia cutis ra raro vitiatur quavis inflammatione aliter quam Erysipelatae; cumque Cantharides introductae intra stomachum antum satis est, non solum generant Gastritem sed etiam flammationem totius alimentaris canalis; adhibitae meram sicationem sequentem restrictae Erysipelatis; cumque quibus vasoribus acribus cute applicatis excitant Erysipel tem, pulmonibus pneumoniam, oculis ophthalmiam cultate indita irritandi sentientem fibram animalem.

Scitum est hepar recipere totum sanguinem revehen m alis chylopoeticis visceribus ascendentem primaum partum esse maximum indicium Erysipelatis; nnon illinc necesse sequitur hepari repetentem anguinem illis partibus repletis insalubri vitiato acido ue humore aliquanto corrumpi. Tute habeamus pro certo t magnam vim sanguinis venosi eruentem hepari et ob pro prietatem ejus secretionum sanguine venoso omnino ecernere; acsi sanguis qui redit ab illis partibus

epletio acido acido humore vitietur, ejus secretiones si ul-
e sint eodem modo vitiabuntur; sin autem hic sanguis
on vitietur acido in partibus de quibus discedit, quô evenit
uod in Dyspepsia ubi morbus acida materia generata
vitiet in stomacho debile, hepar semper torpet vel per-
turbari? Dicen hepatispe torpentem vel perturbantem con-
sensu tantum probet demonstrationem ignorantiæ. Dup-
e si torpeat consensu stomachi oppressi materia asces-
enti, quomodo evenit cum hæc ascescens materia, quam
n Cholera Morbo, excitat vomesin hepar usque ad vomitos
teratos pariter torpeat. Hîc doctrina consensus de-
st quia fingit hepar torpere consensû partis, quæve-
lementer excitatæ. Quecunque officia sint hepatis
pinio adhibeta mihi, ullis atque consentiet. Si bilis
it excrementi atque ejus secretio tantum designetur
orpore excimere quæ non amplius possint stimulare intes-
ina adstrictioni relaxionique, torpor vel perturbatio

epatis excitatus accessentia primarum viarum certe
occet retinendo aut obstando ejus salutari secretioni;
et si bilis sit recrementi necessaria que formationi
Chyli hic torpor vel perturbatio inhibendæ ejusformatio-
ni; postremo si secundum quosdam Physicos nuper
-tos unum munus sit hepatis adjuvare pulmonibus
in efficiendo chymicam mutationem sanguinis certe
occet inhibendo illæ mutationi. Si prima suppositio
sit verasc, est retentio materiæ escqua corpus nlevatum
nipet; si sit secunda, Chylus, lympha quæ maxime
interest, deportata sanguine per totum corpus tam necessa-
ria viribus non potest salubriter secerneri, sed si postrema
sequitur sanguinem impurum esse. Illuc nervo-sangui-
neæ temperiei, cutis clarce oculique cæruleo, fortasse deducens
morbum majoribus, stomacho repletus acido, non amplius im-
pulsu frigoris aut aliarum causarum, quæ accumulant
irritabilitatem cutis, egebit aggressu veri Erysipelatis affici.

Fuerunt qui censebant inflammationem cuticularem
on amplius esse concernere naturæ corpori eximere noxiam
materiam in sanguine mixtam; forsitan jure, quia anno-
tamus posteaquam eruptionem apparuisse, ægrotantem valde
relevari, attamen conamine minime salutari. Adhibenti pro
vero effectum sine dubio pravum causæ insequens locatæ
visceribus chylo-poieticis fingunt probare actionem ver-
sus omnino dirigendæ auxilio eorum qui aut amiserunt
salutem aut periclitantur. Eodem modo si mitigatio indicium
in Erysipelatæ adhibeatur probare conamen esse salutare na-
turæ, adhibenda gangrænam inflammatione insequentem co-
namen esse pariter salutare naturæ quoniam eadem mitiga-
tio utraque videndæ. Huic objicitur, nempe ægrum seve
convaluisse posteaquam pars gangrænæ affecta fuerit, ple-
rumque mori; attamen inflammatio Erysipelatis non mi-
nus prævaleat ea antiqui mortificationum cederetur vi
conservatrici naturæ, summam mortalitatis non multum
esse. Hesi natura inflammatione cuticulari egit in
morbo eximendo gangræna sæpissime insequens vincit

am pariter intentam fuisse ægrotantem subtrahendo.

In remediis morbi necesse est acidam materiam canali alimentari amoveri, hepatis salutarem secretionem restituere, vasa cutanearia relaxari esse ac febrem irritationi mitigari. Illis omnibus peractis, vires corporis sustinere, vasa cutanea debilitata morbo firmare consanina nostra adhibenda. In primum consilium efficiatur. Præscribe magnesiam; pro secundo tertioque venæsectionem cum emeto-cathartico; pro quarto omnia hæc remedia conjuncta cibariis exiguis, medicines deprimentibus sudoremque excitantibus amovendoque affectioni restrictæ, quæ posthæc tractabo.

Hæc remedia aliquando parum necessaria, quoniam quædam exempla fere nullis egent. Sin morbus valde sæviat, ne detinerer metu debilitatis usu omnium, quia propria experientia duxi existimare ægros raro mori debilitatis sed sæpissime corruptione partium; eos feliciores esse qui obtulerant ea impedire. Sine dubio morbus iste notas typhoides præse gerit; autem quando reminiscitur morbos typhoides characteris fere semper congestione associari, quæ

pietant congestionem removere, dum vires possint sustinere: erit felicior in morbo sublevando.

Magnesia certe remedium aptissimum acido auferendo nisi aeger multum tabefactus sit; ibi sit necessarium adhibere aquam calcis conjuncta qua medicina certe roborante; quia si cedendum debilitatepmorbum semper orii averemus aegrum ne faciamus infirmiorem. Postaquam magnesia adhibita sit, murias hydrargari magis faustè efficiat. Quomodo hoc sit non intelligo sed ad sententiam Professoris Polteri, accidunt nonnulla exempla vrois mi hi confirmantia ejus veritatem. Postea magnesia et oul- murias hydrargyrus inflammatio rapide discedit etiam sine desquamatione. Olim hominem vidi faciê tumidâ ad occlusos oculos, cujus inquietudo qualis erat (ut verba ejus usurpare) non posset ore eloqui, neque mente altius concipi, cum duro simoque pulsu salientique, lingua albida fœdataque et angore juxta venas portarum, postaquam adhibitæ sint portio magnesiæ, copiosaque enæsicto inscentiæ emeto-cathartico tantum sublevari

inflammationem, quæ confestim definiret cum effusione
ori, resolutione sanari modo unius diei.

Quod pertinet ad dictam opinor prohibitionem ab
a cibo animali ad extrema impulsam fuisse; etenim
pleraque exempla sunt annotanda aut in puris, senibus
que debilitatæ depravatæ habitus stomachum languidus
in quibus cibaria omnino vegetabilia neque corroborant
vires pepticas neque eas sustinerat totius corporis. In
hoc exemplo quam in omnibus aliis debemus regi
indicis; quamdiu temporis habitus ætatesque homi-
num distent, ac quamdiu occasio morbi regitur alia
vi dispari, regulæ utcunque idoneæ non possint dari
quæ congruant omni exemplo; etenim usque ad
longævitatem vivamus, sed nihilo magis videamus
duo exempla omnino paria, quum nonnullis necessi
est præscribere cibum parcissimum, sunt alia quibus
medicamina quam maxime foventia, firmantia que
vise sufficiunt retinere animum terrestri domicilio.

Quum oblectatio in satietatem incidit, forma nobilisque olim pulchritudine et vribus affluens marcescit, onerique succumbit multarum hyemum, cumque visus obscuratos lumina que cordis igni ferventes olim micantia, in orbitis subsident; cumque pro fuscis crinibus venustam claramque frontem juventutis decore ambientibus, sparsi capilli seni, notantur in asperis sulcis curæ, cumque vultus olim sedes rosæ, solum gaudiis senectutis lætatur, denique cum omnia indicant procepsum rapide volvenitium annorum cum amplesseni majorum clementia allaturum esse piget reminisci, hunc morbum sæpissime senium afficere memoria — Cumque lecto adstiti, gemitumque fortis audivi prespi hominis; cum flaccidum manum huc illuc jactatum vidi, tristem præmonitum mortis! cum sensi frontem ferventem acerbitatem spiritus que quas non potui levare, etsi cognovi cum citô futurum esse in ea clariore regione, qua impii cepant vescare, fessi quiescunt; moestus sum inanitate totius humanæ peritiæ. Est ad hue solatium est

homini benevolo, licet debemus omnes bibere omniferam potionem mortis, plurimum posse mitigari angores animæ descedentis; licet aliquando nostrum sit astitere spectantium dolorem quem nequaquam lenire possit; nostras manus sæpe id tenere quod afferat pacem pectori afflicto sæpe ei protendere mollia vela-omnidiu vigilanti lapitudine magnâque molestiâ; restituere parentem orbandis, virum uxori etiam quum Amor ipse desperaverit.

In præcipiendis diaphoreticis semper adhibeo sedativa quum febris est vehemens, stimulantia quum defectio virium manifeste apparuit. In exemplo priori sæpe probavi venæsectionem cum emeto-cathartico esse aptiores: post eorum adhibitionem si adhuc febriat, præscripsi nitratem potassæ cum minuta portione Tar. antimonii; si magnam irritabilitatem eruptio inducit febre exsiqua in modo Pulveris Doveri. Remedium sulphur est aptissimum huic morbo quoniam ad benignam actionem cuti, accidit aperientem

intacta atque esse. In curatione cavendum potissimum ne
e frigore objicitur ne relabatur. Fertur gymnosophistarum
medicum quo sudorem excitent in morbis diuturnis
articularibus felicissime adhiberi; nisi inflammatio
valde torpet nollem illud prescribere quod fere
inducit inflationem membranae cellularis. Corpore mag-
nopere defecto, si desideremus remedium roborans, simul
atque sudorem excitans, in plantis fleaque idonea
speramus.

Quod attinet medicamina externa, inflamma-
tionem parum vehementem leni potamus lotione astringenti
absolvere. Ad usum vegetabilis astringentis nonnulli
suadent sed quamdiu nobis sit acetas plumbi vel il-
lio egebimus. Ejus mitis solutio potior. Si adsint vesic-
ulae oportet eas operiri lymphamque effusam imbibi spon-
gia molli. Excinde si partes inflammatae non commoderate
erviat modicum amyli ea insparsum jucundissime agit.
In exemplo posteriori oporteat uti cataplasmata emollienta
brevi auferendo ut inducat suppurationem huic morbo

omnino insalutarem. Hirudines utiles ea conditione ut non applicatae in habitu pravo parti inflammatae pro-
nores, quoniam morsus eorum gangraenae inclinant.
Tametsi in iis habitis sani nequaquam timendum
prospera eventu frequente quoniam ad portionem ipsam
inflammatam adhibitae sunt. Ubi desint hirudines,
possumus uti cucurbitis eadem praemonitione. Si gan-
graena imminet aut jam existit, fortiu vesicatoria de-
bent admoveri. Postaquam inflammatio evanu-
rit, lotiones lene astringentes possint adhiberi, vasa
cuticularia roborare.

Aliquando inflammatio cuidam e visceribus
maxime cerebro transfertur. Huic oportet omnibus re-
mediis antiphlogisticis uti, venaesectione utriusque modo,
cathartices pilulis lutis glacie comminuta lotione arescenti
et ceteris —— Sed maxime nitamur de integro in-
flammatione cuticulari excitandae. Huic aptissima
adjumenta fricatio, vesicatoria, balneumque sale ma-
rino saturatum. Perverá existimare debent omnino

Phrenitis. Quum translatio infausta veniat parva spes magna apprehensio. Vise occurrit nisi incisantia morbo primario fractis utque ad depletionem necessariam curationem nequeant ferre. Posteaquam operam maximam dederimus sæpissime veniet nihilo prodesse: Attamen volatium præbet incipiente morbo arcessitos nunquam non posse ejus exitui lethali prohibere. Ei exemplum huiusmodi aspectavit dolore dementem vehementer sævire subjectum, quam vultus furiosus incensusque, indicare nequeunt; audivetque voces murmuratas delirio monentes spiritum resecatum ardere desiderio mortalis carceris aufugendi, regionisque petendæ quâ in luce clariori, vallibusque amenioribus immunis expatietur malis permultis homini præmonentibus mortem; ei qui visit ferocem aspectum aut audivit insanum risum insani simul secumque volventi eum aspectare audire que risum hominis instar sui, illud volatium potest adhiberi.

Multum magis inotueram scripsi, forsitan

ungues quam sequando legitur; narratio morbi non opit unquam juvare, atque a juvene qualis ego paucei respectant discere, autem quiequid si impendat fatum impei opus confecturum jucundissimum juvenilis ætatis recensebo.

Dissertatio

de cerebri anatomia,

judicio

Praefecti Regentium

Professorumque

academiae

Mariae Terae

pro gradu

Doctoris Medicinae

submissa

A Maurice Morrison.

Hac die primo mensis martii

1831

Professori Nathan Smith
hic conatus inscribitur
ab Auctore

Mi Care Benefactor,

Credo nullam linguam itaque eloquentem pape expressionem dare palpitationibus internis gratitudinis. — Ergo quamvis officium pupilli exercean versus praeceptorem thesem tibi dedicando; tamen eloquium his affectionibus, quibus es profecto dignus, in potestate mea non est. Cum, reflecto de claritate, qua me ducebas contra excelcitatem asperam scientiæ, et de munificientia, qua particularis istam intelligentiam, cujus papesiane insignis es, et de cura paterna, qua deducebas vestigia mea per labyrinthos philosophiæ medicalis, — cogor dicere, quod debeo plus tibi solo, quam omnibus personis, quas unquam visi. Si enumerem haec attributa, quibus te ut civis et philosophus ornaris, repetitio duntaxat rei sit, quam millia jamdudum proclamaverunt: "quare gaude tuo isto tam excellenti bono". De vestra benevolentia versus me multum dicere papum, sed quoniam mihi restat confirmare actionibus meis quas ore meo loquutus sum, absistam, ne permittendo scintillare cor, quod salute vestra ardet, transcendem limites, quos formula prescribit. ---- Maurice Morrison

Cerebrum est viscus, quod in cavitate cranii situm, quo a violentia externa defenditur. Membranæ, quæ cerebrum involvunt, tres sunt: dura mater, membrana arachnoidea, et pia mater, prima fibrosa, secunda serosa, et tertia tunica vascularis est; nihilo minus hæ omnes quoque per canalem spinalem extendunt, et spinalem chordam involvunt. Dura mater membrana fragrandi tenacitate et casio colore est, superficies superior ossibus adhaeret, a quibus nisi cum difficultate separi non potest. Apud fundamentum cerebri, dura mater quam altero loco ossibus firmiter magis connexa est, ibi emittet processus parvos per numerosa foramina: aliqui processuum arterias et nervos involvunt, et in illos gradatim perdeuntur. Arteriæ numerosæ duram matrem sanguine suppeditant, quarum largissima est arteria meningealis, ramus arteriæ maxillaris internæ, in ossa sphenoidali apud fundamentum cranii per foramen spinosum intrat, et striam sibi subedit, ut ascendit expendere se in membrana in angulo inferiore et anteriore ossis parietalis. Dura mater per medium ramorum de occipitalibus, vertebralibus et pharyngis arteriis quoque suppeditata est. Hæ arteriæ duræ matris, quoque, ossa superimposita sanguine saginant. Processus a

cerebrali superficie dura matris in cranio descendunt, qui cavitatem cranii in divisionibus pluribus dividunt: hi processus duræ matris sunt septum cerebri, tentorium cerebelli, et falx cerebelli. Sinus magnus longitudinalis marginem superiorem septi cerebri perrerat. margo inferior septi parti mediæ commissuræ magnæ cerebri congruit, sinus longitudinalis inferior in hac plica membranæ involuta est. Tentorium cerebelli simile areæ transversæ in parte posteriore cranii panditur; margo convexa hujus plicæ fastigio transverso ossis occipitalis connexa est angulo inferiori parietalis, angulo superiori petrosi, et posterioribus clinoideis processibus sphenoidei. Ubi cerebrum removetur, falx cerebelli exposita est: membrana densa, sed parva est, et re levi cujus fundamentum supra tentorio adhaeretur, apex est infra apud foramen magnum, margo convexa spinæ occipitis adhaeret, sinus occipitales inter laminas ejus involuti sunt; margo convexa ejus hemisphericola divisiones cerebelli separat. Sinus sunt similes venis, et sic describuntur: longitudinalis superior et inferior, rectus, lateralis dexter et sinister, petrosi, cavernosi, rotundi, transversi, occipitalis et torcular Herophili, Ubi sinus longitudinalis apertus est, chordæ Willisii sunt in medio sinûs utrinque videri, quæ extendunt a tunica

a latere uno ad alterum. Numerus parvorum albarum corporum decumbentium in hoc sinu aliquando singulatim est, sed frequenter magis in se convolventur: glandula Pacchioni appellata sunt. In additione ad numeros parvas venas a cerebro et dura matre hic sinus decem vel duodecim magnos venas prope vertiem accipit a superficie superiore hemispharicorum amborum. Sinu superiore longitudinali descripto, nunc venio ad descriptionem inferioris, de quo non est necesse multum dicere; quia non semper adest, vena parva simmilissimus est, et parvas venas a corpore calloso accipit, sinus rectus in linea media ponitur inter laminas basis falcis, et supra tentorium involutus est. Sinus laterales sunt largissimi, in forma similes ellipsi sunt, quorum uniusquisque primum prorsum, et exterius in strua ossis occipitalis procedit, et in angulo inferiori parietalis, tunc partem mastoidiam ossis temporalis descendit, et intedens os occipitale prorsum vertit, et foramine lacero posterio ingresso in vena jugulari interna terminat. sinuum uniusquisque lateralium numerosos parvas venas accipit a lobis posterioribus cerebri, et cerebelli. In fundamento cranii sinus sequentes siti sunt: sinus cavernosi utrinque a processu anteriori clinoidis ad punctum ossis petrosi seuus latus corporis ossis sphenoidalis extendunt

in hoc regione dura mater in laminis duabus dividitur - vena ophtalmica in parte anteriori hujus sinûs aperit, et duo sinus petrosales ab ea ad sinus laterales retrò extendunt. Sinus petrosales sunt quatuor: duo utrinque superior et inferior: sinuum unusquisque a cavernoso sinu retro exurrit. Sinus transversus ab uno petrosali sinu inferiori ad alterum extendit super processum cuneiformem ossis occipitalis. In falce cerebelli sunt duo parvi sinus: occipitales appellati sunt in quibus venæ a cerebello, et sæpe a canale vertebrali se evacuant, in torculare Hierophili aperiunt. Torcular Hierophili est receptaculum, in quo sinus plures terminant in situ congruit tuberi ossis occipitalis, et inter laminas falcis et tentorii involvitur; in forma est simile ovo. sex apertiones ei sunt: sinus laterales utrinque, sinus longitudinalis supér, sinus rectus antè, et sinus occipitales infrà sunt. Tunica arachnoidea est tunica secunda cerebri, nitida et tenuis membrana est, et tactum eruditum exigit eam dipscere, et demonstrare. membrana arachnoidea e medio pia matris elevari potest inflando columnam aris inter has membranas - Tertia tunica cerebri est membrana vascularis, vel pia mater, structura cujus est mollis et tenuis, firmitèr cerebri adhaerit, et sequens involutiones ejus cum

substantia ejus gradatim adjungitur. ...
Descriptis membranis, nunc venio ad descriptionem cerebri, et nervorum, qui ab eo oriuntur. Cerebrum est pars largissima visceris, ab fissura profunda in duabus partibus equalibus dividitur hemisphaerio dextro et sinistro. Unusquisque hemisphaeriorum in tribus lobis ab inferiori parte dividitur, quarum anterior in lamella superiore orbis recumbit; lobus medius fossam mediam in base cranii occupat; lobus posterior in tentorio habitatur. Cum pars superior hemisphaerii uni a planitia aqua cum commissura magna cerebri removatur, videri est spatium album circumscriptum, a linea substantia cinerea removendo hemisphaerium alterum a planita aqua cum commissura magna cerebri centrum magnum ovale exponitur, quod est linea substantia cinerea circumscribens massam albam centralem. Commissura magna cerebri nunc in centro cerebrali videtur; sed propior ossi frontali quam occipitali, et ea raphe divisa est. Ventriculi laterales detegûntur dividendo corpus callosum brevi intervallô utrinque a raphe; et septum lucidum descendens in linea media ab eo ad superficiem superiorem fornicis videtur. Ventriculi laterales septo lucido divisi sunt, quod in quartis laminis consistit: duo quarum sunt utrinque, quintus ventriculus inter

has existit - Ventriculi laterales a medio cerebri in anterioribus et posterioribus lobis extendunt - corpus unus ~~[illegible]~~ cujusque retro transit, cornu posterum obliqué prorsum et exterius descendit, et pone fissuram Sylvii, et infra cornu posterum terminat - Fornix supra corpus callosum et septum lucidum horizonti ponitur, et a velo interposito et plexis choroidis jacet. Quamvis septum lucidum, cui suprà alludebam, est pars intra ventriculos laterales, tamen ha cavitates communicant per foramen quod appelatur foramen commune anterius. In cornu posteriori ventriculorum est parva eminentia hippocampa minor, in cornu inferiori hippocampam majorem videmus extendentem sicuti aream cavitatis, et terminantem in expansione tuberculata, pede hippocampa seus marginem interiorem ejus est arcta alba copula tania hippocampa vel corpus fimbriatum - In ventriculis lateralibus thalami optici videri sunt: duo alba corpora mutuo tangentia interné, hac commissio commissura mollis appelatur, genus fissura thalamos separat, hac fissura in parte anteriori duit ad foramen commune anterius, et hac foramen est pone commissuram mollem, et inter pediculos glandis pinealis situm Thalami optici videntur duo tuberculi corpus geniculatum internum et externum, sub parte inferiori thalamorum opticorum, Ventriculus

tertius est cavitas arcta in media linea
situs, et terminatur utrinque a thalamis
opticis, supra velo et fornice, infra tubere
cinereo, et loco perforato prorsum columnis
fornicis, et commissura anteriori retrorsum,
commissura posteriori, et glande pineali,
Canalis parva ducit retro a parte posteriori
ventriculi tertii; hac est aquaeductus
Sylvii, vel iter ad quartum ventriculum
Commissura anterior est chorda discreta ro-
-tunda extendens ab uno hemisphaerio ad
alterum, et terminans in radiis prope
fissuram Sylvii. Commissura posterior
pone ventriculum tertium transverse exten-
-dit supra aquaeductum Sylvii, et ante
tuberculum quadrageminum. Tubercula
quadrigemina sunt sub hac commissura
et glande pineali, a plano obliquo duo
superiora et anteriora nates appellata sunt
duo inferiora et posteriora testes appellata
ea supra et pone aquaeductum Sylvii
jacent, qui separat illos a ponte Varolii
nates thalamis opticis connectuntur, et
testes cerebello, hi sunt processus a
cerebello ad testes: hi dividunt ergo
cerebellum, et continui sunt externe
et infra cum denso rotundo albo pro-
-cessu, crure cerebelli, inter hos duos proce-
-ssus lamina tenuis extenditur valvula

Vieussentis appelatur, vel quartus ventricosus. Crura cerebri convergunt et descendunt, et terminant in extremitate superiori pontis Varolii, tertius ventricosus inter ea est, et tractus aptius utrinque circumdant. Pons Varolii, vel commissura cerebelli in cerebello obliquè ponitur, quartus ventricosus aquaductus Sylvii, et tuberculà quadrigemina sunt in superficie superiori et inferiori ejus superficies anterior et posterior in ope quiesit. Pons Varolii ab aliquibus scriptoribus describitur ut portio medullæ oblongatæ, tamen cum ea connectitur tam cum cerebro, et cerebello, denique quasi communis omnibus consideretur. Removendo lobos posteriores cerebri, et dividendo tentorium, cerebellum exponetur, quod in dexteris et sinistris pone et ante dividitur a fossa profunda: hac fossa folium cerebelli recepit. Seus circumferentiam uniuscujusque hemisphæri fissura profunda extendit, apud fundum cujus charda alba videatur hæc est crus cerebelli scriptorum, id pontem Varolii jungendum prorsum ascendit, Dividendo hemisphæria horizonte, massa substantia alba observetur, germinans in fibris tenuibus prope, in centro hujus massæ albæ quæ cum processu ad testes continua supra est et infra cum crure cerebelli est, massa ovalis

substantia cinerea: hac est corpus dentatum vel rhomboidaum. Substantia alba qua a medulla oblongata ad crus cerebelli extendit per hoc transire videt, a quo in quantitate crescit, hinc ab aliquibus scriptoribus ganglion cerebelli appelatur. Medulla oblongata est ista partis alba substantia, qua a margine inferiori pontis Varolii extendit ad chordam spinalem circum pollicem in longum, et a linis longitudinalibus in sex eminentias dividitur, quae parellae sunt. Corpora pyramidalia sunt circum pollicem in longum, a parte superiori chorda spinalis oriuntur, et continentes corpus dentatum fopula superficiali ab eminentiis priaribus seperata sunt, extremitas superior illorum in ponte Varolii continuatur.
Corpora restiformia longiora quam priarbus sunt, fipura seperata sunt, quae a calamo scriptorio sinus lineam mediam posteriorem chorda spinalis continuatur, corpora restiformia suprá in cruribus cerebelli continuantur, hinc aliquando processus a medulla spinali ad cerebellum appellantur.

Cerebro descripto nunc venia ad descriptionem nervorum qui ab eo oriuntur.

Par primum sita infra lobos anteriores cerebri a fissura Sylvii oriuntur, in bulbos ovali terminantur, qui situs supra laminam cribriformem ossis ethmoidei, per quam transeunt, et expanduntur in membranas nasi: nervi sensuii specifici olfaciendi sunt.

Par secundum, vel optici a natibus et testibus oriuntur, per foramen opticum transeunt, et in retina terminant.

Tertium, vel motores oculorum a latere interiori crurum cerebri oriuntur, per foramen lacerum orbitale transeunt, et in quinque musculos in orbite distribuntur.

Quartum a valvula Vieussentis oriuntur, quorum unusquisque canalem parvam inter laminas tentorii intrat, et trajecit ad musculum superiorem obliquum oculi.

Quintum, vel trigemina largissima cerebralium nervorum sunt, a ponte Varolii oriuntur tunica densa membrana fibrosa illis est, nervis spinalibus similes sunt.

Sextum a corporibus pyramidalibus oriuntur, per foramen lacerum transeunt, et in musculos rectos externales oculorum distribuuntur.

Septimum a corporibus restiformibus ad aurem et faciem eunt,

Octavum a corporibus olivaribus et restiformibus oriuntur, per foramen jugulare transeunt.

Nonum a corporibus olivaribus oriuntur, et ad linguam mittentur —

Inaugural Dissertation

on

Epilepsy

Presented to the Faculty

of the

University of Maryland

for the degree of

Doctor of Medicine

in April 1851

By

Seth Shipley

Frederick County

Maryland

Inaugural Dissertation

on

Epilepsy

Submitted to the examination of the Provost and Medical Faculty

of the

University of Maryland

For the degree of

Doctor of Medicine

In April 1831

By

Joseph Slingluff

Frederick County

Maryland.

To Nathaniel Potter M. D. Professor of Theory and Practice in the University of Maryland.

Dear sir,

I avail myself with the greatest pleasure of the opportunity which is now offered to me of returning my most grateful acknowledgments for your kind attention on various occasions during my pupilage.

I feel now especially for the anxiety which you manifested with regard to my recovery during my late illness, has left an impression, the recollection of which shall ever be associated with feelings of the deepest gratitude by the

Author

D.

To Samuel N. Baker M. D.
Professor of Materia Medica & Therapeutics
in the University of Maryland.

Dear Sir.

It affords me the highest degree of satisfaction to have an opportunity in this public manner to offer you my sincere acknowledgments for the instructions, which I have received from you during the time I had the honour of prosecuting my medical studies under your directions & for the many favours you have conferred on me; as a public testimony of my respect & as a slender tribute of gratitude, allow me to dedicate to you, this my first medical essay. Of the politeness with which you have always honoured me & of the kind attention which I received from you during my late illness, I shall ever retain a grateful feeling & be assured, dear sir, that no length of time or extent of distance can ever lessen that real affection, which is now cherished by

Your sincere friend & former pupil
Joseph Slingluff

Epilepsy.

Epilepsy whether considered in its immediate phenomena or remote consequences, is unquestionably one of the most distressing and deplorable of human maladies. Its tendency to impair the understanding, to produce hebetude, and even total abolition of the rational powers, leads often to a condition infinitely more lamentable than death itself. So frightful and distressing a disease could not fail to attract the particular attention of the physician of every age; and we accordingly find it minutely described, & its nature & treatment extensively discussed in the works of the Greek & Roman physicians; Hippocrates describes epilepsy under the name of Morbus sacer; a name which was given to it from its supposed origin; it being generally regarded at his day, as an infliction of the Gods, or of demonic influence; Aristotle treats of it, under the name of Morbus herculeus.

Definition. Epilepsy has been defined to be a disease primarily seated in the nervous system manifested by convulsions, occurring at uncertain periods, in paroxysms, accompanied by temporary loss of consciousness, sense & voluntary motion & terminating in somnolency.

Symptoms The epileptic attack sometimes comes on suddenly without any manifestations of its approach. More frequently, however, certain symptoms precede the occurrence of the paroxysm & of these the following are the most common. A peculiar confusion & distressing feeling in the head, an absent or aweing an confused state of the mind; giddiness; dimness of sight; ringing & loud sounds in the ears; sparks & flashes of light before the eyes; distention of the veins of the head & neck; a trembling & feeling of restlessness in the extremities; an anxious feeling in the præcordial region; starting during sleep; loss of power & of distinct-

articulation; complete temporary deafness & drowsiness; in some instances there is a manifest change in the moral disposition, a short time before the accession of the attack; sullen gloominess with an irritable temper is manifested by some patients. In some cases the mind falls into a kind of revery from which it cannot be drawn, & which terminates often in total insensibility. Occasionally spasmodic twitches of particular muscles, especially in those of the face, precede the attack.

The most remarkable of the premonitory symptoms, however, is that which is technically called aura. The sensation to which this term is applied, & which, I believe, occurs in no other disease, is compared by patients to a gentle stream of cool air directed on the back. This sensation generally commences in the feet or legs, & gradually ascends until it reaches the head, when the patient instantly becomes insensible & epileptic. Some patients are enabled by this symptom to tell with accuracy

the nearness of the attack, & to avail themselves of this intimation to place their bodies in such a situation in which they will be least liable to sustain injury during the attack.
Spicula of bones, tumours, & foreign bodies pressing upon & irritating some nerve, have been found to exist at the starting point of this singular sensation; the primary irritation is however, invariably, seated elsewhere, & transferred sympathetically to the part in which the aura commences.

In many instances, the attack occurs at night whilst the patient is sleeping. In this respect epilepsy differs conspicuously from Chorea, the convulsive motions of which, however violent during the day, are almost wholly suspended during sleep.

When the epileptic seizure occurs whilst the patient is sitting or standing, he suddenly falls down in a state of insensibility, & immediately becomes more or less violently convulsed. In some instances, the convulsive actions of the muscles, particularly those of the

face, are frightfully violent; the whole frame is violently agitated; the eyes roll about; the lips & eyelids are convulsed; the tongue often spasmodically thrust from the mouth, which with the gnashing of the teeth & the foaming at the mouth, give the countenance a horridly wild expression. Sometimes the teeth are violently pressed together; at other times the jaws are widely & fiercely distended; the thumbs are almost invariably firmly pressed in upon the palms of the hands. The spasms are generally of the clonic kind; but in some instances, the muscles remain for a time rigidly contracted, the body being bent either backwards, forwards or to one side, as in tetanus. Occasionally the abdominal muscles are violently drawn in towards the spine. In many instances there are strong erections of the penis, with spasmodic retraction of the testicle & occasionally of a discharge of the seminal fluid. The face is sometimes pale, but more frequently livid, with a turgid state of the veins of the

head & neck; the heart palpitates rapidly; the pulse is usually contracted, small, & irregular & frequent; respirations oppressed, laborious & sometimes even sonorous. About the termination of the paroxysm a considerable quantity of frothy saliva usually flows from the mouth; & in some cases the excretum pass off involuntarily. Sooner or later these spasmodic symptoms abate; generally gradually, but sometimes abruptly. The respiration becomes freer; the pulse fuller & more regular; the countenance more composed; & the patient finally falls into a state of stupor or deep sleep, out of which he awakes with a sense of lassitude & confusion & stupor of mind, which generally continues ten or twelve hours. The countenance exhibits a stupid & vacant expression; and the eyes are dull, staring & wandering. In violent attacks the mind remains obtuse & fatuous & the temper irritable & morose, for several days after the paroxysm. During this somnolent state the patient usually perspires

freely; & the perspiration has frequently an peculiarly offensive smell. Epilepsy, does not however, always, assume such a violent character. Sometimes the attack supervenes suddenly, & after a few moments partial convulsions of the muscles of the face & neck quickly subsides, & restores the patient to consciousness.

In relation to the duration of the epileptic fit there exists great diversity. The convulsive stage generally continues from 10 to 15 minutes, sometimes for half an hour, & occasionally for days. The paroxysms are most apt to become protracted in children. In most instances one paroxysm only occurs at a time — sometimes however they recur in succession, the patient passing from one paroxysm into another, with but a very short interval between them.

With regard to the interval of the epileptic seizures there also exists considerable diversity. In some few cases the paroxysms recur almost daily, in others from a few days to a whole year.

Occasionally the paroxysms occur regularly at the periods of new & full moon. Richter observes that cases arising from gastric or intestinal irritation & from catamenial irregularities, are most apt to assume a periodical character.

Prognosis. Epilepsy seldom proves fatal, except through the intervention of apoplexy. When it occurs very frequently, however, the mental powers gradually fail, until at last a total imbecility or idiotismus is produced, & this takes place sometimes in less than two years. Although the immediate danger of the epileptic paroxysm is not in general very great; yet in relation to its sanability, the prognosis is always highly unfavourable. Even when a cure or suspension of the disease has been effected the liability to a relapse is always considerable. When epilepsy depends on organic disorder within the head, no immediate management can effect a cure. Epilepsy however unconnected with cerebral lesion may sometimes be cured. That variety of

the disease which occurs in young females about the age of puberty, from menstrual irregularities is not unfrequently curable, and indeed sometimes passes off spontaneously after the catamenia begin to flow regularly. The longer the disease has continued or rather the more frequently its attacks have been repeated the greater will be the difficulty, in general of effecting a cure, & when the mind has once become obviously affected or impaired by its attacks, all hopes of a cure may be abandoned.

Causes. Authors say that in some cases of this disease the original exciting cause is seated within the head or acts directly on the cerebral mass, whilst in others the cause is located in some other part of the system & affects the encephalon secondarily; through the medium of the nerves. It is evident therefore that we may with propriety divide this malady into two general varieties; namely into idiopathic & sympthomatic; the latter is in general much more apt to yield to remedial treatment than the former.

In some individuals there appears to exist a constitutional predisposition to epilepsy & it is without doubt in some instances of hereditary origin. Children, especially, it has been observed, are much more liable to this disease than adults; but the age at which there appears to exist the strongest predisposition to epilepsy is the period of puberty.

The exciting causes of epilepsy are exceedingly various. Of these causes some act immediately on the Brain & others make their Impressions on distant parts & affect the sensorium commune secondarily through the Medium of the nerves;

The most common of the former variety of causes are Injuries & malformations of the Cranium; exostosis from the internal surface of the Bones of the Skull; Spiculæ of bones driven in upon the Brain; preternatural distention of the cerebral vessels; various organic affections of the Brain & effusions within the Cranium.

Violent & violent mental emotions frequently

produce this disease by a morbid excitement originating in the Brain. Fear, terror, grief, & other disagreable sensorial & mental impressions have been known to give Rise to epilepsy. Many remarkable instances have been excited by disagreable & strong impressions on the senses, have been reported. Strong odours, sudden & vivid light, load & peculiar sounds & certain colours have produced this disease in irritable habits. This disease has frequently been excited & rescited by a sight of a person affected with the epileptic paroxysm.

Among the Causes that act upon the brain through the general system, gastric or intestinal irritation is perhaps the most common. Worms & indeed every other substance which is capable of producing an irritation in the nervous extremities of the mucous membrane of the alimentary canal, may give rise to this affection, in weak & irritable habits.

The suppression of habitual discharges

whether sanguineous or serous, is another powerful exciting cause, such as suppressed catamenial discharge, healing up of old ulcers, tinea capitis, setons & issues &c. also excessive evacuations, such as inordinate seminal discharges &c various poisons, the abuse of opium in children, the habitual use of alcoholic liquors with irritation from biliary concretions, & urinary calculi, have given rise to this affection.

Habitual tendency to congestion or plethora of the vessels of the brain is perhaps one of the most frequent exciting causes of the epileptic paroxysms.

Proximate cause.

1. The immediate cause of the epileptic paroxysm whatever its essential character may be, is always seated in the brain. 2. In the majority of fatal cases organic & other obvious affections of the brain, particularly of the cerebellum or of the meninges are found on dissection & which we may infer contributed to the excitation of the epileptic paroxysm.

3. The cerebral affection is in some instances primary & the result of causes that act directly upon the brain; In others, probably, in the Majority of Cases, it is 2dary, depending on primary irritations located remoted from the brain.

4. Immediately before the accession of the epileptic attack, it would seem that vascular turgescence takes place in the encephalon & the pressure thus created, in cooperation with the general predisposition to the disease, & the organic cerebral affection, when such disorders exist, is probably the immediate exciting cause of the paroxysm.

<u>Diagnosis</u>. The affection with which epilepsy is most liable to be confounded is Hysteria, when this disease assumes assumes the convulsive form. They may be distinguished however by the following circumstances. In hysteric convulsions the countenance is less livid & distorted there is seldom any foaming at the mouth

or profuse discharge of saliva, nor does it terminate in a profound sleep or in a confused or torpid state of the mind. In Hysteria too there is always present the globus hystericus, involuntary laughing or weeping & in many instances a continuance of a degree of consciousness &c

Treatment. The causes of C. are so multifarious & generally so obscure, that we are seldom enabled to prescribe with any degree of reliance upon general & rational therapeutic principles. When called to a case of C—, the first object of the practitioner should be to enquire into the nature of its exciting cause, its duration, the time & manner of its first attack, the general constitutional habit of the patient, the age, previous or concomitant diseases, his habitual temper & disposition of mind, his manner of living, his probable hereditary predisposition, in short, into every thing which can throw light on the particular character of the disease, & on the constitutional or acquired habits of the patient.

A ligature upon the limb from which the aura arises has been found of service in preventing the paroxysm. In persons of robust & plethoric habits, prompt & efficient bleeding must be resorted to.

In the epileptic paroxysm our principal object should be to diminish the congestion of the cerebral vessels. The immediate danger of an epileptic fit arises chiefly from this condition of the cephalic circulation; for when death occurs during the paroxysm of this disease, it is almost invariably by apoplexy from vascular turgescence or sanguineous extravasation. When the patient is plethoric & the signs of inordinate sanguineous congestion in the head are considerable, it will be prudent to abstract blood & to remove every thing which may compress the veins of the neck or impede the free return of blood from the brain to the heart. It is very doubtful however whether any treatment during the epileptic paroxysm can materially mitigate its violence or shorten its duration. It is almost exclusively with the view of protecting the brain that remediate

measures can be resorted to during the fit with a prospect of advantage.

The most important part of the treatment of E— is during the intervals of the paroxysms, for the purpose of effecting a permanent removal of the disease; with this view we must carefully enquire into the exciting causes & regulate our treatment accordingly.

When there exists intestinal Irritation, Emetics Antacids & Tonics have been of great service. In verminous epilepsy, we must have recourse to anthelmintics. Should the disease have arisen from suppressed perspiration, Diaphoretics & whatever else has a tendency to keep up a regular action of the cutaneous exhalents such as flannel, warm bath, friction &c are indicated. When E— arises from suppressed Eruptions & Evacuations, their Restoration is of the greatest importance; for this purpose we may employ issues, setons, blisters, tartar emetic ointment &c.

E— from local Injuries of the head, have been cured by surgical operations.

The following is a List, of the most approved remedies recommended for the treatment of C— they chiefly belong to the classes of Antispasmodics & Tonics & are admissible consequently, only in irritable, nervous & debilitated systems — Valeriana officinalis — in ʒj Doses.
The Mistletoe, the animal Oil of Dippel, Oil of Turpentine has at present no inconsiderable reputation as a remedy in this disease.
Artemisia vulgaris —
Of the Narcotics, belladonna, Opium Camphor & Stramonium have been successfully employed.
Phosphorus, all the ppts. of the metals as the oxyd of Zinc, sulphate of Zinc, Cuprum ammoniacum, the Nitrate of Silver, Tin, ppts of Lead & Mercury — Galvanism & Electricity — Setons & issues & lastly Music — have been employed with variable success to overcome this distressing Malady

Whatever mode of treatment or remedies be employed, particular attention, should always be paid to proper regulations in

relation to the Diet, exercise & the action of the Bowels of the epileptic patient.

This Essay
on
Puerperal Convulsions, is,

With all due respect, dedicated
To the Provost, Trustees and Medical
Faculty of

The University of Maryland

By

Francis W Pendleton
of
Caroline County
Virginia

March 1831

There is no disease to which a pregnant woman may be subject, so sudden, or so menacing as Convulsions. their attack is always ferocious, and their consequence but too often fatal. And what renders this disease still more formidable is the contradictory directions given for their cure. The young practitioner is bewildered by the opposite opinions on this subject; he either pursues with reprehensible temerity the directions of one, or blameably temporises agreably to the views of a second, or fatally urges the remedies of a third —
The contradictory methods of cure proposed by authors have originated in the pathological views they have taken of this complaint; and from their having but too generally supposed that there was but one species of Convulsions to which a pregnant woman might be liable.
One set of authors conceived that Convulsions arose from the irritation of the uterine fibres; others believed them to be epileptic; and a third party imagined them to be nervous. —
From these discordant views of this terrible disease, arose the various practical directions for the cure. From success hav-

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having attended delivery in some instances, it was hastily believed, it was the only resource; from want of success in other cases, it was given up with too much facility; while in other instances more fortunate, but more rare, Opium was found useful, and it was recommended with a confidence it but ill merited. From this view of the subject it would appear, that success has attended each of the methods just noticed, in the hand of their respective advocates; but that this partial good had persuaded each it was the only plan that could rationally be adopted, than which nothing can be farther from the truth, and of course must have had many victims — Neither of the plans of cure, which have just been noticed, can be uniformly pursued without the most fatal consequences following: it therefore shall be our business, to attempt such considerations of this disease, as are at present most generally received, with regard to the treatment. In prosecuting this plan we shall first advert to the supposed causes of <u>Puerperal Convulsions</u>; secondly, notice the premonitory and ultimate symptoms, thirdly mark the distinguishing signs of each particular species: fourthly, and lay down the method of cure

The causes of convulsions are so completely hidden in

obscurity, that any attempt at a theory of them, until better understood, would not only be futile and objectionable, but might be productive of serious error. We shall, therefore merely state a few of the reputed causes. — Doctor Denman, in his Introduction to Midwifery (Vol II. page 465) says "it is remarkable that this disease so rarely occurs in the country", and "that a remote cause of it may be sought for in the particular influence of the air, or in some change made in the constitution, by the custom and manners of living in cities and large towns". and that "the cases which have happened out of London, have happened in large towns, or among those who might be reckoned among the higher ranks of life". These remarks of Dr Denman's are by no means confirmed by the authors of our own Country, who affirm that a majority of cases are found among the lower class of people; and that the robust and plethoric appear to be much more obnoxious to this disease than the delicate and debilitated in the higher walks of life. How far the condition of the air may be instrumental in producing convulsions, I am not prepared to determine; but that one season is more productive of this disease than another I am by no means willing to admit, but yet cannot absolutely deny — it must be left for further observation

It is said, that every part of the body becomes more irritable during pregnancy in consequence of their sympathy with the Uterus. And that this is especially the case with women whose habits of life, and mode of education are of the enervating kind: and consequently they are more subject to this disease than those women who by education and habits of living, are seasoned, as it were against impressions which might affect either their mind or their constitutions; for it is to both of these we are to look for the causes of convulsions. But I have already remarked, that it is the robust and plethoric who are more liable to this disease. And I may add, upon good authority, that when the delicate and relaxed are seized with this complaint, the convulsions are generally of the hysterical kind: which we shall say presently, are neither so frequent nor dangerous as the other species. Mercurial preparations have, according to Denman occasioned convulsions. And he cites two instances of women having convulsions, preceded by violent headache, brought on by the use of Mercury mixed with the powder used for their hair. But it is difficult to believe that the mercury employed, was the cause of the convulsions; for this metal is frequently employed in the diseases of pregnant women whose labours are neither preceded by headache, nor

followed by Convulsions. An over distention of the bladder and rectum has been accused of occasioning Convulsions. Bandelocque says that the pressure of the gravid uterus upon the descending blood vessels, causing a regurgitation of blood to the upper parts of the body, and the head in particular, is one of the causes of Convulsions. He also adds as causes an extreme sensibility of the uterine fibres, a violent distention of the edge of the orifice of the uterus, and of the parts which form the entrance of the pudendum.— It seems to be a fact now well established that convulsions may become periodical, and return with as much certainly and regularity, as the paroxysms of an intermittent fever. Professor Dewees says "it may also be observed in patients subject to epilepsy, that the fits may return during pregnancy, at their accustomed period, without particularly deranging the economy of gestation—

I now proceed to consider the general premonitory and ultimate symptoms of Convulsions. In almost every attack we may observe it to be preceded by the following train of symptoms, which differ more in intensity and duration than in peculiarity. Headache, ringing in the ears, vertigo, and often a temporary loss of vision— these symptoms continue a long-

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longer a shorter time in different patients; some complaining of them many days, others but a few hours, while others only a few minutes before the convulsive paroxysm comes on. These symptoms are said, so uniformly to prevail before the convulsions take place, as almost to enable us to keep them off entirely, by the timely use of the proper means. Some are said to complain of a violent pain in the stomach previous to an attack of convulsions — this by Denman is considered a more fatal symptom than headache. After the patient has suffered a shorter or longer time with the symptoms we have just described, she is suddenly seized with quickly repeated spasms: the face and eyes are twitched with incredible quickness in almost every possible direction; the arms, legs, and the whole of the body are violently agitated. One side is sometimes more affected than the other; the face becomes flushed, then livid, nay black; the tongue is strongly thrust forward between the teeth, by which it is frequently severely wounded: the respiration at first is much hurried, but eventually becomes almost suspended; the carotids beat violently; the jugular veins are distended: a peculiar

peculiar noise is made by the mouth not unlike what is termed "Cat Spitting:" a froth issues from the mouth, for the most part tinged with blood, from the lacerated tongue; the pulse in the beginning is full, frequent and tense, but quickly becomes rapid, small, and eventually almost imperceptible: the urine and feces are sometimes discharged; a cold clammy sweat bedews the whole body and the fit then begins to subside. This, for the most part, is gradual, seldom or never ceasing suddenly and at once — the convulsive motions abate in their violence: the pulse becomes more distinct and less frequent: the breathing is less hurried and less oppressive: the face loses part of its lividity: the muscles are now agitated only at intervals, and their action resembles the commotion excited by the passing a brisk electric shock through them, and eventually they become entirely tranquil — the patient, however, remains for the most part insensible, and comatose, attended by a sterterous breathing a loud snoring — she cannot be roused by any exertions, for some time, and when she does recover her shattered senses, she is most generally without the slightest recollection of what has passed. This truce is too frequently but of short duration; convulsions succeed convulsions without our being able to determine

determine with any exactitude, the cause or period of their return — When this disease attacks a woman absolutely in labour, or when it is about to take place, we may observe a pretty strict recurrence of the fits with the probable return of the pains, for altho' the patient be insensible to external occurrences, she appears to manifest by her moans, and that suspension of respiration that is common during a labour pain, that the contraction of the uterus has taken place. The face becomes very much swollen, particularly the eyelids and lips: indeed the whole body seems to partake of this intumescence, but none so conspicuously as the face. So completely is the countenance changed, or rather disfigured, that oftentimes we could not recognize the dearest or most intimate friend; nor does this swelling immediately subside with the convulsions which caused it: it frequently remains many days after they have disappeared. Dimness of sight, nay blindness for weeks, are not infrequent consequences of this disease —

That I may be the better able to lay down the rules which should govern our practice, I shall divide Puerperal Convulsions into three species. I shall therefore for the sake of mere distinction, without attempting to defend the propriety of the terms, call the first the Epileptic, the second, the Apoplectic, and the

the third the Hysterical species.

In the first: we have always the premonitory symptoms some days before the attack of convulsions: it is uniformly attended with a strong determination to the head, producing an engorgement of the vessels — it may come on at any period of pregnancy, but most frequently not until some time after the sixth month. This kind almost always produces labour, or at least, is almost always accompanied by it; whether as cause or effect I will not pretend to determine, but am inclined to think the former. This kind may terminate favourably when judiciously treated, or may be converted into the second species. In the second or apoplectic species, we have nearly all the premonitory symptoms just enumerated, but they are of much shorter duration. It may attack like the former, at any period of gestation, but does not; necessarily like it produce symptoms of labour, nor is it accompanied by them. From this it would seem it might be produced by causes independently of pregnancy, tho' this process may be considered as the exciting cause: for it sometimes happens when this is at its height; and is no other ways accessory to it, than by the repetition of uterine efforts, the blood is made strongly to determine to the head. It may therefore be either idiopathic or symptomatic. In the third or Hys-

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Hysterical kind, we have not the same train of premonitory symptoms. If headache attend it is not so severe, nor so permanent: there is frequently a ringing in the ears, and is always accompanied with Globus Hystericus, and palpitation of the heart: the face is much less convulsed: the eyes vacillate much less, while the larger muscles of the body are much more powerfully agitated: the patient is sometimes very obstreperous: and the muscles on the posterior part of the body are almost always violently contracted, so much so sometimes as to raise the woman in the middle like an arch while her head and feet nearly touch each other. This circumstance has been considered as a very decisive mark of this species of convulsions. The face is much less flushed than in the former kind: but is seldom found pale. There is no frothing at the mouth; and that peculiar sibilating noise which so strongly characterises the first species and perhaps the second, is entirely wanting in this. the patient for the most part; after the fit has subsided can be roused to attention, by a repetition of efforts, for this purpose, or will frequently become coherent so soon as she recovers from the fatigue and exhaustion by her violent struggles; and tho' she may lay apparently stupid, she will nevertheless sometimes talk or indistinctly mutter. The pulse is much less disturbed, nor does it

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acquire that extreme velocity and tenacity that it does in the other kind, for respiration is never so near being suspended. This kind attacks women of delicate habits, or those who are habitually subject to Hysteria. The recovery from this is always more rapid, and has rarely or never left imperfect blindness.

From the view which we have taken of Puerperal Convulsions it readily occurs, that each particular species requires a somewhat different mode of cure; and that on the discrimination much of the womans safety depends.

Mode of Treatment. In the first, or Epileptic species, our great dependence must be placed upon bleeding. This must be done promptly and copiously, or no good can be expected; and one efficient means to render this serviceable, is that the blood should be abstracted as rapidly as possible in a given time; to ensure this large veins should be chosen, and large orifices made. The jugular veins are opened with a decided advantage over the veins of the arm, as the blood flows more freely, and is immediately derived from the head, the part more particularly involved in this disease. The drawing of the blood suddenly cannot be too strenuously insisted on, as on this circumstance alone, sometimes

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will depend the success of the operation. It is a fact well known, that a large quantity of blood, may be so gradually abstracted from the system, as scarcely to make any impression on the arterial system. When this obtains, then no advantage is gained, as the force of the arterial action is not weakened by the operation; nay, sometimes, we are persuaded, mischief has arisen from this kind of bleeding; for the arterial system, in consequence of being relieved of part of its load, when in a state of depression, acts with renewed vigour, and augments the existing mischief. The well known fact of syncope being more certainly induced by suddenly emptying the vessels, shows that the good derived from bloodletting, is not simply from the number of ounces that are taken from the system, but is owing to that peculiar effect, which this circumstance has upon arterial vigour; for the same, or even a greater quantity allowed gradually to escape from a vein will have no such effect. If it be asked what quantity of blood should be drawn in any given case? I answer, I would bleed until I had abated the severity of the fits, or until I had arrested their repetition. This may be effected sometimes by thirty or forty ounces

suddenly

suddenly drawn, but it may require upwards of a hundred in the course of a few hours. Besides bleeding generally and topically, which should not be omitted, other evacuations come to our aid, and are to be promoted, such as purging, enemata of stimulating ingredients &c. The application of cold to the head, as bladders filled with pounded ice, cold water &c, should not be neglected. Sinapisms, and blisters, have been applied to the head; but from the nature of their operation, I am not inclined to think favourably of the practice.—

Mode of Treatment in the second or Apoplectic species.—

The only difference in the treatment of this, that is very important, is that bloodletting should, if possible, be more promptly employed, and more extensively used than in the former—for if an hour be lost, the patients doom may be sealed. And it should not be disguised, that the patient but too often falls a victim to its violence, notwithstanding all the means that can be employed. The warm bath is a remedy also employed, than which none other has been prescribed with less attention to the state of the system. Hence the conflicting opinions of eminent writers upon its effects.

Dr Denman observes "there have been women with convulsions

convulsions, who were freed from them only during the time they were in the bath; and that he had heard of cases of their being actually delivered in the bath without any ill consequences to mother or child". Dr Bard says "the warm bath, always a safe, and frequently an efficacious remedy, should be tried as soon as it can be got ready— The patient will sometimes remain free from convulsions as long as she continues in the bath. Should the fits return on taking her out, let her be returned to the bath, and delivered in it". The London Practice says "it has been directed that the patient be put in a warm bath; but experience contradicts its use. The fits have been found to be more violent in it; and the patient is liable to bruise herself, and be otherwise much injured". I should not be disposed to use it at any rate, until due depletory means have been employed; then it may aid, in placing the parts in a condition favorable to delivery.

Mode of treatment in the Hysterical Species. This species is much more rare, than those we have already mentioned; it is also much less mischievous. It may occur at any period of pregnancy without necessarily derang-

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deranging its economy. For the most part, the convulsions continue longer, but are evidently not so threatening. They sometimes cease suddenly, and the patient, will frequently recover her senses, and anxiously enquire "where she has been, and what is the matter". The fit may take place during labour, but this is rare when it happens before labour, it does not appear to have any agency in producing it. Its cure is much more simple and certain than the other kinds; requiring precisely the same treatment as when this disease happens to women not pregnant. Delivery is rarely considered essential to the welfare of the patient; unless it attacks when labour is pretty far advanced, and seems to arise from the irritation given by the head of the child suddenly distending the mouth of the uterus: in this case, to deliver may be important as it immediately removes the cause of convulsions. This form rarely requires more than one bleeding, and that not very large. After we have taken away blood, which should be done when the pulse is full or tense, we may safely administer opium, with asafoetida and other antispasmodics, which will generally, pretty speedily arrest the disease. Having the bowels opened is important; and often the only way of effecting this, is by injections

Whilst the Physiologist has laboured to investigate the cause, the Physician has been equally zealous to find the remedy for convulsions, especially for the two first species. Having traced it to its connexion with, and dependence upon the state and action of the uterus, delivery became the consummation to be wished. It was therefore advised "in all cases where practicable, to dilate the Os Uteri, and deliver immediately. But careful observation proving that the greater part of those thus delivered had died, their deaths being apparently hastened by the operation, however carefully performed. Dr Ross of St. George's Hospital had the courage to declare his doubts of its propriety in all cases; and the correctness of this opinion is now generally acknowledged. Denman generally assisted in every fit: but being soon convinced that this endeavour brought on, continued, or increased the convulsions, he desisted and left the work to nature: and concluded as a general remark, "that women who fall into convulsions in the beginning of labour, ought not to be delivered by art." "Burns" agrees with those who are against forcibly opening the Os uteri, but agrees also with those who advise the woman to be delivered as soon as can possibly be done without violence

violence. He was convinced no rule of practice was more plain or beneficial. Delivery did not always save the patient, or prevent the recurrence of the fits; but he thought, it did not follow, that it ought not to be adopted." After much observation Bandelogue concludes" that we ought not to be in haste to deliver, when nature seems disposed to do it herself, because nature, notwithstanding the disorder of her functions, can perform in a short time, what we could not obtain but with an abundance of efforts. And that we may in many cases, accuse those physicians of too much precipitation, who have conducted themselves differently, instead of giving them credit for the success they flatter themselves, they have obtained." Whilst thus looking to delivery as the most efficient or probable means of a favourable termination, the physician carefully avoiding timidity or rashness, should assiduously employ all the resources of the profession, to mitigate the effects or prevent the return of convulsions. In violent cases, prompt and decisive measures only can save the patient. Nature seems to be deranged, and her efforts tend to defeat her own purposes. Art is then required to relieve the organ assailed, to remove the causes of irritation; and, recalling nature to her duty, to restore order to

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the system. The Brain is generally the principal sufferer and claims particular attention. The apoplectic symptoms warn us of immediate danger, and experience proves they are most successfully subdued by the unsparing use of the Lancet. The system must be relaxed, and put in a state to admit of speedy delivery.

So simple, clear, and void of all ambiguity are the rules for the delivery of a patient labouring under Convulsions, that it is unnecessary for me to detail them in this place and indeed such is the inordinate, yet unavoidable length of this essay that I fear I have long since exhausted the patience of those whose province it is to examine it.

An

Inaugural Dissertation

on

Inguinal Hernia

Submitted to the

Provost and Professors

of the

University of Maryland

For the Degree of

Doctor of Medicine

By

Hiram W. Cochran

March 1st 1831

Inguinal Hernia

The word Hernia is derived from the Greek ἔγκρος a branch, because it protrudes forwards. By the term Hernia in general we mean a protrusion of any organ or viscera through the walls of the cavity in which they are contained. But by this term Surgeons imply a protrusion of some of the abdominal viscera through the walls of that cavity. Dr Cullen defines it to be an ectropia or displacing of soft parts though still retained within the skin and other integument. A Hernia may occur at almost any part of the abdomen. Thus we have, Ventral, Umbilical, Femorae, Inguinal Hernias &c according to the place at which they are protruded. But as it is not our intention to speak of Hernia in general, we shall confine our remarks to one of the above varieties, viz Inguinal or Scrotal Hernia, which is a protrusion of some of the abdominal contents through the abdominal ring into the groin, it is now called bubonocele, but when it descends into the scrotum it is termed oschocele.

The cavity of the abdomen is always completely filled by its viscera, and its walls are admirably strengthened by the peculiar arrangement of its muscles. The fibres of each crossing that of the other in which it is in contact, transversely, thus forming a complete net work. The abdomen is acted upon by two opposite forces which counterbalance each other, the viscera acting against the parietes, the parietes reacting upon the viscera forming an equilibrium. But certain parts of the abdominal wall being naturally weaker consequently make a much feeble resistance to the action of the viscera especially at the inferior part or that part which extends from the pubis to the anterior superior spine of the ~~[illegible]~~ ilium and these parts are sometimes

further weakened by wounds, malformation &c.

We shall now give some account of the parts concerned in Inguinal Hernia. Coming down over the abdomen, between the external oblique & subcutaneous fat and skin, there is a lamina of condensed cellular tissue called fascia superficialis, as it descends over the abdomen, it becomes a little thickened at the inferior part, especially where it passes over the external ring; at this place it sends off a few transverse fibres over the superior angle of the ring, giving it a rounded appearance and materially strengthening it; it then passes down over the groin at which place it becomes extremely thin and then passes over the thigh. It is in fact a portion of the Fascia superficialis which covers the whole body. It is important in as much as it becomes one of the investments in Inguinal Hernia

The external oblique arises from the seven or eight inferior ribs near their cartilages, by a number of digitations which interlock with those of the serratus magnus anticus and is connected at the three inferior ribs with the latissimus dorsi. The muscular fibres run obliquely downwards and forwards and terminate in a broad tendon, which is continued over the abdomen and is inserted into the two anterior thirds of the ilium from the anterior spine of which it stretches across the spine of the pubis, forming what is called Pouparts ligament into the ensiform cartilage and the whole length of the lenia alba, at the inferior part the tendon of this muscle splits into two portions called pillars or columns, the internal ~~splits into two portions~~ is attached to the symphisis of the pubis, the external to the spine of the pubis, thus forming a triangular opening which anatomists

have pleased to call the abdominal ring. The superior angle of this opening as we have before said is strengthened by a fibrous sent off by the fascia superficialis. It is through this opening the spermatic cord passes in the male and the round ligament of the uterus in the female.

The internal oblique arises from the whole of the spine of the ilium from the fascia lumborum and from the outer third of Poupart's ligament. The fibres run in different directions, the posterior portion runs obliquely upwards and inwards, the middle portion lies obliquely and some of the fibres run transversely and the inferior portion runs obliquely downwards and is inserted into the seven inferior ribs and into ensiform cartilage. Its tendon divides at the semilunaris into two portions the one going over the rectus with the tendon of the external oblique and is inserted into the whole length of the linea alba, the other going under with the tendon of the transversalis passes into the linea alba as low down as halfway between the umbilicus and os pubis, at which place it passes over the rectus and is inserted into the lower part of the linea alba. The inferior edge of this muscle does not descend so low as the last described muscle but the fibres extends in nearly a straight direction over the spermatic cord and is attached to the ansa of the pubis. A fasciculus of fibres is sent off from this muscle over the spermatic cord and is continued down to the cord till it becomes insensibly lost in the tunica vaginalis, it is called the cremaster muscle.

The transversalis muscle arises from the inner parts of the cartilages of the seven lower ribs, from the fascia lumborum, from the whole of the spine of the ilium internally and from the

ruts part of Pouparts ligament, at the lineæ semilunaris it joins the tendon of the internal oblique and is inserted into the lineæ alba, except at the inferior part and cartilage. It is manifest from the description of the two last muscles that there is a place not supplied with any covering from the muscles or their tendons, but which is covered by a strong fascia called fascia transversalis. This fascia comes down over the abdomen between the peritoneum and transversalis muscle, running across this space it goes under pouparts ligament; when it joins the fascia iliaca which comes down over the posterior part of the abdomen passing over the psoas and iliacus internus, muscles. They join at this place & form the femoral or Hoys ligament. The cord perforates the fascia transversalis a little above the inferior margin of the transversalis and internal oblique muscles and it passes obliquely under their edges on its way to the scrotum and when it has arrived at the external ring. (for the place where it perforates the transversalis fascia is called the internal ring) it is embraced by the cremaster muscle which accompanies it into the scrotum. The inguinal canal is that space from the internal to the external ring. It is through this canal the intestine passes in bubonocele or inguinal hernia it is bounded anteriorly by the tendon of the external oblique, posteriorly by the ~~[illegible]~~ transversalis fascia superiorly by the margins of the transversalis and internal oblique, & inferiorly by pouparts ligament—

The epigastric artery arises from the external iliac just be~~fore~~ it passes out to the thigh— It runs

obliquely upwards and inwards, behind the upper angle
the external ring and spermatic cord to reach the rectus
and inosculate with the internal mammary coming down
from above. The place at which this hernia commences is
the internal ring or that place at which the cord per
forates the transversalis fascia, a nuckle of intestine being
(in not this point already weakened by disease) for it gen
erally occurs in cachectic habits) or violent exercise, it is
protruded, carrying before it a fold of the peritoneum. It
passes through the inguinal canal, which we have alre
ady described, over the cord and on the inside of the epigastric
artery. It also carries before it the loose cellular tissue
which surrounds the cord, and this has been called the
fascia of cumper.

The envelopes then of an inguinal hernia would be
first the skin and subcutaneous fat the fascia super
ficialis, cremaster muscle and a fold of the peritoneum.

There is a variety of hernia which sometimes takes place
from a blow or some other violence inflicted on the inguin
al region, directly through the walls of the abdomen at
the external ring. This variety of hernia is called ventro
inguinal or hernia by the direct descent, while the other
variety is called, hernia by the oblique descent. In ventro
inguinal hernia ~~hernia~~ the relations of parts are enti
rely changed. The epigastric artery which in the above
variety was on the outside of the herniat sac is now on

the inside, and the cremaster does not now form an invest-
ment The investments of this variety would then be, First
reckoning from within outwards, The peritoneum, fascia
superficialis, sub cutaneous fat and skin, hence the
necessity of bearing these things in mind in the performan
of the operation, Herniae tumours and named from their
situation as before said, and also from their contents.
If they contain intestine alone they are called enterocele
if omentum alone they are called epiplocele, and if both
omentum and intestine be contained they are called entero-
epiplocele - An enterocele may be distinguished by ~~its~~
the smooth and regular surface of the tumour, If it be
inflamed or distended with wind, or if it strangulated
the tumour will be tense and elastic to the touch, resist
ing the impression of the fingers and painfull, If there
be neither stricture ~~no~~ inflammation, there will slight
tension and no pain on handling, and if the patient
be directed to cough the enterocele feels as if it were
blown into, and when it is returned into the cavity of
the abdomen if ~~feels as if it~~ it contain air a gurgli
ng noise will be heard,

An epiplocele may be distinguished by an irregular
roughy softness, and it is generally indolent
If both intestine and omentum be contained, it will
be more difficult to ascertain its nature it will have
somewhat the feel of both the other varieties

Several diseases in these parts have been mistaken
for inguinal hernia - Hematocele or a collection of blood

on the tunica vaginalis, may be distinguished by the firmness of the tumour, and the redness of the skin. The cord can also be felt at the ring. The tumour does not dilate when the patient coughs. The testicle is sometimes lodged in the ring, counterfeiting an incipient hernia; but we can always decide whether it be a Hernia or not, by examining whether or not the testicle be present in the scrotum. When the tumour is produced by the testicle it is also found to be possessed of extreme sensibility

Circocele has sometimes been mistaken for Bubonocele and the diagnosis is sometimes difficult. But by attending strictly to the symptoms the distinction may always be made. If it be Hernia, after placing the patient in a horizontal position, and the tumour having been emptied by pressure upon the scrotum, if the Surgeon then make pressure upon the ring and desires the patient to rise, there will be no return of the tumour, But if it be Circocele it will not only return but increase in size

Hydrocele has sometimes been mistaken by an inattentive observer for Hernia, But it may always be distinguished from the latter, by its not being affected by any position of the patient, from its having begun below, From the absence of pain in handling it, From it not increasing in size from coughing, and from the size of the cord which can always

[illegible] by the sacs

e distinctly felt above the tumour

The most common causes of Hernia are, violent exertions of the abdominal muscles, compressing the viscera of the abdomen, and thereby diminishing the cavity of the abdomen Running jumping lifting and carrying heavy weights, violent vomiting and straining at stool are particularly conducive to the occurrence of Hernia

Hernia may be divided into reducible, irreducible and strangulated. It is termed reducible when the intestine lays quietly in the sack without pain, and is capable of being returned into the abdomen — The symptoms of this variety of Hernia are, first. The sudden appearance of the tumour, after violent exercise or injury, and its being indolent, whilst the patient is in the recumbent posture the tumour is diminished, and frequently entirely disappears, and is enlarged whilst the patient is in an erect position, When pressure is applied, the tumour is diminished, and enlarges again when the pressure is removed, The tumour is also enlarged after meals or by flatulence. The patient is troubled with colicy pains, nausea ~~and~~ vomiting, and constipation on account of the displacement of the intestine It sometimes happens however that the patient experiences no inconvenience at all from a protrusion

[illegible] on a [illegible] back, [illegible] by the [illegible]

of a portion of intestine, the functions being performed with little interruption. A Hernia by adhesions to the surrounding parts, may become irreducible without producing any immediately dangerous symptoms, and the patient doomed to bear about him a disease for life, from which he daily apprehends the most dangerous consequences, and by the slightest injuries, or the supervention of inflammation, a stricture is produced, which forbids any hopes of recovery.— A hernia may become strangulated at several places. The ~~most~~ most common, is that which is produced by the pillars of the external abdominal ring; the intestine having been protruded in an empty state, afterwards the fecal matter accumulating, it becomes inflamed, ~~and~~ sometimes also the protruding intestine becomes inflated with air. It is also sometimes strangulated by the internal abdominal ring, or by the neck of the sack; some writers also speak of a strangulation being produced by the margin of the internal oblique muscle, but in each of these cases the symptoms are nearly the same.

The symptoms attendant on this variety of disease are pain on handling the tumour, if it be an enterocele the pain will be increased by coughing sneezing or standing on the feet. The pain at first is experienced in the tumour, but soon extends over the whole abdomen, which becomes tense and [illegible] by the efforts of the sufferer

swollen, accompanied by sickness and vomiting. There is also obstinate Constipation and fever. If the patient be not speedily relieved all the symptoms become more violent, the Contents of the stomach and afterwards those of the bowels being thrown up. The tension and pain of the abdomen is now much increased, the fever is more violent, and great anxiety and restlessness comes on. If the patient be not yet relieved the pulse becomes quick feeble and irregular, and the extremities cold, after a time hiccough comes on, which indicates that mortification is about to take place, or has already taken place. The pulse which but a short time previous were ~~quick and hard~~ are now scarcely perceptible, The respiration is weak, and the whole body covered with a clammy sweat. After these symptoms have continued for a short time, the pain and swelling of the abdomen subside, and the patient vainly flatters himself with the hope of recovery. But the eye loses its lustre and becomes glassy, the skin of the part assumes a livid hue, a crepitus is perceived on touching the part, and sometimes at the juncture the intestine spontaneously returns, and the patient dies.

It is only necessary to say with respect to the ~~bettlement~~ irreducible hernia, that it should be returned into cavity of the abdomen, as soon as possible and ~~retained~~ then by the application of a proper truss

If it be irreducible the tumour should be supported by a suspensary bandage, and the patient advised not to make any violent exertion.

Various means have been adopted for the relief of strangulated hernia. The most approved of which we shall now notice — First of the Taxis by which we mean the efforts made by the hand of the Surgeon to return the protruding viscera. In order to use the taxis with effect the patient should be placed on his back, and the thighs bent upon the pelvis, and the one of the affected side turned a little inwards, in order to relax the abdominal muscles, and the parts forming the structure to the greatest extent. After the patient has been placed in this position, the Surgeon should grasp the tumour (when large) with one hand and gently drawing it downwards, he should with the fingers of the other endeavour to return the tumour by pressing its contents upwards and outwards, beginning with the part nearest the ring — If the inflamation be great we cannot employ the Taxis and in all cases where we do use the Taxis we should proceede gently, for much mischief has been done from its rude employment. If we fail in the use of the Taxis other means of relief should be immediately resorted to. If the patient be athletic, we should bleed freely, and again try the Taxis. If we cannot then succeed in reducing it, the patient should be placed in a warm bath, and the efforts by the Taxis

mended. If a bath cannot be quickly prepared, we should try cold applications as no time is to be lost. Clothes wet with ice water, or bladders of pounded ice, should be applied to the tumour. Ether dropped, and permitted to evaporate has been highly recommended, but we should be cautious not to reduce the temperature too low, least mortification should ensue, and the life of the patient be lost; When ice cannot be obtained, a solution of nitre and sal: amonia, or alcohol may be used with advantage. Injection of tobacco smoke or a decoction of the article, has been resorted to when the other means have failed, but much caution is required in its administration; as it sometimes produces extream prostration, and death. Cathartics and Enemas, may also be used in junction with the above remedies. But if all these means fail, the operation should be immediately performed —

The manner of performing the operation —

The hair about the pubis and groin should first be shaved off, and the patient placed on a table of convenient height. The incision should commence about one quarter of an inch above the ring, and to be carried down to the most prominent part of the tumour, unless it be very large. The incision being carried the the skin and subcutaneous fat divides the external pudendal artery which crosses the tumour near the abdominal ring

and if it bleeds much it should be tied, This incision exposes the facia superficalis. This facia should now be seized with a pair of forceps, and elevated, making a smale opening in it, with the knife carried horizontally. then introduce a director upon which the knife must be carried, and the facia completely divided, ~~The [illegible] and upper part of the [illegible] at which [illegible] the sac [illegible] the intestine do not descend [illegible] and the fluid which [illegible] contained within the sac [illegible] to the part.~~ The cremaster muscle which lies beneath the facia superficalis should be divided after the same manner as the facia. The tunica dartos sack being now brought into view, a potion of it is to be pinched up with the finger, after having ascertained that we have included nothing but the sac, we should make a smale opening by carrying the knife horizontally, into which we introduce a director, upon which the knife is to be carried and the sac devided, This being accomplished, the finger should be introduced and the structure ascertained, when we have found the structure, a probe-pointed bistory is to be introduced laterise on the finger into the wound, and the structure devided by carrying the knife in the direction of the umbilicus, Having removed the structure we should return the contents of the sac, and nothing but the actual mortification of the intestine should prevent us, If it Entero-Epiplocele, the intestine should be returned first. The parts nearest the ring should always be returned first, After the intestine is reduced, the surgeon

ould introduce his finger and ascertain whether the intestine be
ompletely on the cavity of the abdomen, afterwards the omentum
may be returned, if not diseased. If there are recent adhesions
between the intestine and sack, they may be broken up by the
finger, But when the adhesions are old the cautious use
of the knife is necessary, Sometimes the adhesions are so
short that it would be dangerous to attempt their division
It is better to cut off the adhering portion of the sac, and
return it with the intestine, When the intestine or omen-
tum or both are returned it should be treated as a simple
incised wound, The lips should be brought together by means
of sutures, for they are necessary on account of the great
quantity of cellular tissue, causing the lips to become
inverted, Also adhesive straps and bandages, and the
patient should remain quiet —

On

Inaugural Dissertation
on
Epilepsy

Submitted to the examination
of the

Provost, Trustees and Medical Faculty

of the

University of Maryland

On the first day of April 1831

For the Degree of Doctor of Medicine

By

Henry S. Hunt.

To

Nathan R. Smith M.D.

Professor of Surgery in the University of Maryland.

This essay is respectfully inscribed, not only in consideration of his high merits as a gentleman, a friend, a Physician, for which he is so justly esteemed by all his acquaintances; but also as a grateful tribute of thanks for the valuable instruction and many marks of friendly attention, bestowed while he had the direction of the early medical pursuits of

his affectionate Pupil

and much obliged friend

The Author

Epilepsy

Many circumstances conspire to give an interest to epilepsy: the great frequency of the disease, the class of persons among whom it prevails, the alarming character of its symptoms, and the difficulties which, from the earliest times, have been experienced in the relief of it. Although the characters of epilepsy are thus sufficiently distinct to have attracted in all ages the notice of the world, considerable difficulty has been found in contriving a definition of it which may include every form of the complaint. Epilepsy, the species of which has been ascribed by authors as arising from various exciting causes, like many other affections, it is both idiopathic and symptomatic: but the phenomena of the epileptic paroxysm, are in both cases, the same.

The epileptic fit mostly occurs suddenly, the patient falls to the ground, and the disease has received the name of falling sickness. When the complaint is fully established, it is usual for the patient to experience certain warnings of the approach of a fit, which, though lasting only a few seconds, enable him to make some preparations for it. The most frequent of these warning symptoms are, headache,

giddiness, nausea, dimness of sight, or flashes of light
passing before the eyes, ringing in the ears, fretfulness,
disagreeable odours, and coldness of the extremities.
But the most common of all epileptic warnings
is that singular sensation of tremor, or coldness, or
numbness, which has been called the aura epileptica.
It begins at the extremity of a limb and gradually as-
cends to the head, when the paroxysm of coma and
convulsion ensues.

During the fit the convulsive agitations of the
body are violent. The eyes are fixed and averted,
the pupils are permently contracted; the teeth nash
against each other, the tongue is thrust forward, and
often severely bitten, and there is frothing at the mou-
th, the breathing is laborious and difficult, the pu-
lse small and corded. Complete insensibility pre-
vails. The fit varies in duration from a few minutes
to a quarter or even a half an hour, in some cases it
has lasted much longer. On its cessation the patient re-
mains for some time motionless, insensible, and appa-
rently in a profound sleep. From this he recovers by
degrees, but without any recollection of the cir-
cumstances of the fit, it leaves him weak and ex-
hausted, and for the rest of the day he complains
of a degree of stupor and sense of oppression
in the head.

The of recurrence of the fits are too various to ad-
mit of being stated with any degree of accu-

racy. When the disease first developes itself, the intervals are long, perhaps two or three months. As it becomes more firmly rooted in the system, the fits recur with a corresponding frequency, until at length the patient hardly hopes a day without one. Epileptic fits occur at all hours: but much more commonly during the night than in the day: sometimes on first going to sleep: but more usually, on waking in the morning. It is reasonable to conclude, that there is some peculiarity in the state of the brain during sleep, which is favourable to the development of the epileptic paroxysm.

The varieties in the phenomena of epileptic fit are interesting; the first, or common form, is characterized by insensibility, and general convulsions, or stringing of the whole body.

The second, distinguished by the loss of sense and consciousness, with tonic spasm or rigidity of the muscles.

The third form of epilepsy is marked by fits of insensibility, with perfect relaxation of the muscular system.

Such are the common modifications of the epileptic paroxysm. In which ever way the disease manifests itself it gives on to produce other, and more serious injury to the constitution. The mental faculties become gradually and permanently more and more impaired; the memory fails, and a state of mind closely verging to idiotism is at length brought on.

Epilepsy, when once thoroughly rooted in the habit, will

generally be found to bring on, sooner or later, some other form of cephalic disease, — hydrocephalus, maniacal apoplexy, and palsy. The complication of epilepsy with mania is at once the most frequent and the most formidable. Of one of these, in most instances, the epileptic patient dies. Epilepsy sometimes terminates, in the third place, fatally and suddenly, without inducing any secondary affection. This though seldom witnessed among adults, is not uncommon in the epilepsy of children; and assuredly it cannot be a matter of surprise: — it can only lead us to reflect, how wonderful must be the structure of that delicate system which can resist, in ordinary cases, the repeated attacks of so dreadful a disease, and how little pathology can assist us in unravelling such a mystery.

On the morbid appearances of those who die of epilepsy, are a turgid condition of the vessels, both in the membranes and substance of the brain, has been noticed in some cases, with or without effusion of serum.

Tumors, cysts, and abscesses, have been discovered in others, Rejection has thrown little light on the peculiarities which distinguish the convulsive from the other varieties of cephalic disease. Epilepsy is obviously an hereditary disease in many instances. In others the parents and relatives of the patient may not, it is true, suffer from actual epilepsy, but they will often be found affe-

ted by other maladies of the same class, such as palsy, convulsion, or mania.

Epilepsy unaccompanied prevails in that habit of body called nervous. It is that state where impressions, both on the mind and body, produce more than their usually corresponding effects. To this circumstance is attributed the fact, that epilepsy is mainly the disease of early life.

Epilepsy is stated to occur in nearly the same degree of frequency in both sexes.

Symptomatic epilepsy is of two kinds;- that which is connected with disturbance of function in some portion of the alimentary canal; and the hysteric, or that which has its origin in disturbed functions of the uterus. Generally speaking the first is peculiar to children under the age of fourteen; and the second to women between the ages of fourteen and twenty.

The first source of that irritation in the alimentary tract which leads to epilepsy, is painful dentition. It is a fruitful cause of the cephalic diseases of children, and of none more commonly than epileptic fits. The second is acidity in the stomach, its distension by wind, or the mere crude detention in it of crude and undigested aliment. In infants of high natural irritability of frame, these disordered conditions of the stomach frequently lead to paroxysms of convulsion, and in many cases they recur, and otherwise exhibits all the characters of perfect epilepsy.

At a somewhat more advanced period of life there is no kind of irritation which so commonly proves the source of epileptic fits, as the presence of worms in the intestinal canal; but almost any disorder of the bowels will, in certain habits and states of body, bring on a tendency to a convulsion. The prognosis in this form of epilepsy, is more favorable than in any other variety of the disease, because the source of irritation is both more obvious, and more under our control. The hysteric epilepsy is at least an equally frequent, and unfortunately a much more formidable kind of disease.

It is a melancholy reflection, that it prevails extensively among the most delicate of the sex, at the most interesting periods of their lives, often resisting the most active and judicious treatment, and degenerating into that permanent and almost incurable form of cerebral epilepsy. Hysteric epilepsy commonly affects females about the commencement of the catamenial epoch, or shortly afterwards, when the flow is scanty and difficult. Occasionally it takes place at a later period of life, in accidental obstructions of the menses. It chiefly prevails among those of sanguine temperament, with full development and vigorous action of the circulating system, and a delicate irritable constitution.

Epilepsy is in some instances dependent on a primary morbid condition of the encephalon, and independent of disturbed pas-

ection of the abdominal viscera. Cerebral epilepsy is of two kinds the one connected with functional and the other with structural disease of the brain and nervous system

The obscurity in which the whole subject of the function of the brain and nerves is involved, makes it impossible to speak with any precision on that difficult point in in the pathology of epilepsy at which we are now arrived. but there appears primary functional disturbance of the brain, leading to the epileptic paroxysm, the hereditary predisposition to the disease; the absence of all appearances after death, excepting such as are common to other forms of chronic disease of the encephalon; but the recurrence of the fits at regular intervals, and particularly at night, are confirmations of this doctrine; but to these are added the peculiar character of many of the immediate exciting causes of the fits of this kind are violent mental emotion, irritation and the operations of certain poisonous substances both of the narcotic and narcotic acrid. Arsenic and the nitrates barytes has been strongly suspected of inducing epilepsy. The first effect of the poison of small-pox is frequently in children an epileptic paroxysm.

A large proportion of the cases of cerebral or idiopathic epilepsy, and in many of those which are manifestly connected with disturbed function of the bowels or uterus, there is called marked preternatural fulness in some part of the vascular system of the Brain. Epilepsy occurs in persons of full habit of body, and ind-

cent mode of life: the fit is frequently preceded by headache, flushings of the face, and throbbing of the temporal and carotid arteries; it is brought on, in many cases, by great muscular exertion, as in parturition, by stooping, intoxication, heated rooms, and by violent fits of coughing, such as occur in severe hooping cough: the hysteric form of the disease is only one of these many consequences of obstructed menstruation, of which the prevailing character is irregular determination of blood: the appearances on dissection, when observed, are those of sanguine accumulation in the brain.

Epilepsy is often connected with chronic disorganization of some one of the structures within the cranium. Those most usually noticed as producing are, spiculæ, detached by some injury from the internal table of the skull, ossifications of the falx; tumours of various kinds, attached either to the bones, membranes, or parenchymatous substance of the brain; and lastly foreign bodies lodged there.

Treatment, During the fit no remedial measures of any importance are either practable or necessary, our efforts are to be reserved for the interval of the fits, and our aim should be to prevent their recurrence. In effecting this the following are to be the chief objects of attention.

Having described the different kinds of irritation in the body which occasion an epileptic, in the epile-

pies of infants and children much may be done by scarification of the gums, by the administration of an emetic, by the occasional use of purgatives medicines, by the use of mild aperients and absorbents, and by a strict attention to regimen and diet. Where the symptoms afford symptoms of worms anthelmintics are to be used, more especially the oil of turpentine in a full dose, This medicine, independent of its febrifuge powers, appears to exert, in moderate doses, a peculiar power of allaying that irritable state of the nervous system, with which the convulsive paroxysm is so intimately connected.

When the irritation is seated in the uterine system as manifested by the concurrent symptoms, scanty and laborious menstruation, and the peculiar periods at which the fits recur,

For this purpose must be had to the warm bath or pediluvium, stimulating enemata, relaxing medicines, as the antimonial diaphoretics, and the different kinds of emmenagogues. Regular exercise, occasional purgatives, and in some instances an issue or seton, have also afforded efficacious aid in the treatment of hysteric forms of the disease, pregnancy often removes this form.

The second of those principles by which the treatment of epilepsy is to be guided, is the obviating the general plethora, and taking off that peculiar determination of blood in the vessels of the brain

which has been adduced as one of the most important features in the pathology of the disease.

Such a principle is equally applicable to the sympathetic as to the primary, or cerebral, varieties of epilepsy, where the disease is still recent, where it occurs to young persons, and in robust habits, and more especially where, in the intervals of the fits, the patient complains of headache, giddiness, stupor, or any other mark of permanent fullness in the bloodvessels of the brain, fullness and hardness of the pulse, bleeding from the arm, temporal artery or jugular vein, according to the urgency of the case. Under particular circumstances the necessity of substituting for it cupping between the shoulders, leeches to the temples, blisters to the nape of the neck, and the steady use of purgatives medicines.

The last of those principles which regulate the physician in the administration of remedies for the cure of epilepsy, is the altering that peculiar condition of the brain and nervous system with which the state of convulsions is associated.

The medicines of the narcotic kind possess a considerable power over it. Many of them have been according by employed in epilepsy, and with occasional advantage; more particularly Stramonium, opium, hyascyamus, and stramonium,

Further, there are grounds for believing that the morbid irritability of the brain and nerves, on which spasm depends, is often connected with general constitutional weakness, hence it is that many of the most powerful of the antispasmodic medicines are in fact tonic, of this may specify, as having obtained considerable reputation in the treatment of epilepsy, bark, steel, valerian, and nux vomica.

The artemisia vulgaris has been lately used, with success. The leaves of the ayang tree has also cured many cases.

But it must be confessed, that we are unable to form any precise idea of the nature of that morbid state of the nervous system present in convulsive diseases, it shows that some of the medicines which have acquired a character for the cure of this disease, may have deserved it, altho'ng the mode of their operation be as little known to us, as the state of the brain on which the epileptic paroxysm depends.

Numerous cases are on record of the permanent cure of epilepsy by the argentum nitratum, by Baly, Johnson, and others, though many of these cases may be inaccurately reported still we must acknowledge the alleviation afforded by the remedy; and this appears inexplicable on any other principle than that

to which I have now adverted, It is taken in the dose of $\frac{1}{8}$ of a grain four times a day, and increased continued for some time, It colors the integument by a dark hue, which however gradually disappears on leaving off the medicine, Arsenic, and the oxide of zinc, have been found by many very successful.

Dr. Rush and many others of the first authority in medicine have borne testimony to the efficacy of this preparation of Zinc. given doses of three grains three a day It has been increased to two scruples three times a day.

The cupum Ammoniacum has also succeeded, in the dose of a quarter of a grain three a day and gradually increased.

A salivation has often succeeded. Tin has been used with advantage. It has been given in combination with combination with a decoction of the mistletoe, valerian, &c.

Dr. Rush has given the acetate of lead in the dose of two grains three a day with complete success.

The tartrate of antimony given sufficient doses to keep up constant nausea, has had a beneficial effect, Tissot recommends it in combination with mercury, in the cases of Children

Dr. Johnson speaks highly of the tincture of cantharides, given internally, and blisters applied on the spine.

Galvanism is also among the remedies for epilepsy.

When the disease depends upon ossification of the membranes of the brain, or upon abscesses in them, hydatids, bony and schirrous tumours, &c, it is incurable, when the disease has originated from an original injury to the brain, and the membranes are affected, it has been completely relieved by the operation of trephining.

The actual cautery, hot iron applied to the cranium denuded of its hair, the hotter it is used, the less pain attends it. it has succeeded in this disease.

The cautery, the moxa, burning by the concentrated rays of the sun, and issues are applicable, where the disease is owing to inflammation of the membranes of the brain produced by external injury.

The use of cautery in epilepsy. is supported by the salutary effects of accidental injuries on the scalp.

Hippocrates has observed that ulcers about the head and sores has cured epilepsy.

The Fortin emetic ointment, has succeeded by eslotteshing eruptions on the skin beyond any other remedy.

Gulielmus P. Flint
cum reverentia maxima, hoc
opusculum inaugurale, de Gono-
rrhea, tradit facultati medicae
In Collegio terra Mariae

De Gonorrhea

In temporibus vetustis aut diebus praeteritis, Morbus Venerealis praevalisse putatur; Nam Rex regum, Solomon, sapientissimus sapientium, Ita Poeta similis exclamat, O, peccata juventutis mea, quae nunc in inguine delitescunt,
Haec sunt verba ipsius, qui duxitant uxores sexaginta et pellices octoginta — Origo hujus morbi vel videbatur ubi primo, est aliquantulo in ambiguitate et obscuritate, Nam in scriptoribus antiquis, discrepationum existam esse magnam, Enim nonnulli latius est e America a militibus Columbii ad Europam dicunt,
Sed alii fide maxima diverunt ortum esse in Italia et velubatur inde Galliam Hispaniam et cetera, at ei veritas est hoc, quae sentimens universalis praevalens ad punctum hoc pervenit, quod oriretur copulatione impura, "ergo hoc et propter hoc", ab initio illius epochae, quem virginitas violata et stupra regnabant — Ab aliis Gonorrhea pro peccatis multis, hominibus et foeminis dicitur fuisse tradita, Quae quia virus venereale putabatur illis non contaminare canes, quae aiunt mortalibus Deo omniscente, causa aberrationis et mandatis sanctissimis

Ale Hemorrhoids

In temperamentis nervosis aut atrabilariis, Hæmorrhoidis
hæmorrhagicis fluentibus, Non ita raro adhibenda, sequentibus
modis administrandum, Ita facile sanitatis restituit. Quando
hæmorrhagia nec, quæ nunc in singulis distinguenda.
Nec haud rario ejusmodi, qui diu fluxerunt ut ipsa sequentia et
pulliness extenuata — Hinc longus morbi vel prolabitur
ulcis venæ, vel obstipandis vis constipatio et obstructio.
Nunc in secundariis constipatione, obstructionem expellere
ejus medicamen, Nunc Hæmorrhagia Intestinorum et Hæmorrhoides
e multitudine Calculorum vel Sanguinem dicunt.
Ut alii fide medicamentorum diversorum ejus in Hæmorrhoide et
Calculorum vide Dilution obstructionem et cadere, et ita non
tot et hoc, qui Intestinum mucosum hæmorrhoidis et fluxu
ejus hoc Hæmorrhoidis, quod medicinæ exploratione requirunt,
Imo hoc et Partim hoc, et multis illius ejusdem, quemque
Sanguinem mulcere et Illinere respondent. Alia Illi-
mitare hoc Parcatis mulcis, Hæmorrhoidis et Hæmorrhoidis
Sanguis Medicinæ. Hoc quia Nunc Hæmorrhoidis Partibus illis
Non continuum cum, quare nunc Hæmorrhoidis Sed
Hæmorrhoidis, quare Partibus et Hæmorrhoidis hæmorrhoidis

Decalogo Dei magni. de illis, qui virus Gonorrhea e corpore morboso dicunt, in eanem sanam non transferre potest. Postea mihi erit occasio animadvertere, sed nunc Pathologiam Gonorrhea cursio cito et literate perscribere,

Urethra membrana mucosa dicitur ipse sedes hujus morbi. In primis, virus venereale coitu receptum et a lacunis urethra absorptum, inde irritatio, inflammatio et suppuratio sequuntur, partes conjuncta fiunt morbosa et inflammatio diebus paucis frequenter vesica urinaria adveniet, glandula prostata et Cowperi glandula interdum inflammatione sunt affecta, praesertim si patiente sit scrofula, etiam testes turgida qua secundum scientiam vocantur, hernia humoralis, inguinis affecte glandula mutuno sunt sape morbosa, at non crebro suppurabant, Multi auctores arguebant, quod virus Gonorrhea et virus Syphilis sunt eadem, horum auctorum unus (Joanhes Hunterus) loquitur, si virus Syphilis positum est urethra, morbus Gonorrhea contrahiretur et vice versa et viro Syphilis Gonorrhea procercaretur, Joanhes Hunterus non est singulus solus, qui opinionem hanc pustentat, quia multi perhonorifici medici et conspicui et praeclari eandem asserruerunt que vestigiis iisdem

Geschwülste der Brustwand. Es erhielt, qui ratione laboratorii e corpore mortuis ablatum, in cavum pleuræ non transfixum habet. Totum medio post oesophagum non invenitur, sed parvo stellatopinnatum laboratorium capitis et totum ut totum ipsum esse.

Unitas Pneumococcus Pneumonia dicitur ipse sicut lingua pneumonia, pneumonia lobaris, cortex pneumonia et a lavamento ratione observatum, sicut constatio, inflammatio et suppuratio pulmonum, partim corporis fixit morbosum et inflammatio tubus pulmonis respiratorii pneumococcus, pleuritis tractata et bronchitis pleuritis inflammationem post effecta, pneumonitis ex partium et pneumonia, ulcus tubi bronchi quia pneumococcus ratione pneumonia, lymphadenitis suppuratio effecta pleuritis mutatus sunt ab Pneumococcus, et non cortex suppuratione, Multis mortis compulsum, quod minus laboratorium et minus syphilitica sunt tubum, tamen pneumococcus non (pleuritis attentus) longitudine, ex minus syphilitica non tum ut multum, quod tubus laboratorium contra introductum et non pneumococcus et minus syphilitica laboratorium pneumococcus, sunt tubus attentus non est pneumonia adhuc, qui syphilitica tunc pneumonia tantum, quia multis post transfixi pneumococcus et cum syphilitica et pneumonia, pneumococcus et non tantum qui pneumonia syphilitica

cipiderent, Gonorrhea et Syphilis videantur in corpore uno simul, Ratio; sed vero distincto speciali gignatantur, si hae sit vera, Cur est Gonorrhea et Syphilis non perpetuo comites videntur, tunc rursus rogarem; non sunt in copulatione partes omnes penis materiae Gonorrhea periclitata? quid mihi responsum erit, certe sunt, et nemo potest negare. sed loquor ulterius. quoties quum hominibus est morbus Gonorrhea, videmus nonnullos linteolam positos esse super partem omnem, et pius per horas manere, tunc erat non tempestivus locus propagationi Syphilis, nunc die mihi cur Syphilis non supervenit. Ha sunt interrogationes illis qui certant virus morborum duorum idem insuperabiles. Quomodo, homines. talis sapientia scientia et investigationis profunda auserunt opinionem tam errore implicitam evo perpetuo diffundere, non possum in mente figurare pro vita mei - observationibus diurnis coarguor et factus certior, quod virus Gonorrhea non potest et nunquam poterit induxere Syphilis et vice versa, at sunto illis experimenta qui opinionem contrariam tenent, eite tunc fiunt convicti stultitia ~~esuna~~ et cedunt dictatis erroris expertibus. Virus venereale Gonorrhea receptum membrana mucosa urethra se ostentat diebus pau-

cis, uno ad quindecim, Hebdoma est epocha mediocritatis sed illis quibus morbus hic semel fuisset, plus facile susciperent et frequentissime se manifestat horis quadraginta,
Indices hujus morbi sunt sicuti, In primis sensus aculeatus seu punctio est perceptus propter meatum externum penis cum rubore partis manifesto, inflammatione secula, latera meatus externi penis coagmentantur materia lactis flori simili, aliquantulo mixta colore palente subviridis sicut morbus progreditur, fluxus fit major et increscit inflammatione, Ardor urinae quum inflammatio itinerat per membranam mucosam urethra et extendens ad vesicam urinariam, est evidentissimus, quia partes sunt molliella et exitus urina super superficiem lacuna inflammatam sic dabant originem sensui ardoris et doloris acerbitate, Hoc est, quod vulgo vocatur ardor urinae. —
Si inflammatio manet et non domita sed permittitur progredi, imperturbata, at si partes sepe abluuntur, asperitationes natura hujus, Phymosis et Paraphymosis frequenter succedunt, ergo causa horum putantur esse virus venereum, quod partibus adhaeret circumjacentibus, Materia Gonorrhea tibi sumit colores diversas, et vicissitudines multas spissitatis virus in gradibus omnibus diversis

ed, uno et quinquiens, substituens et figendo mutationem fecit
duo alia quinque numeros sic quod fecit, fecit fecit duo et fecit
et fecit quinquiens et mutationem fecit duo quinquiens.

Mutatio longa mutationis quod fecit, longissima mutatio
alto per quinque et fecit fecit longior mutationem et mutationem
fecit quinquiens mutationem fecit mutationem longissima
longa mutatio etiam fecit quinquiens mutationem longissima
fecit quinquiens, aliquantulo minus colore fecit mutatio longissima
quod mutatio fecit quinquiens, fecit fecit mutationem et mutationem
inflammatione, color fecit quinquiens inflammatione etiam
et fecit mutationem mutationem longissima et mutationem et
mutationem mutationem et mutationem, quinquiens fecit quod
mutatione et fecit quinquiens mutationem fecit mutationem longissima et
flammatione sic colorem mutationem mutationem longissima et
mutatione, sic et quod longa mutationem mutationem —
Si inflammatio mutationem et mutationem sic fecit longissima
longissima mutationem et et fecit longa longa inflammatione, alia
tatione mutatione longa, longissima et longissima mutationem
ente mutationem, ergo causa longam mutationem et fecit
mutationem, quod fecit longissima et mutationem et mutationem
mutatione longissima sicut mutationem colore quinquiens et mutatio
tatione multo multo sicut et quinquiens mutationem longissima

hujus morbi, nunc in principio densa, nunc ad finem tenues.
Per totum morbi intervallis patientes sunt ~~molesti~~ molesti excretionibus omembri virilis excruciatis, seu tentiginibus, et plerumque quum recipiunt sese cubitum nocte, et ibi calefacti, hi tentigines cruciatae sequuntur, cum curvationibus penis deorsum, seu chordisicut nominaverunt, et causantur inflammatione magna urethra; quia tunc viditur evidentissime, quod tensio et erectio penis non possunt occurrere ~~atque~~ absque dolore maxima, saepe facientes semetipsos vociferare, et cubito Salire, eam ponere pelvi aqua gelidissima, dolorem levire; frequentissime per diem sed plerumque frequentior per noctem iterum atque iterum, hi patientes tentiginibus iteratis coacti sunt modo supra dicto, scilicet vasa aqua gelida, per multum temporis non cubuerunt cubito, priusquam iterum, simulatque calescunt illis sunt hi tentigines, Hic morbus progrediit per tempus longum que interdum dicitur ultimo medicamen sucum efficere, at multum frequentior sanies sequitur quam terminatione prima, et morbus dicturnus gonorrhea non facili remediis notis cedit, huic modo gonorrhea inflammata si sinetur progredi, sunt multa consectationes mala comitantes, quorum unus nunc ad deliberandum propono, ob hanc causam, quia est tardior remediis collatis et quia periculosior vitu ejus, et quum occidit, que remedia non citer utuntur, indicus

natura periculosissima adsunt et si nullum auxilii prabitur instanter mutare statum morbidum partium, citius vel serius patiens festinabitur, iter facere regionibus incompertis Domi ejus longi, etiam strictura urethra quidem sunt vero percula, quia dies, menses et etiam toti anni prasteriant, sed strictura urethra semel absolute bene formata, adhuc manent in statu quo, atque intervallis, sint interdum causa doloris exquisita patienti, forsitan propter exitum urina per viam naturalem obstructum, et etiam propter tentigines qua occurrunt et distendent urethram nodosam, hamorrhagia quandoque ab urethra subsequuntur, dum morbosus nitatur mire, enitatur rursum. Ecce pertersifactus, quia sanguis efflavit, urethra urina mixta, nunc partes circumjacentes fiunt morbosa, vesica urinaria irritatur et patiens post tempus certum urinam non potest tenire, ac irritatio vesica urinaria eum fert sape mire, cum sensu angoris, vicino scroto, pusimo et fundamento, nunc glandula inguinis sapissime quem morbus progrediit consensu mutuo partium affectantur, tensa et turgida facta sunt, patienti sunt causa doloris cruciati et etiam dolores volitantes dorso ejus sentiat, calor corporis crescit, et nota febris symptomatica sunt obvia; testiculi interdum et plerumque frequentior tumefacti sunt quam glandulis inguinis.

In hoc statu rerum nobis est quod vocatur Hernia humoralis, et si non retardaretur vel impediretur in ejus progressu, increscet ad magnitudinem vastam que fiat fons et origo angoris magna nam fundus scrum est non tantum fere intolerabilis, patienti ambulanti at jam nunc stanti vel sedenti, nisi testes sunt suspensi _ subinde Glandula Prostata est frequenter morbosa, et morbus in capita duo distinguuntur, In primis ha inflammata affectiones, qua sunt afectationes irritationis partium vicinarum, que secundo, Ali morbi horrendi quibus in periodis vita posterioris, de primo horum cupio dicere _ glandus morbosus ab Gonorrhea, insuper sape est afectatio Gonorrhea semisanata quum virus adhuc fluxit enormiter partibus et tardeque exprimantur manu, materia est purulenta, interdum sanguine mixta, item sensus ardoris et irritatio cervice vesica urinaria frequenter comitantur stillicidio urina, Patiens sentit pondus pelvi, vesica urinara, recto intestino et perinao, faces ejecta sunt dolore et difficultate maxima, Desiderium patientis mire est magnum, tentat et rursum tentat sed tantum gutta pauca urina exacta sunt; Strictura urethra etiam sunt afectationes sape Gonorrhea, quum injectionibus stimulatis tractantur; strictura urethra definita esent, attenuationes exitus urina per urethram inflammatione antecendente originata. _ Strictura sunt

divisiones duæ, facta sunt ab aliis; Organica et Spasmodica.
Ioanhes Hunterus ait: fibra musculi videntur membrano mucoso
urethræ, sed multi negabant hoc, qui experimenta falsam pro-
baverunt, ergo Strikturæ ab primo sint actionis tantum spasmo-
dicæ e actione naturali membrana mucosa urethræ digressa,
atque si relaxus sit fibrorum, similitudo nulla morbo
potest videri, quamobrem occurant secundum speculationem
ejus sine inflammatione antecedente; hanc non credo, exper-
imenta Ioanhis Bell satis sunt refutare; videlicet, globi
plumbi et negotionem cateorum, in urethra ponebantur,
affectationes erant tales rem confirmare semetipso, -
causa strikturarum sunt varia, et frequentissime oriuntur
usu injectionum stimulantium in curatione huijus morbi
Gonorrhea, cantharidis emplastra superficii cutis applic-
ita, item in vesica urinaria lapides, injuria ictu partibus
interdum cum strictura urethræ est ruptura partium que ext-
ravasatio sequitur, possumus sape certis signis ad prænos-
titionem ~~pertin~~ pertinentibus exitum prognoscere, enim si
strictura urethræ, irritatione multa comitata sint in per-
inæo et cervice vesica urinaria cum calore et dolore
ac exacerbationes frigoris et caloris adsunt, tenuitas urethræ
maxima, cupido inordinata mictu que potest tantum

tuniona dunc, forte fiunt et alia; Organa et fumosi co-
lorulu stantiung ont; filia musci, in arcolis membrana mucosa
uretheae, sed multi muscorum hoc, qui aquam ut fatear fac-
lumenum, unge filiformes et ferme sint cotiuna tantum phaeo-
rica e colorem naturali membrana mucosa ejusdem corpus
atque in relavia pit filiformum, sinuitiuca nulla mucosa
fortit ridui, quamdiu occurrunt sinuatum phaeoliteae
que sine in flavo-nulla cuiusdam. Tunc non enata, sed
mutata dorsalia illi sacti pant rufiteae; nidulant, plani
plumbi et magnetarum coloreum, in uretha tantum
cyaneteum mont tali rem conformes pentiqua.
Lunae dirutiu-omnia sunt parvae, et frequentiam omnium tur-
um injectorum plumbeum in omnitiu lunae magnetis
Conarthae, contiuntur cyaneteo pulpa sit sub ipsi
ita, ita in omnibus minoris lapidis, unguis sit tantum
uretum gum plantae uretha et supiuro frutum que ut
concretia pulpitur, Polymnia sapi certia sit ipsis cor fungo-
rum tunum ~~tunc~~ partimutiu et tum fungorum, sum in
plantae uretha, mutatum mutae commutata sint in ipsa
mea et omnis nasco unionis, sum colam et dulcis
ex omnitiuna fungorum et colaris cutaneum. Tunc uretha
mutatum, sufficia mutatum mutae qui pelit tantum

guttas paucas ejicere ardore urinæ magna, adhuc cupido mi-
ce auget que ad extremum dum pitans mitis conatis max-
imis, huic est sensus fluxus, sed quid est, ecce urethra rupta,
tunc urina demum permeat scrotum et intumescit
confestim ad magnitudinem incredibilem, tumor pergit
crescere, vicinis extendes partibus per cellulas membranar-
um et ita angoribus excruciatissimis perditur vita,
Nunc mihi est occasio loqui de verrucilis e Gonorrhœa
quæ sunt posita vel nascuntur glandi aut præputio
penis, interdum permolesta facta, Quia si excisio
perficiatur, iterum renascunt, ha dicuntur oriri viro
venereali Gonorrhea, manente partibus circumjacent-
ibus ore externa urethræ, atque etsi morbus evanescent
ha verruca manent, augentes gradatim, et ad tremum
sese vertantes in ulcusculum, quia quandiu statum
certum durities tenent et tactui sunt sine dolore; Plerum
que frequentior præputio penis locantur, unum, duo, tres,
aut plures videantur, que sæpius Hyeme quam æstate,
qua causa explicare non possum, nisi quia frigor remansi-
oni virus Gonorrhea, in partes ubi morbus verruculorum
beatus est amicitior; alii dicunt consensu mutuo occu-
dos affectos esse, similes glandulis inguinis, que illi

Sutura frontis aperte cedere videtur. Cellulæ cerebri mediæ ad ossa et tentorium duræ matris contractæ sunt, duæ ad parietem dextrum, duæ ad sinistrum versus. Ad ventrem dextrum, funiculi duo, tres centimetra longi, duo versus dextrum, funiculi duo versus sinistrum, et in omnibus conjunctivum ad processum transversum et in omnibus cellulæ parietis dorsalis, tumor fungi cerebri, nisi ubi ad partem sinistram cellulæ parietis dorsalis et ad corpora ganglionis spinalis quartum dorsalis.

Tunica media aut corporis lapsi de nervorum e spinalibus quæ sunt tenuia sed resistentia plerique sunt fragilia, intentum pannoidem facta, duabus de speciebus fungiformibus, unum parvum, ad dexterum cruris nervorum lumbarium, in omnibus partibus sinistrum cum nervis medium, cruris sinistri, et ad terminum nervorum ischiadicorum, cruris dexteri et sinistri; illum quæ fragmentum fungiforme tunica interior, unum, duo, tres cum fulmine interior, quæ adhæsa diversa quam cellulæ, quæ causa affidere non fugum, non quia fungor numerosi nervus lumbarium, in parte ubi medius terminatorum ad omnitem; ulnæ dextrum sinistrum cruris ad pedes offerebat ejus, in cellulis plumbulis in medulla.

sunt difficiles medice. at veritas rei hujus est hoc, patiens digitis morbum communicat oculis, quum ille oculos digitis tangit seu terit incogitans, quibus erat aliquod virus Gonorrhea, hinc Gonorrhea opthalmia. nunc omnes diversas afectationes momenti ullius ab Gonorrhea ortas, credo renumerari, alia quorum periculosa, alia leves., igitur initio incipiam que remedia optima mihabar scribere varietatibus diversis. Inprimis. morbus ipse - Gonorrhea tractata est, in libris prescriptiones invenimus multas dicatas et commendatas, auctores multi arguunt quod est morbus localis, quamobrem applicationes locales essent remedia, injectiones medicinarum constringendarum, sed in quam huic praxis, sunt objectiones, primo, obvie est venereale virus in urithram agitur ulterius, que gignat irritationem et inflammationem partium posteriarum frequentissime stricturas laborant. vesica urinaria est interdum ab remediis natura similis implicita. mala afectationes quidem sunt tales, quod illis experientia nunquam utuntur, igitur ab praxis medicina exauctorentur recte. In curatione hujus morbus-Gonorrhea- cogito mihi esset inutile, ponere hic omnia diversa remedia, que fuerunt adhibita, alii eorum sunt tantum subsidii, alii pejores quam

sunt difficilia medicis, et non tot in lingua et hoc, praesertim
digitis manibus commemorat cruciata, quam illi oculos digi-
to tangit per tant insegitang, qui hic non adjungat nova
Gonorrhea, sive Morbus ophthalmicus, nunc omnia diversa
ophthalmia morbum illius ab Gonorrhoea, modo non
numerum, oculi quorum funiculos, oculi tres, ipsi in ea
conjunctivam qui numero ejusmodi motibus hominibus non-
atibus diversis, Japonicis, morbus ipse Gonorrhea tem-
tota est, in libris Phaenomenitiones numerum multos ob-
oculos et commendatos, omnibus multis conjunctivae
morbus locutis, quemadmodum ophthalmia locutis, ipsi
mundis, ipsi otiosa medicinarum conditionem generalem
sed in quam hunc Morbi, haut difficilis, tamen, obvias
numerare rem in multorum oculis utentia, qui apud
invitationem et inflammationem partium Genitorum fe-
cundissimum Gonorrhea dolorosa, nexus numerosa est quae
dum ab mundis motus pinnis inflicta, modo ab
tationes quodam sunt tales, quod illis exquisita numquam
utuntur, ipsis ab Morbi medicinae commentarium nat.
In ea tamen lingua morbus Gonorrhea - sed modo in ophthal-
mia, tamen hic omnia diversa mundis, quae funiculos
illis, oculi quorum sunt tantum subsidii, oculi superes

nihil, — Si multum caloris corporis adsit, actio cordis aucta, cum notis cateris febris, quae si sit multum inflammationis localis, tunc est optime incipere detractione sanguinis cathartici salini, poti mucosi haustibus magnis, aqua Hordei seu Ptisana, aqua cum seminibus lineis subfervefacta, solutiones gummi Arabici cum lacte, dieta tenuis esset subacta, quietus corporis. alvi adstrictio est evitata, cathartics dabentur, usus quorum esset regularis, Post hoc Copaiba Balsamum est praescripta cum adjumentis caloris conjunctis, Formula optima, qua scio, et compertum esse commodi maximi in curatione hujus morbi, verbis potest et dabitur paucis,, sicut plures adolescentium vel singulorum quibus est Gonorrhea, cupiunt obliviscere, igitur fuisset tandiu desideratum. quo modo seu vehiculo optimo, remedia dabentur suspicionum vitare. Summi consolidatum Copaivae Balsamum fuisset negotiatum sed non efficax satis, permutta remedia cetera, Cantharidis tinctura, Terebinthinae oleum et omnes diuretici stimulantes adhibita essent, et alius. Piper Cubebs, tantum fiducia in curatione hujus morbi positum est quod in eo solo multi credebant, Fama hujus medicina erecta et alta, ut animus ferebat eam experi, igitur mor-

Ut tuti, — sic multum salvo corpore valeat, vita sanitas cum-
ta, quam vita sanitas habet, quae si sit multum valetudinem
vita locatis, tum est optimum in vitae distractione consumere
voluptatis causa, post mensem denuntiatum magnis, copia Morbi
cum Plumbo, copia cum semivitae tuae sulphureto, sed-
Mitonis quamvis Dentis cum lacte, dicite tunica lapt sul-
cato, quidem corpora, cum calculatio est in toto, calta
tum domestica, vena quamvis lapt regulatis, post hoc lop-
cho Balsamum est proximo cum colymbetis salis cum
pumicis, Pomula optima, quae sicio, et conservari ipse cum
in cibi morbi in gustatione hujus morbi, vestis potest
et dentur poenis, sicut plures calculationum est sangui-
tum quidem est laxandus, cupiunt obtinere, ipsum
lapt tunicis dimidiatum, quae magis cum minuto
optimo, vestis tunicis sanguinum intone, ut omnis
consideratum tempore Balsamum lapt (superfluus
est non offendat pedis, permutate cum salis cutis, tunicis
vitis tempore, Pulmo tunicae, cum et omnis cum tu-
minutata calculis lapt, est clius, Ipse e tunicis
cutis dilatatis in gustatione hujus morbi tunicis est
quod in se sed multi consultant, Pomo hujus Medicinae
vesta et oris, ut omnis tunicae cum cupiunt, ipsum cum

bosis Gonorrhea repitate adhibita erat et agometipse in rebus propitiis, maxime post venæ sectionem, cathartecos salinos et dictam tenuem expertus fui, quidem que cogor fatere quod nunquam commodi ullius eam cognovi, sed contra ad frustrationem meam magnam deludebatur, quia morbum augebat obvie, hactenus dico pro piperem hoc bubda, quod pridi usum, multa medicina extra urinam cientes que plerumque illorum sine stimulantes aut non sine discrimine date sunt, et dicuntur curam efficisse, sed consuetudines tales, lector, certe quidem in Gonorrhea tempestiva damnari debent, at gradibus posterioribus morbi quum fit stabilis vel in sanio esent utilia præcipue, nunc formulam dabo, cape Balsamum Copaiva et spiritum vitri dulce proportiones æquales; Gummi Arabicum dimidii quantum, cui aquam adde nullam sed quantum sacchari albi, tantii facere solidum, quibus etiam aliquantulum mentha piperis vel olei citri, simul teritur, que tunc cumuli hujus in partes nonas divide, unam ter per diem captandam, ante cibum semper, Hæc præscriptio daretur ab initio, at est optime patientem purgare prius, si systema poscerentur interdum inflammatio partis est tanta, quod profluvium sanguinis locale fit necessario, chordus sæpe urethra

obvenit et quem tentigines occurrent, semper dolorem crescent et quidem sunt vero cruciati, qui remedium e pluribus est emergere instanter penem vasa aqua gelida, alia sunt mersi gelido partes posteriores corporis nudas ponere. diu tentigo manet. Opii tinctura adhibita est et soporifici cateri et intrinsicus et extrinsicus cum cataplasmis panis et lactis, frequentes opus est folias Belladonna atropa in pulverem redactas in unguentum factas Peni accommodari, Hernia humoralis dicitur e Gonorrhea oriri saepissime, qui extra curam et attentionem posit, quia fit magnitudinis talis, interdum patienti intolerabilis, nisi sacculo suspenditur, quod levit aliquanto dolorem. huic morbo permatta remedia negotiata sunt, emetici, cathartici, applicationes algida, nix et glacies, sed embrocatio herbarum amarum posita patibus est potissimum, continus quantum caloris tati partes sine dolore possunt tolerare, strictura urethra etiam testantur; in curatione quasum remedium ad radicem pertinens quod praecipue fretum esse, idem est hoc, Nitras argenti, subdita in virgula tenite argentea ve Gummi elastici, introducta per urethram strictura que gesta in urethra per tempore longo sunt, e parte quarta horae, ad

semihoram, horam, seu potest quamdiu per diem ferri hoc remedium versaretur post usum virgula ferritis et argentea; absque agente Nitras argenti, sic stricturae tarde et gradatim pericuntur, multum plus de remediis stricturarum diceretur, at quid dixi, satis est, scio, eas obliterare, cur ergo de hacce copiose dixi ipsum — subinde Inflammatio glandula prostata etsi interdum cum scrofula oriretur, tamen cum gonorrhea vidatur et a hirudinibus tractata est, balnea tepida poti mucosi, infusiones seminis lini cum multis aliis remediis oppugnantibus inflammationes, nunc dicet necessario de gonorrhea femineorum loqui, qui tantum pauca verba dicabo, Inprimis animadverterer, ea vix unquam poscit remedium ullum aliud praeter munditiam, lotiones aqua gelida et res similes, quia sedes morbi feminis est pagina, sed etsi urethra sit interdum morbosa, Idea remedia similia qua in Gonorrhea masium eadem exitu negotiaventur felicissimo,

On Epsom Salts

in

Dysentery.

Submitted as an Inaugural Dissertation

To the examination of

Roger B. Taney, Esq. Dean,

The Trustees and Medical Faculty of the

University of Maryland,

For the degree of Doctor of Medicine,

on the day of one thousand

eight hundred and thirty one

By William Wilkinson Griffith

of Westmoreland county Virginia.

an essay on Dysentery.

Submitted as an Inaugural Dissertation

To the examination of

Roger B. Taney. Esqr Provost.

The Trustees and Medical Faculty of the University of Maryland.

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on the . day of one thousand eight hundred and thirty one. —

By. William Wilkinson Gregory.
of Chesterfield county Virginia. —

To originate a new and popular theory in Medicine, or in any other science at this period, would be difficult with him whose opportunities for the acquisition of literary knowledge, have not extended beyond mediocrity. In the early ages of antiquity, but little was understood concerning the real operation of causes, and effects; consequently it is very easy to conceive of the manner in which new systems and new theories derived their origin. At the present time the advanced state of science renders it necessary, that the Student should spend the greater part of the morning of his life in acquiring what has already been developed.
If we consider attentively the state of Medicine as handed to the Arabians from the Temple of Esculapius, by some of the Grecian Prelates, by whom the art was principally practiced, we shall be struck with astonishment and admiration when we behold it in the hands of a Sydenham, a Cullen, a Rush and a Potter, clad in the splendid garb of Philosophy. The Chemistry, Mathematics; and in short all the various branches of Philosophy, have been called into aid in the explanation of the Phenomena of disease; yet we not unfrequently find ourselves entirely at a loss, when we attempt to account for many of the symptoms incident to a morbid state of the animal

functions. The disease which I have selected as a subject for an inaugural dissertation is Dysentery; not that I feel myself adequate to the task of liberating it from the cloud of intricacy in which it is enveloped: for to such pretensions I have no claim: This I leave to be effected by him, who has mingled with the philosophy of ages, a life of experience and reflection; my object being simply a compliance with the laws of the institution. If I should be so fortunate as to delineate the true character and symptoms, together with the progress and treatment of the disease which I have here proposed for consideration, I shall have, may more than fully, accomplished the object of my most sanguine expectations. ——

Dysentery is a disease with which it is of the greatest importance to be acquainted, no other complaint, fever not even excepted, is so much calculated to puzzle the young beginner, and for this plain reason, that when the hour of danger is at hand both men and books are calculated to distract his judgement, and by their diametrically opposite directions, to paralyze his arm.—
For one will tell him that Dysentery is a disease closely allied in its nature to Enteritis, therefore he must bleed; another tell him, that the cause of Dysentery is dependent upon

strictures in the colon and small intestines, thereby occasioning a re=tention of the fecal and other peccant matter, and therefore he must purge, when perhaps a third assures him his patient will be purged to death, and that the only true plan is to sweat him, and perhaps again he will be informed by a fourth, that if Mercury can be said to act as a specific in any disease, it is in this, and unless he can salivate, his patient must be buried. Now in this state of suspence he continues to vacillate from one direction to another and behold! his success is less than if he had pertinaciously adhered to the worst plan proposed. Experience then will be the only means by which he can determine his choice, and many an anxious hour must he spend whilst exploring his way through this labyrinth of opinions.———

We have hardly any disease in Nosological arrangement more uni=form in its nature and symptoms than this, hence the mistaking prominent effects for proximate causes, must have been the manner in which this discrepancy of opinions among authors and prac=titioners originated, so that the means of cure directed against the effects have often removed the causes. Therefore each individual believed that he alone had found out the true cause and treat=

ment of the disease; perhaps one Physician will examine the body of a patient who died in a certain stage of Dysentery, and he will discover marks of inflammation, or perhaps Sphacelus, in different parts of the intestines, but he finds no other remarkable appearence; so he frames his inflammatory hypothesis, and he makes Venesection the principal indication, and in subsequent cases his success is only tolerable, but he becomes quite satisfied, that he alone has hit upon the proper plan. And then another patient dies, but at a period of the disease less advanced, or when all signs of strictures and relaxation have not been effaced by mortification; he will then say he is examined by another Physician, and upon examination he discovers the inner coat of certain portions of the intestines thickened, carrugated, and the caliber of the organ diminished, with foecal matter (called Scybala) lurking in the cells of the colon, or perhaps in the bendings of the small intestines; here then he establishes his doctrine, and occasionally afterwards has recourse to bleeding; and exhibits certain medicines, which he supposes have the power of relaxing these spasms, or strictures, together with frequent laxatives; and very often success is the result.—

Another persons in the examination of a different subject,

discovers ~~[illegible]~~ abcesses, or other organic derangement of the liver, and he concludes that Dysentery is Hepatitis in disguise, he administers mercury and his success is still better than those who have preceded him. Therefore he is positive that he alone has followed the true course and has correct ideas of the disease; whilst a fourth will observe that Dysentery is always accompanied with a defective perspiration, and believeing as Sydenham did, that it was a fever thrown in on the bowels, he has recourse to sudorifics to turn it out again, and not without success. —— Now I would ask the question, how are we to reconcile these jarring opinions and practices? He who could lay down or establish any fixed principles, which he could alway have in view throughout every case, and by them explain the phenomena as well as the mode of cure, and by the same give easy and plain directions, when we ought to lean towards one or the other of these directions, so apparently apposite, without looring sight for a moment of the principles in question would certainly deserve the thanks of the profession. ——

Symptoms. This disease is often ushered in by a sense of lassitude, nausia, a want of appetite, with a bad taste in the

mouth, the pulse somewhat depressed, with perhaps slight chills, alternating with flushes of heat, great thirst, dry skin, with pains in the bowels, costiveness, and sometimes a diarrhoea; sometimes the disease is very insidious in its attack, commencing with griping, accompanied with mucous and bloody stools, and with tenesmus, without any premonitory symptoms; when it arises from causes that act immediately on the mucous membrane of the intestines, this is most apt to be the case, but most generally the fever is developed before the proper Dysenteric symptoms show themselves; sometimes the febrile irritation is preceded by more or less diarrhoea, and tormina, but occasionally the mucous and bloody stools, accompanied with tenesmus, are the symptoms first discovered. From the commencement of the disease, and generally throughout its whole course, no fæces are spontaneously discharged, the stools consisting entirely of Mucous, more or less mixed with blood, but tenesmus may be considered one of the most characteristic attendants on this ~~[illegible]~~ affection; and this very violent and painful symptom, will generally afford us a pretty accurate criterion by which to judge of the violence and extent of danger in the disease.—

Sometimes much pain and difficulty are experienced in voiding

urine, and then the tormina are extremely violent and distressing, but they are however, more so just before the urgent calls to stool are experienced, whilst a constant soreness is discovered in the abdomen. It is sometimes the case that the stools are entirely of a mucous nature, or with very little or no blood mixed with them, but generally a great quantity of blood is discharged mixed with mucous, though in some cases the evacuations consist wholly of blood.—

The discharges from a Dysenteric patient in the beginning of the disease, are very seldom accompanied with foetor, though it is sometimes the case that they are accompanied with a peculiar disagreable smell: When the disease is advanced, and where the case is a violent and dangerous one, the stools generally have a pungent and cadaverous smell, and at the same time a sanious and corroding character. In some instances, the heart and arteries sympathize but very little with the local inflammation, but it is much more common to see fever of a high grade accompanying the disease. When the cases are protracted and unsubdued, there ensues great prostration; the pulse becomes small, perhaps corded, and very frequent; the countenance cadaverous and contracted; with tension

and elasticity of the abdomen, the skin shrunk and harsh; the gums tender, and swollen, and the breath offensive.
It is sometimes the case that an apparent amendment occasionally occurs, after these very dangerous symptoms have come on, it is however fallacious, for although the pulse may rise and to all appearances be improved, with a remission of the tormina, and tenesmus, still the restlessness and anxiety may increase, and the stools become dark, pungent, liquid, and offensive, the extremities cold, the countenance Hippocratic, and the surface of the body moistened with a clammy sweat. At first the tongue is covered with a ~~white~~ fur, then becoming brown, rough, and in the progress of the disease, becomes dry along the middle, though the edges will be red and perfectly moist.—
In protracted cases, or cases of a sub-acute character, the edges of the tongue will become, as well as the tip, perfectly clean, smooth, and florid; but in the chronic form of the disease, the whole surface of the tongue is often smooth, red, and clean, or perhaps red and granulated. The urine is always diminished in quantity, and high coloured, and is occasionally of a pungent odour. The hepatic and cutaneous functions are always inactive

in this disease, and the discharges from the bowels invariably feed from bile, and the skin obstinately dry, particularly during the active period of the disease.

Causes of the disease. — a sudden check of perspiration, may be considered the most common of its exciting causes; excessive fatigue, and a long exposure to the direct rays of the sun, appear to have brought it on. All unripe fruit, all acid, and accescent substances, will unquestionably produce it: and even fruit which is perfectly ripe when taken in too large a quantity; large draughts of cold water have sometimes the same effect. The character of the fever which accompanies inflammation of the intestines, may be said to vary from synocha to Typhus Gravior, for the type depends upon the cause of the disease; many contend that marsh miasma is the true cause of the disease, but this is certainly a mistake, for it may be found in situations, where marsh effluvia do not exist; although it has been so frequently ascribed to this cause. It is my opinion that heat is the true cause of the disease. In autumn it takes an a billious remittent form, when it is more inflammatory, and thus

it is always preceded by a chill. It cannot be said to be inflammatory when produced by heat alone, one cause which I have neglected to mention, is the introduction of putrid vegetable food into the stomach, this will almost invariably produce it. We sometimes have Dysentery in the winter, but it is produced from confinement, filth, and putrid aliment taken into the stomach.——

This disease is most difficult to treat when it is accompanied with great prostration: We do not find generally as much prostration in white persons, as in negroes, although we have more fever accompanying the disease in the former. It has by many been considered a contagious disease, but I believe the arguments which have been advanced in support of this opinion, have been founded upon incorrect data. It is said that in some constitutions it has lasted for fifteen or sixteen years, but when it continues as long as this it must be owing to a chronic inflammation of the liver. This disease has received many names, by some it is called the <u>bloody flux</u>, or the <u>flux</u>; by others, <u>morbus mucosus</u>; again <u>Dysenteria alba</u> &c. It frequently alternates with other diseases, Rheumatism, Opthalmia,

and it is sometimes, though rarely, followed by Palsy.—

Post mortem Examination.

It appears that the true Pathological character of Dysentery, was not well understood, until within the last fifteen or twenty years, I believe it was the opinion of Richter that Dysentery was a rheumatic or catarrhal affection of the intestinal tube, and this same opinion was formerly entertained by many Pathologists; they contended that inflammation of the mucous membrane, was not primary but secondary, and that it was the result of the irritating action of fluids which they believed to be vitiated and stagnant in the alimentary canal; the bile, the intestinal mucous, and pancreatic secretion, being the fluids to which they alluded. Later inquiries have however shown, that an inflammatory condition of the mucous membrane of the large intestines is invariably present, to a greater or less extent.—

It is sometimes the case that we can discover inflammation no where else, than in the colon and rectum, but more or less inflammation occupies the whole extent of the intestinal track, commencing from the duodenum and terminating in the

rectum. Whenever Dysentery terminates fatally in the early stage of the disease, the mucous membrane of the colon and rectum will always present many red spots, or patches, and there will be found to be somewhat elevated above the level of the surrounding parts; sometimes we discover vesicles, but these will be most frequently seen in cases of children.
The mucous membrane of the stomach and intestines throughout will show marks of great inflammation, surface uneven, and sometimes rough granulations may be discovered. The liver is generally very much enlarged, and its whole structure apparently destroyed.

Prognosis.

In the commencement, when the discharges are almost entirely of blood, the disease may be considered more tractable than where blood and mucous appear in combination.
It has been said, that a copious discharge of blood at the commencement of the disease is advantageous, by lessening the congestion in the portal vessels: When the stools are colliquative and fœtid in the advanced state of the disease it is said, to be indicative of much danger, but the appearance of bile

and natural feces in the stools, indicate a very favourable change. When all tormina, tenesmus, pain, and tenderness of the abdomen abate, and when the skin is uniformly moist, we may then prognosticate favourable, and the more natural the appearance of the stools becomes, with more certainty, may we anticipate a favourable result. —

Treatment.

It may be said, that there are four morbid conditions present in this disease, which are calculated to point out the general indications to be pursued in its management. —

(Namely)

1st — Inflammation of the mucous membrane of the alimentary canal, which is generally of a greater or less extent.

2d — Irritated vascular excitement.

3d — The entire cessation of cuticular transpiration, and.

4th — The disordered or entire suspension of the functions of the liver. According then to these discovered conditions, must we regulate our plan of treatment. —

1st — To moderate the action of the heart and arteries where it is excessive. —

2 — To restore the regular action of the skin and liver. —

3 — To relieve the local inflammation of the bowels. —

In establishing the relative importance and urgency of these indications, it must be observed, that the hepatic derangement, as well as the torpor of the cutaneous exhalents, are not always antecedent to the inflammation of the intestines, or to the febrile action; therefore it would seem reasonable to conclude, that the restoring these functions, in the commencement of the disease, (by purgatives) should not constitute a primary object, and I believe this will always be confirmed by experience, for in proportion as we subdue the general febrile excitement, and local intestinal inflammation, by equalizing the circulation, and consequently lessening the quantity of blood in the bowels, in the same ratio will we relieve the hepatic derangement, as well as the torpor of the cutaneous exhalents, It appears then that a high arterial excitement is incompatible with the regular performance of these functions, and tends particularly to sustain the local intestinal inflammation. —

The first step in the treatment of the disease is to moderate the very great febrile excitement, by bloodletting, though

in many instances, the fever is so very moderate as not to call for such depletory measures; when the disease prevails as an Epidemic, the fever is generally of a Typhoid grade, and then the abstraction of blood be wholly inadmissible. whenever the pulse is quick, tense, firm, and frequent, blood should certainly be drawn, but blood letting ought to be considered only in the light of a useful auxiliary, and as applicable principally to the early stage of the disease. I believe the hotter the climate is, the more inflammatory will the disease be, and the more impetuous in its attack; and here very prompt and copious blood letting may be considered the only means, by which to check its violence, and prevent its rapid termination in disorganization of the liver and bowels, It may sometimes be necessary in the inflammatory form to take, thirty, or sixty ounces of blood, as was practiced by Dr. Halloran in the Dysentery which prevailed at Gibraltar in 1824. Dr Armstrong also recommends that blood should be taken in the inflammatory stage, but it is equally true that in ordinary cases of this disease, or such as we have in temperate latitudes, it may be very frequently and properly dispensed

with. When the fever is of a high grade one or two bleedings in the beginning of the disease, will be sufficient to moderate the tormina, and fixed abdominal pain, and thereby favour the beneficial operation of purgatives which are indispensable to the cure.—

The form of Dysentery which usually occurs in summer can frequently be cured by, a dose of castor oil, a dose of calomel and the like, but that which occurs in autumn is generally of a more inflammatory form; and of course will require a more vigorous treatment, besides the indication of bloodletting as mentioned above, the long continued use of cathartic medicines is usually required, especially heavy doses of Calomel. In some cases of this disease it is with very great difficulty that an evacuation can be procured, and hence it has been necessary to administer as much as one hundred grains of calomel. The secretions deposited in the alimentary canal in Dysentery, appear to be highly acrid and irritating, and therefore cannot fail to increase the violence of the disease and sufferings of the patient, when suffered to remain in the bowels; they should be evacuated therefore

from time to time by mild laxatives, throughout the whole course of the disease. As the object is merely to relieve the intestines from this morbid secretion in this disease, those medicines which are less calculated to irritate, aught to be preferred, such as castor oil and calomel. a dose of calomel should be given as soon after the disease has commenced as possible, and followed after the lapse of three or four hours, by an ounce of castor oil; It may be necessary in some cases where the pain is very great to administer Opium, but this medicine should be dispensed with, whenever it is possible to do so. —

In some instances the irritability of the bowels is so great, that the mildest laxatives occasion much griping and spasmodic contractions of the intestinal tube, and here it may be necessary to administer opium, for it cannot be considered then to impede the operation of laxatives, as it often contributes to their aperient effects, rendering their discharges foeculent, copious, and less painful. Emetics. May be considered valuable in this disease, especially where it has originated from some indigestible article article taken into the stomach: they are said also to be valuable particularly where the tongue is coated with a brown fur along its centre, and when

much nausea and billious vomiting occur in the beginning of the disease. The usefulness of this class of remedies is in a great measure restricted to the early part of the disease, and it is probable that the beneficial effects of emetics in this disease, is dependent upon their mechanical operation, by the concussion which the liver and abdominal viscera must receive by the act of vomiting, thereby promoting the activity of the hepatic function, and at the same time determining the circulation to the skin. —

Diaphoretics are always valuable in Dysentery, by keeping up a gentle perspiration. They may also be administered with purgatives, with mucilaginous drinks, &c. The warm bath has been highly recommended in this disease. (particularly in the Typhous type.) The administration of Wine and other tonics, is necessary. When the disease is produced by aliment of a putrid nature, the patients diet must be changed, when perhaps he will recover without the use of medicine. Anodyne and emolient Enemeta are almost always highly useful means in the treatment, both of the acute and chronic Dysentery, but more particularly in the Dysenteric affections of infants and children. The injections may be compared of

the infusion of flax seed, of slippery elm, or a liquid preparation of starch, with a full dose of laudanum, should be administered, about two or three times a day, in fact injections of this kind, even without the anodyne, very rarely fail to relieve for a time, the very distressing tormina, and tenesmus, and predispose the bowels to more free evacuations, from the operation of purgatives.

It will be advisable during the whole course of the disease, that mucilaginous drinks, such as flax seed tea, solutions of gum arabic, infusions of slippery elm, barley water, or thin preparations of arrow root, &c. should be freely given. Every kind of solid food must be avoided, during the convalescence from this disease, great caution should be used to avoid every kind of indigestible and irritating food, some of the milder vegetable tonic astringents may be used. A weak infusion of the dog wood bark, or of cusparia with nitric acid, may be considered excellent articles for this purpose. Barley, Oat meal gruel, Rice, and boiled milk, &c. are the best articles of diet after the subsidence of this disease.

An Inaugural Dissertation

On Cholera Morbus,

Submitted to the ~~Medical Faculty~~ examination of the

Provost, ~~and~~ Trustees ~~of~~ and

Medical Faculty of

~~The~~ University of Maryland

~~For examination~~ for the Degree

of Doctor of Physick

by

Robert Gale.
of Virginia.

1831.

To Nathaniel Potter M.D. Professor of the Theory and Practice of Medicine in the University of Maryland. whose talents, acquirements Research, and Skill render him competent to impart to his class that which is of more value than silver, or gold, this dissertation is Respectfully dedicated by the Author.

Cholera Morbus.

From χολη bilis and ρεω fluo a flow of bile both upwards and downwards. It is one of those diseases which terminate in twelve or eighteen hours, and sometimes less when violent, and at other times, when not so violent lasting for several days. It is a disease which is apt to terminate fatally if its progress be not arrested, by the most fearless and energetic practice.

Causes. In warm climates this disease is most common occuring at all seasons of the year, but in cold climates it occurs most frequently in autumn when the heat is excessive, and the violence of the disease depends very much upon the intensity of the heat, yet we may have the disease very violent from articles taken into

the stomach. These circumstances induce us to believe that heat is most frequently the predisposing cause of this disease, both in warm and cold climates; producing a change upon the bile which renders it more acrid, or causes it to be secreted in a preternatural quantity; for the disease appears to be nothing more than a secretion of vitiated bile, from an accumulation of blood in the liver. Unripe fruits taken in large quantities into the Stomach, long exposure to the direct rays of the sun, fresh fish, oysters eaten after having been long kept, sugar, wild sallad, ale, beer, porter, punch, acescent wines, rancid butter, tainted meat, crabs, a mixture of different aliments; if you dine on fresh fish, and then drink milk you will have the disease, either in winter or summer, because the secretions off, of which they subsist appears

to be putrefyed. Symptoms. This disease generally
comes on between midnight and morning, with
nause and purging, sowness, pain and sometimes
flatulency in the stomach, the bowels are also
affected with very acute pains, succeeded by a
desperate vomiting and purging of bile, there
is a weak frequent and fluttering pulse, heat and
thirst excessive, and the Respiration hurried.
If the disease is not violent, these symptoms may
continue for a day or two, and the patient recover
without the use of medicine, but he is left in a
very debilitated & exhausted state. But if to those
symptoms be added spasmodic contractions of
the abdominal Muscles, great depression of
strength, cold clammy sweats, cramps in the
legs, and cold extremities, with hiccups weak
and irregular pulse, the patient must inevita-
bly die in a short time, if he be not promptly

elieved from this desperate situation; which
dont hesitate to assert, can always be done
Opium if administered in proper doses.
The disease which has lately been observed in
India & which is now prevailing in Russia,
appears to differ from the form in which it prevails in the
United States. In the Eastern variety it sometimes
begins suddenly, at other times after two or three
days previous illness, characterized by a pulse
scarcely to be felt, with a purging of thin watery
stools, and all the symptoms which mark the
worst form of the disease in the United States
these symptoms characterize the first stage, which
lasts sometimes twenty four hours, when reac
tion comes on. this is supposed to be the most
dangerous crisis of the disease, during this time
there is a quantity of vitiated bile thrown
off from the bowels of a dark & pitchy Colour

& sometimes proves fatal in a few hours, the pulse sinks and all the secretions are suspended, the blood being drawn by the contraction of the vessels, upon the deeper organs.

Diagnosis. The disease is to be distinguished ~~from~~ from dysentery, and Diarrhœa by the discharges. In Cholera the matter discharged is pure bile, unmixed with either blood or mucous, and sometimes scarcely with fæces. There is a considerable quantity of bile thrown off in Colica Pictonum, which might be mistaken for Cholera, but this disease can also be distinguished by the evacuations. In Colica Pictonum Notwithstanding the quantity of bile thrown off by vomiting, the bowels are obstinately Costive. Prognosis. If the evacuations upwards and downwards are accompanied by cold clammy sweats cold extremities

a weak and intermittent pulse, great disten
tion of the abdomen, hiccup, spasm and con
vulsions, with great prostration of strength, and
a shrunk Hypocratic face, these are signs which
betoken great danger. But when the symptoms
gradually abate, especially the vomiting, suc
ceeded by a disposition to sleep, with a moist
surface, the pulse and appearance becoming
natural, we may infer that the patient
may recover.

Appearances on dissection. There will generally
be found an accumulation of bile in the stom
ach and duodenum, the biliary ducts and
ductus choledochus are found relaxed, and
preternaturally distended, some of the viscera ap
pear to have been removed, perhaps by violent
straining in the act of vomiting. In the castein
variety of this disease, when the patient

as died during the first stage, the appearances on dissection were those of great congestion in the branches of the Vena Portai, the Liver enlarged and gorged with blood, the gall bladder distended, with dark green coloured or black bile; a greenish dark coloured fluid in the stomach, which also appeared ~~to be~~ to have been in a state of inflamation, with dark spots on its internal surface, the blood vessels of those viscera being preternaturally distended with blood, the pyloric orifice of the stomach hard and tumefied, the intestines containing a fluid like pus, sometimes resembling tar. At other times the intestines are found without disease, and the brain found affected, especially when the case has terminated suddenly.

Treatment. Horacks mode of treating this disease is by the lancet, if the patient be of a strong and

plethoric habit, if he be called before great debility has taken place, he informs us that this practice has succeeded in his hands, when Rhubarb, Magnesia, Emetics &c had failed. We have no doubts but the patients constitution must have been extraordinary if he was able to bear the lancet after the above articles had been taken; for we believe that emetics are deleterious in this disease, instead of being a benefit; And we have no doubt if patients are treated with large doses of Tinc: Opii that there will never be any necessity for bleeding, Emetics or Magnesia. Emetics & calomel should never be given in this disease, as objects is to stop the secretion of the liver, and if we give calomel we defeat our own designs, and consequently aggravate the symptoms. Warm drinks, and various teas have been extolled in this

disease, but we place no confidence in them, our sheet an-
chor is opium, Professor Potter's practice is to give 100 drops
of the Tinc. at the first dose, and repeat it every hour
untill the symptoms abate, using at the same time brandy,
and water as a stimulant; it is best, because the thirst cannot
be abated by water. In extreme cases he has given 300 drops
of the Tinc: first & repeated it every hour with success; the
gentleman who recovered under this treatment, is now
living in Baltimore. Opium has cured the disease when
the patient was in cold sweats, and no pulse could be
perceived, There is also some advantage to be derived
from friction with hot brandy & water; injections of lau-
danum has been used with success in this disease, when
the Medicine is thrown off the stomach. During conva-
lescence, the patient should keep his bowels open, avoid
all the exciting causes, use Tonics to prevent a recurrence
of the disease, the diet should be light, and digestible, &
taken in small quantities, the patients should wear

flannel next the skin, and exercise in the open air as much as possible, if he can do so with safety.

The practice pursued by Professor Potter has been also pursued by Dr. Clark of Dominica, who has had great success in the treatment of this dreadful disease.

These gentlemen I have endeavoured to lay before you, not the practice pursued by our forefathers, from hippocrates to the present day, but I have laid down that practice, which appears the most rational, and which has been successful in the hands of the most skillful, & scientific Physicians of the present day.

An Inaugural Essay
on
Cynanche Trachealis

Submitted to the Judgement

of

The Provost, Trustees and medical Faculty

of

The University of Maryland

For the degree of Doctor of Medicine

By

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of

Richmond

Virginia

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Cynanche Trachealis

This disease prevails chiefly in children from a short time after birth untill puberity, attacking itself to particular families, and generally attacking the most robust and ruddy children, and rarely seize upon those that have been exhausted by other diseases This disease generally comes on in the night after the little patient has been exposed to the weather during the day and after a catarrh of some days stand-ing. Previous to the attack, the voice becomes hoarse and a gloom is cast over the patient, which causes him to forsake his playfellows and seems as if he was anticipating his danger. But these symptoms are not sufficient to prevent the patient from going to sleep. He awakes with an unusual cough, and the inspirations particular those which immedi-ately follow the cough are long and attended with that crowing noise which is the most remarkable characteristic of the disease. Feverish symptoms succeede and often run high. Pulse is frequent and hard accompanied with thirst and restlessness. His face is flushed + swollen, and his

eyes are unusually red and he seems in constant danger of suffocation. His skin burns and he labours more and more in breathing; still the wheezing noise with the usual cough is heard. He tries in vain to relieve himself by change of posture but finds no relief from it, and generally his sufferings are protracted untill morning when perhaps there is a little remission, his breathing is a little easier, but the anxiety, fever and cough remain. He soon grows as ill as ever; and these symptoms continueing, weakened by the violence of his illnes, with a purple lip and pallid countenance he breaths his last after one or two days illnes. In other cases the disease after continueing for some time appears suddenly to give way, the breathing is free the child becomes cheerful, his appetite returns and every symptom of the disease appears to have yielded and the patient appears to enjoy himself and seems perfectly recovered and the hope of his parents are raired only to make the disappointment greater. For suddenly the child grows worse with his livid and swollen face and convulsive strugles giveing him the appearance of one that is strangled. When Croup is favourable it terminates in various ways; the most common termination is a gradual retrogression of the symptoms after the disease has

arrived at its maximum hight. There is poured out a moisture on the skin, the fever declines, and the croupiness and lastly the cough at length wears away. When venesection is used upon the commencement of the symptoms, the relief is sudden verry frequently; and the patient after bloodletting breaths with ease who ten minuets before lay gasping and convulsed. Sometimes after the child has been ill for two or three days he is relieved of the symptoms by expectorating a thick white substance This however does not always happen; for there are instances recorded in which the membrane has been rejected completely formed and yet the child died. This ~~secretion~~ membrane is a secretion from inflamed vessels and presents all the varieties from the smallest deviation from health to the secreting process perfectly formed in inflamation In some cases the condition of the vessels seem to be incompatible with secretion in such cases you will always find by dissection the vessels injected with red blood only. The secretion of a more compact form, to which the appellation membrane has been applied, seemes to be the fibrine of the blood semi-organized, such as we find when adhesions ~~on~~ are formed in any membranous parts.

This body is found not only in the bronchia but throughout the extended ramifications of the bronchiae. If we macerate this membrane found in the Trachea in water and thus seperate the internal softer parts from the more

compact, we find it to consist of numerous rectangular fibres, lamella completely identifyed with the fibrine of the blood collected by stirring it while flowing from a vein with a rough body, the red globules being washed off. Chemically treated they correspond, unless we say that the membranous ~~matter~~ imparts rather the characteristic of albumen, but fibrine and albumen are so nearly allied that it is impossible to say in what the difference consists. Croup sometimes becomes chronic and does not subside for weeks. when the restitution is gradual the patient now and then coughs up portions of this white membrane When in the urgency of the attack, the fauces and neck are examined with a view to investigate the cause of these symptoms. even when a sense of heat is complained of in the throat; the tonsils are not swollen and but little inflamed. In some instances there is a fulness to be discovered in the swell of the neck, but this is by no means characterestic of the disease. It is a fact well known that the first attack most generally establishes a predisposition to the disease. And it has been the observation of every practitioner who has had much of this disease to contend with that much slighter causes are required to produce it a second time than was required to produce the first attack. may that

external cold and wet without any specific state of the atmosphere will bring on a recurrence of the disease. It is a confirmation of this that those who have had the croup, when they are affected with catarrhal affections have more or less of the cough of croup intill they arrive at the age of puberity-

Appearances on Dissection. Examination of those who die of croup has made us acquainted with a very peculiar morbid appearance of the Trachea. Viz. an adventitious membrane as some term it which as I have already observed is nothing more than the fibrine of the blood thrown out by the inflamed vessels of the Trachea and in a great measure blocks up the passage. It arizes a little below the Larynx, and extends, in many instances to the bifurcation of the Trachea. Semi-purulent fluid is commonly found in the Trachea at the same time, and occasionally traces are also met with of pulmonic inflamation. Frequent as is the appearance of such a preter natural membrane in those who die of croup, it is by no means to be considered as a constant or necessary part of the disease. Its formation is often indicated by the manner in which the child breaths - throwing his head back, so as to put the Trachea on the stretch.

Croup has been considered by some Pathologists a contagious disease but it is evident it is no more contagious than Rheumatism or Pneumonia

One plain and simple fact plainly shows that it is not a contagious disease, for it is a law in all contagious diseases that the predisposition should be destroyed by the first attack, but in this disease Croup the first attack always establishes a predisposition and leaves the patient much more liable to a reccurence of the disease & from much slighter causes than was originally required to produce the disease. But it is sometimes hereditary. It is often formed on hereditary predisposition as Gout Phthisis &c. and this proclivity to Tracheitis does not always depend upon a scrofulous diathesis. This has been one of the sources of error, because several children in the same family are affected at the same time they are supposed to have contracted it by contagion. The inflamation sometimes extends from the lining of the trachea to the muscles surrounding the glottis and in some instances it commences in these muscles and run downwards, but the situation and the office of these muscles is such that they never can close the glottis or passage in the windpipe when these muscles are in a state of inflamation an irritating cause acts upon these muscles great pain and tension are excited, but they are so completely antagonized that they cannot close the passage. The sonorous cough in croup is occasioned by the rigidity of the inflamed ~~mufells~~ muscles In such cases the voice is much louder & more shrill than in health.

Causes. The most usual exciting cause of Croup is cold

and particular in a damp atmosphere. It prevails chiefly in winter and Spring, and is more common in the cold and temperate climates than in the Tropics. It is asserted by some authors that croup never attacks after the age of puberity, but this assertion is far from being true for croup attacks persons of every age as an instance of it our illustrious, good and distinguished benefactor Georg Washington died of this disease, (Tracheatis) of which there can be no doubt.
Children of all ages die of Croup from a few weeks of age to puberity and yet a boy of twelve years of age has as perfectly as ever he can or will have the power of expectoration, to account for this, some have immagined it to depend on the change which takes place in the constitution of the boy at the age of puberity and perhaps in a more peculiar manner on the change which the upper part of the windpipe undergoes. That a verry material alteration does take place is evident from the change in the voice which now becomes firm and manly.
I therefore suppose that the greater degree of tone with which the Trachea is endowed enables it to resist those excitements which would have operated on the same organs in a less perfect state. Hence it may be infered that I consider debility of the Trachea as the predisposing cause to croup. The obvious exciting cause of croup, the inflamed Trachea, the throbing and vehement pulse, the great thirst, burning skin and

and high coloured urine together with pain in the diseased organ point out that it legitimately belongs to the order of inflammations; an order of disease of which the general treatment is peculiarly applicable to the disease under review. With a view to the formation of a plan of cure it is proper to consider the disease under question as consisting of two stages. viz. the incomplete or inflamatory and the complete or purulent. In the former the membrane is not as yet formed, in the latter it is fully formed. It is in the first stage that every effort that can be made should be rigidly enforced for the relief of the patient In the first stage our practice is as bold as it is simple and unless the summary measures are taken in the beginning, succeede our success let the management be ever so skillful afterwards is very problematical

Treatment. During the first stage of Tracheitis our chief reliance should be placed on venesection, Emetics & calomel &c In the first place as regards bloodletting. It being our intention to subdue the local & general inflamitory action as speedily as possible and for the fulfilment of this intention, the most prompt & energetic antiphlogistic measures must be adopted. The remedy upon which we must place our principal reliance, for the reduction of the Tracheal inflamation is bloodletting. Here, however as in most other phlegmasial diseases, the good effects of the lancet are

confined to the early period of the disease. When called to a patient labouring under this disease, in whom the manifestations of high febrile excitement and active tracheal inflamation are conspicuous, a vein should be opened and the blood suffered to flow until an approach to sincope be induced. So soon as this effect is produced, all the distressing symptoms subside. But should there be a recurrence in an hour or two with difficult respiration and the pulse be not soft and feeble, more blood should be drawn, and again to the extent of inducing syncope. Sometimes we are under the necessity of opening a vein three or four times in the course of 12 hours before a permanent and decisive impression was produced on the disease. Such copious depletion is, however, demanded only in cases where the local and general inflamatory action is strong - where the pulse is tense, hard quick and vigorous, attended with a dry and sonorous cough and respiration. Such cases are apt to terminate in the formation of a false membrane in the larynx; and our efforts ought to be prompt & vigorous to reduce the inflamation below the grade necessary for the formation of pseudo membranous matter. For the quick reduction of this local and general inflamation, the opening of the laryngeal artery has been proposed by Dr Potter ~~but do not think~~ so as to make a decisive impression at once on the diseased organ by cutting off the supply of blood to the part. After the effusion which gives rise to the membrane has taken place, bleeding will afford but moderate & temporary advantage. It must also be observed, that where the

disease is attended with but moderate symptoms of febrile excitement; where the pulse is not hard or tense, though accelerated; and especially where, in addition to these manifestations of a moderate febrile excitement, the cough and respiration are attended, early, with a copious, transparent and viscid mucous. bloodletting need very seldom employed to the extent just mentioned, and may in some instances be wholly dispensed with. Emetics. these are important remedies in this disease, and may indeed, be regarded as indespensable in its remediate management. In those cases which are early attended with a copious secretion of viscid mucous in the larynx and trachea, emetics are especially useful. They tend not only to expel this tough mucous from the larynx; but to equalize the circulation and to promote the cutaneous exhalation, as well as to diminish the general arterial excitement by the nausea which proceedes & accompanies their action. In infants affected with this disease, the occasional employment of an emetic is particularly important; for at this early age no voluntary efforts are made to dislodge and expell the viscid secretion from the larynx, and which, if not removed, may by itself cause suffocation. In violent cases of high inflamatory action, and in which the cough and respiration are dry during first stage, there is commonly but little advantage gained by the administration of an emetic, so long as this dryness of the larynx and trachea continues. In such cases

the proper period for the administration of Emetics commences with the appear-ance of the viscid secretions, which always sooner or later occur in the respir-atory passages, and from which the disease derives most of its danger. Some benefit may result from the exhibition of Emetics before any morbid secretions occur in the Larynx from the general antiphlogistic tendency of nausea & vomiting; but the peculiar advantages of this class of remedies are most assuredly more conspiciously displayed when the upper portions of the windpipe are clogged with a viscid fluid, which requir-es expulsion. In the advanced periods of the disease, there exists often so much torpor or insensibility of the system in consequence of the imperfect decarbonization of the blood and vascular congestion in the brain, that great difficulty is experienced in procuring an operation from emetics. To obviate this gastric insensibility and procure emesis, we must endeavour to diminish the sanguineous con-gestion in the head, and this may in general be readily accomplis-hed by putting the patients feet in warm water, and applying a napkin wet with very cold water, to the head. The abstraction of blood, too, while the patient is maintained in a sitting or erect posture, will rarely fail to produce Emesis under the circumstan-ces in question. The articles preferred as an emetic in this disease are calomel in combination with Tartarized Antimony

The following formula, Dr. Potter recommends as being preferable it is thus. viz. ℞ Tart. Ant. grs X

Calomel grs XXX

Aqua ℥ ij. Add Gum arabic enough to to suspend the calomel & antimony. Give, two or three teaspoonfuls of this mixture to be given every half hour, according to circumstances This says Professor Potter hardly ever fails of producing copious emesis acting at the same time as a brisk cathartic and with all determines to the surface. Calomel alone has been highly spoken of as an emetic in this disease given in doses of VIII or X grs it will excite a active vomiting in a short time. The peculiar advantages which appears to belong to this practice are the protracted and the great degree of nausea which the calomel produces; an effect which has a powerful antiphlogistic tendency; and the alvine evacuations which almost always speedily ensue. Besides these effects, great benefit may be expected from the early constitutional influence of the calomel an influence which, in the present disease, especially, is very generally acknowledged to be highly salutary. Tart. Ant. Ipecac. Sulph. Zinci Squills. Sul. Cupri have all been used and recommended in this disease and when the object is the mere expulsion of the tracheal mucous any of these articles may answer the purpose. The Lobelia inflata

in the form of an infusion has been used with the happiest result in a few instances, when there is an extraordinary secretion of the trachea Emetics will frequently have no effect, and in this case we must resort to mercury to produce Emesis. The use of Corrosive muriate of mercury in this disease has been by some considered hazardous, but experience always will determine in its favour under the circumstances to which its use should be restricted. It should be used only in that in that insensible state of the stomach which is so often to be observed, where the excited fluids impedes the passage of air into the lungs; In these cases the sublimate affords a prompt, safe and efficacious emetic, and in the hands of a judicious Physician will often arrest the progress of the patient from the grave, even while it has entered the confines of eternity. This is one of Dr. Potters favorite emetics, and it is well known his success in the treatment of this disease is far before that any other person either of Europe or America. His prescription an form of exhibiting it are as follows to wit: Bichloride of mercury gr j

Aqua — ℥ j

dissolve it, a teaspoonful of this to be given every 15 minuets till a complete Emesis be produced. It often excites ~~soreness~~ of the gums, but scarcely ever a profuse salivation. Purgatives, these are useful as auxilliary means in the treatment of this disease. In the onset of the complaint, the bowels should be briskly evacuated, and two or three evacuations

should be subsequently procured daily untill the inflamation is subdued After the first purge, which should be energetic, it is best to employ the gentler articles of this class of remedies; for every active cathartic tends to exhaust the resources of the system without procureing any peculiar advantages over milder aperients, and even do much harm. Mercury — Calomel given with a view to its constitutional effects is a remedy which has ~~[illegible]~~ been, and by many is still much extolled in the treatment of this disease. The late Dr. Rush placed great reliance on its powers in this disease; for he asserts, that when given in large doses in the commencement of this disease, and continued afterwards in smaller doses. "it is hardly less efficacious in this complaint than the Peruvian bark is in intermittents. Dr. Hosack also speaks very favourably of the employment of calomel. Doctor Potter also speakes of it as one of our remedies in which we should place the greatest reliance. He says the reason why it is not more used that it is prescribed in doses so insignificant that it is rather calculated to injure the reputation of the medicine than cure the patient. Every Physiccan who is much conversant with this disease, and has accurately weighed the merits of the means employed will admit, that if we were restricted to a single remedy we would take calomel. The constitutional influence of mercury is calculated to do good in croup we are all well persuaded. It tends in no small degree

to reduce the local laryngo-tracheal inflammation, and to counteract, as it would appear, the formation of the pseudo-membranous exudation. Calomel has been used by Professor Potter & Dr Hamilton in the quantity of one or two hundred grains in a single night with the greatest success indeed it scarcely ever fails of accomplishing every thing we can desire when used in sufficient doses. The apprehension of severe ptyalism deters many from employing this safe & efficacious remedy although it is almost groundless Dr Potter says, he only saw one case of salivation out of several hundred cases in croup. In the turgid state of the stomach it is beyond all other medicine effectual in accumulating the diminished excitability, which seems soon to pervade the whole sentient system. In large doses it does not act frequently as a Cathartic; but finally very copiously, and in case of constipation an enema gives vent to the contents of the stomach and intestines and completes the cure where the complaint assumes somewhat of a chronic character, we ought not to loose sight of this advantage which would be derived from this remedy; you may after the administration of an emetic give it in doses of one or two grains every hour or two with about one-fourth of a grain of Ipecacuanha. Warm bath is a very useful auxilliary in the treatment of this disease. It should be employed along with the remedies already mentioned when the skin is dry & hot; its usefulness is confined to the first stage; for in the advanced stage the skin is generally bathed with profuse

perspiration and the pulse weak & soft. blisters with the preceding remediate measures are often proper and useful. But the want of proper treatment in the commencement often renders them necessary. but Dr Gregory thinks the propriety of applying large blisters to the throat very questionable. for the irritation produced by the blister may extend to the inflamed membrane and produce an aggravation of its symptoms. Dr Elliot has advised the application of a piece of flannel imbued with turpentine and applied around the neck. Polygala Senaka. this has been regarded as a specific; it is without doubt a useful medicine in some stages of the disease; but is far from possessing the powers which were formally ascribed to it. It is objectionable in acute inflamatory cases; but after the complaint has been subdued in some degree or lost its acute inflamatory character, its influence is often conspicuously beneficial. For the removal of the dry & hoarse cough and slight oppression of the respiration which in some instances remain after the inflamation has been subdued we possess no remedy equal in usefulness to Polygala senecka. It is useful in all chronic croupy affections and in catarrhal and pectoral affections which remain as the sequela of this and other acute affections of the respiratory organs. It should be given in decoction. ℞ ℥ of the root to pint of boiling water suffered to simmer for 15 minutes and afterwards sweetened with honey Dose ℥ every hour or two hours according to symptoms.

With regard to hepar sulphuris, a remedy introduced to the notice of the profession by a french Physician but little can now be said in commendation of its powers. Gum ammoniac, The Syrup of Squills, antimonial wine and Laudanum Asafoetida are all valuable expectorants in the last stage of this disease. Tracheotomy. This operation is scarcely admissable in any disease; but in Croup it is altogether inadmissible for this simple reason; that the membrane which is the cause of death is found not only in trachea but extends throughout the ramifications of the Bronchia. The mere opening of the trachea would therefore be of no use; as the air passages would still be obstructed and besides it would act as an impediment to other remedies which might be employed to the relief of the little sufferer.

Dissertatio Inauguralis

De

Cynanche Tonsillari

Quam

Pro Gradu Doctoris

Summisque in medicina honoribus et privile-
-giis rite ac legitime consequendis

In Comitiis

Universitatis Terræ Mariæ

Præfecti

nec non

Professorum doctorum et valde reverendorum

Examini subjecit

Robertus Franklin

ejusdem civitatis civis

Pridie Idus Martias

Anno domini duodecimo centesimo et tricesimo uno

Medico
Denni Claudi
Sub cujus Auspiciis
Studium Medicinæ captum est
Hæc dissertatio
Dedicatur
Consecraturque
Ab
Auctore

De Cynanche Tonsillari

Pyrexia, aliquando typhodes; rubor et dolor faucium, deglutitio et spiratio difficiles, cum angustia in faucibus sensu, cynanchem apud Cullenum designant. Cynanche in quinque dividitur species. Prima in Tonsillis, membranisque his juxta illis positis, sita est. Sed secundam speciem a prima tantum gradu differe opinor. Et in eo secundam a prima quidem differe mihi videtur, quod in Cynanche Tonsillari; dyspnoa, ulceratio, et affectio systematis nervosi leniora sint. Alteris specibus (quæ tractanda sunt) differentiæ in sitibus sunt, et quæ tractare seperatim in hac thesi nimis prolixum esset; quia de sola Cynanche Tonsillari, ex toto quatuor succedentium specium omissa consideratione, pauca hic tradere mihi in animo est. Hic morbus et idiopathicus et symptomaticus est. Primus eam speciem comprehendit, in qua Tonsillarum inflamatio manefeste morbus primarius est, et a causis in Tonsillis agentibus oritur. In secunda specie inflammatio, aut alios morbos, jam antea existentes sequitur, aut a causis in aliis corporis partibus vim suam exercentibus, et inde in Tonsillas communicantibus ortum

ducit. Sed hoc divisio inutilis est, nam non res est valde quæ-
-renda, quis eorum sit morbus primarius, quia sæpe species non
medelam diversam requirunt et præter hæc morbi primarii
curatio semper inflammationem Tonsillarum vincet.

Morbi Phenomena

Præcipua Cynanches Tonsillaris signa, rubor et tumor Tonsil-
-larum et mollis palati, deglutitio difficilis ~~solidis~~, et doloris
-cus, deglutitio liquidorum difficilior solidis, respirationis impe
-dimentum, vox indistincta, auditio obtusa, lingua tumi-
-da, alba, instrata cum densa impositione muci, et pulsus plenus, durus, et frequens, secretio copiosa
salivæ viscidæ sunt. Cynanche Tonsillaris plerumque cum
sensu angustiæ molesto in faucibus incipit. Sed hic mor
-bus sæpe a rigore et aliis Symptomatibus prædispositionis
videlicet, debilitate, languore, et relaxatione procedit, et
nonnunquam inflammatio a Tonsillis in Pharyngem pan-
-dit, et tum difficultas deglutitionis major est, quam ubi
inflammatio in Tonsillis sita est. Nam ubi inflammatio
in Tonsillis, et velo pendulo palati, et uvula sita est,
dolor est potius in actione deglutitionis, quam in deglu
-titione ipsa. Faucibus inspectis, tenues limites inflam-
mationis, Tonsillæ et partes contiguæ, tumefactiora et

rubrora a majore numero vasorum, quæ in statu naturali conspici non possunt, se ostendentium, et insolito more turgescentium. Ea vasa turgida plerumque Tonsillis inflammatis peculiaria sunt, nam raro in sanitate sese ostendunt. Sæpenumero in hoc morbo hic et illic apparent maculæ albæ, ulcuscula efficientes, quæ non periculosa symptomata sunt, dum albæ remanent et pulsus arteriarum durus, et plenus est. Plerumque inflammatio coercitur ad eas partes, quæ aspiciuntur; tamen aliquando per membranam continuam, interiori ~~oso~~phagi superficiei superextensam, serpit, quæ deglutitionis ~~tenta~~ est a ~~medicina~~ a majore difficultate et dolore, tam quam situ doloris recognoscitur. Sed an affectio œsophagi primarius morbus sit, seu expandit a faucibus, difficillimum tractatu est a medicina, quod interdum dolor deglutitionis est tanta, ut medicamenta, et nutrimenta aliquando penitus excludantur. Subinde musculi cervicis afficiuntur, propter quod vertere caput sæpe difficillimum est, præterea musculi deglutitionis aliquando inflammati et affecti cum spasmo sunt. Symptomata febrilia, quæ huic morbo adsunt, sæpe vehementia sunt, et sæpenumero severiora, quam anticipatio indicaverit a limite morbi localis vel magnitudine

partis lacessitæ. Tumor Tonsillarum sæpe peramplus est, ut deglutitio impediatur, et cibi et liquida, quæ devorari conantur per nasum revertentur; et præterea dicitur premere venas jugulares, et ob eam rem sanguinis moram ruborem oculorum, et dolorem capitis producere. Inflammatio nonnunquam ad orificium tubi Eustachiani extendit, et surditatem producit. Cynanchi Tonsillari sunt eædem terminationes ac aliis phlegmasiis, et igitur in hoc loco non dicere singulatim mihi oportet; sed non negligenter ubi decuratione dicamus. Sæpe fluxus salivæ dolori est remedio, tamen aliquando causa ægritudinis est, nam irritatio quam sæpe saliva creat, conatum invitum deglutitionis excitat

Causæ Remotæ

Inflammationem in omnibus fere corporis partibus fieri nemini latet; quam tamen in Tonsillis, tam copioso nervorum et vasorum apparatu instructis, propter minores causas ortum esse, etiam a priori verisimillimum est, hic morbus, frequentissime in vere et autumno occurrit, et juvenes ei obnoxiores, quam senes sunt. Causæ remotæ sunt, quæ in homine procedito corporis constitutione

constitutione peculiari morbem cient; et quæ in homine jam ante morbo, prædispositio cynanchem Tonsillarem concitant.

Omissio venæsectionis in accessu priori et remedia impropria prædispositionem facient.

Habitus corporis plenus, fibra tensæ, et diathesis phlogistica hujus morbi et reliquarum phlegmasiarum semina sunt.

Laxitas et debilitas vasorum Tonsillarum, tum congenita tum variis causis inducta præcipuam ad morbum hunc prædispositionem faciunt.

Iis hominibus præpisime affectis prædispositio major est, quam illis, qui nunquam hoc morbo oppressi sunt.

Humiditas, et frigus præcipue cum conjunta valent, et igitur causa frequentissima est.

De Causa Proxima

Ipsa quæ eadem sit ac in reliquis phlegmasiis, vix operæ pretium est in hoc loco disserere.

Causæ enim jam memoratæ agunt, aut, Primo. Directe stimulando, et ita eo modo constrictionem, et auctum impetum vasorum faciendo, aut, Secundo, Debilitatem atoniam inducendo; quam subsequuntur coacervatio

sanguinis, et actio vasorum aucta.
Hoc tantum proprii habet Cynanche Tonsillaris quod Tonsillæ idoneæ sunt ad effusionem et stagnationem humoris serosi; ideaque Cynanche Tonsillaris in suppurationem quotiescunque aliæ phlegmasiæ desint.

Prognosis

Prænotia omnia, vel fausta, vel mala, vel e violentia aut tractu inflammationis ducenda sunt. Inflammatio lenis, vix ultra fauces extensa ulcusculis carens, larga muci secretio, sanitatem remediorum idoneorum usu restitutam ~~[illegible]~~ iri indicant.
E contrario, inflammatio gravis, et diuturna, Tonsillarum et maculæ opacæ faucium et pyrexia typhodes magnum periculum indicant; et ubi hic morbus in strumosa conditione accidit, periculum majus est quam in sana conditione corporis est.

Ratio Symptomatum

Symptomatibus apparentibus in hoc morbo rationem aliquam hic reddere conabimur.
Ruborem, ac ruboris sanguinis particulis, in vasa Tonsillarum, humorem solummodo decolorem in

statu sano fere solita, ab aucto impetu adactis oriri potest
Et dolor a copia sanguinis majore quam solito, in vasa
sanguifera nervorum, impulsa oriri videtur.
Tumor cui situs est in faucibus a dilitatione vasorum
oritur, qua partem serosiorem sanguinis in interstitia sub telam mucosam sita effundunt.
Deglutitio liquidorum difficilior solidis est, quia numeri majores musculorum in priori quam posteriori occupantur.
Respirationis impedimentum tumore faucium oritur, et vox ab iisdem causis afficitur.
Ubi inflammatio gravis est, et ad tubum Eustachianum extendit, orificium ejus claudit, et eo transitum sonitus ad aurem internam abstrahit.

Ratio Medendi

In omnium morborum curatione animus diligenter adhibendus est, ut causæ remotæ amovendæ et evitandæ sint. Eæ variis modis pro varia earum natura tollendæ sint. Sed præcipue, in hoc morbo saltem evitatio, frigoris remedio est.
Duo sunt medendi consilia:

Primo. Sanguinis impetum, et actionem vasorum minuere.

Secundo. Symptomatibus quibusdam gravioribus, applicatione remediorum topicorum levamen adfere.

Primæ indicationi medetur administratio antiphlogistica, quæ in omni stimulo evitando ponitur; et victus in lacte et vegetabilibus, carne vitato, liquoribus fermentatis, aut spirituosis, præsertim febre urgente, aut diathesi inflammatoria consisteret.

Ubi inflammatio lenis est, aliquando tantum ad partem læsam applicatis remediis utimur, hæc in duas species dividantur; videlicet illa quæ ad externas et internas fauces applicantur. Priora in applicationibus tepidis, linimentis volatilibus, et aliis remediis facientibus ruborem consistunt; et idem de emplastro cantharidum dici potest, quod remedium potentius, quin si excitatio magna sit oportet usum posterioris differe, donec morbus a propriis evacuationibus reducatur, sed postquam depletione propria facta, statim agrum ad sanitatem reducit, et ~~ut~~ utile est.

Quamvis vesicatoria imprimis symptomatibus levamen non

ferunt, earum efficacitas non desperanda est, nam ubi prima applicatio non valet, secunda sæpe succedit; remedia interna quibus utimur, ubi inflammatio lenis est, solutio nitri, aluminis et alii mites gargarismi sunt; sed nihil majis noxium esse potest, quam gargarisma acres, quia sæpe gangrænam producunt, et hæc minime consilio respondent, ubi inflamatio gravior est quam memorata.

Medicinæ vomitum provocantes in initio sæpe finem facient, quia cursum sanguinis ad superficiem cutis vertunt, et corporis organis levamen afferunt, et notatione dignum est, ut ubi nulla affectio systematis est, illa majis efficienter inflammationem faucium quam remedia topica vincent.

Sed ubi morbus diuturna sit, et inflammatio gravis est, præsertim si musculi cervicis inflammati sint, exhibitio emeticorum circumspectionem majorem postulat; et semper minus efficiens est, et aliquando injuriosa est. Tamen hæc sæpe prosperrime adhibentur, postquam abscessus formatur. Nam ubi abscessus situs profundior faucibus, et chirurgus non tangere

potest, exercitatio vomitus eruptionem eorum quæ sint in abscessu movebit

Medicamenta cathartica sæpe nostrum attentionem poscunt, præsertim si comitetur pyrexia gravis; alvi enim purgationes, tum, ~~stimulo ad intestina communicatio~~ magnam humoris aquosi quantitatem evacuando, et eo modo quantitatem fluidorum minuendo, tum stimulo ad intestina communicatio, multum certe allevant. Cathartica lenia conjuncta iis topicis remediis, quæ supra tradidi sæpe hunc morbum curabunt, tamen ubi pyrexia violenta est, adhuc illa propria sunt. Exinanitionem intestinalem minime pro quantitate fluidi evacuati prodesse, sed hoc modo causa amovenda est irritationis arbitror.

Medicamenta ex hydrargyro confecta, jure laudata sunt, et vim peculiarem in hoc morbo curando possidere videntur, et in eo hydrargyrum ab aliis catharticis differe opinor; quod hydrargyri confectiones ad majorem secretionem omnes glandulas stimulant.

Nunc parca de remediis diaphoreticis mihi tradenda sunt. Hæc in Cynanche Tonsillari æque utilia sunt quam in aliis phlegmasiis; nam hunc morbum sua sponte a sudore desinere vidimus, et

hoc nos utilitatem hujus remedii docet, sudor, qui ab externo calore producitur, inutilis et injurosus est. Haustu deluti, vel quicquam mite diaporticum, frigore evitato, saepe sudorem producere sufficiunt.

Sed ubi excitatio systematis sanguiferi major est quam memorata, tum nitrum antimonio conjunctum optimum remedium sudorem instigare est.

In inflammatione locali, qualis bynanche Tonsillaris est, nisi diathesis phlogistica et pyrexia violenta sit, aut inflammentur membranae oesophagi, venaesectio raro adhibenda est.

Scarificatio Tonsillarum prodesse dicitur, et aliqui omnibus evacuationibus vasorum Tonsillarum scarificationibus prostulerunt. Hirudines ad jugulum applicatae effectus optimos saepe dant; ha tamen aliquando haud facile loco, quo cupimus, figuntur, et neque facile metiri possumus quantitatem sanguinis ab iis detracti.

Verum illa detractio topica, ob parvam sanguinis missi quantitatem, utut utilis et praestans aliis largioribus evacuationibus in violenta inflammatione praeferi non debet.

Sed si febris urgens superveniret, tum venesectio remedium est, cui confideremus, et repeteretur, donec symptomata graviora cedant; et postquam febris cessat, vesicatoria multum prosunt, quod humorum determinationem a Tonsillis, avertunt saepe optimo cum effectu.

~~Epp~~ Epispastica ab aure ad aurem vel inter humeros applicari debent; sed majore in his quam illis essent.

Gargarismi quibus utimur in Cynanche Tonsillari dividantur in quatuor ordines, secundum diversas indicationes sunt, primo, illi, qui adhibentur inflammationem minuere, secundo, suppurationem producere, tertio, illi, qui proprii sunt, q̃ũm abscessus sua sponte erumpit, vel a chirurgo apertus est, quarto, illi, qui necessarii quum gangraena supervenit.

Illi indicationi primae sunt remedio, qui non irritationem producunt, et

In initio hujus morbi gargarismi stimulantes mortificationem producent, et periculosi sunt, Sed ubi fauces cum denso muco obstrũuntur, tum gargarismus detergentior esset.

Hoc primo tempore, si doloris diminutio sit dum

tumor crescit, et nobis nulla spes procurandi resolutionem morbi, tum nobis oportet inducere suppurationem benignam, et pro ejus indicatione gargarismi diversi generis proprii sunt, videlicet emolientis et demulcentes (calor applicatus in diversis modis, quod scimus potentissimum remedium est) Compositio gargarismi expedite a indicatione judicatur, quam aspicimus inhalatio vaporis, mitia cataplasmata ad partem externam applicata sæpe multum valent.

Postquam abscessus erumpit, emolientes et leniter astringentes gargarismi optimi sunt. Si proclivitas in gangrænam desinere est, illi efficacius stimulantiores debent, ut exercerent vim suam peculiarem in eas partes, quæ adhuc vitam retinent.

Inter medicamenta hujus gradus, cortex peruvianus cum vino conjunctus, probandus est sed de medicamentis diversis medicis judicaverit et igitur de singulis specialibus dicere non necessarium est.

Differentia aliqua est opinionis de modo optimo ad fauces applicandi remedia, tamen gargarisatio est

ria huic indicationi, si non multum doloris ferrat, vel
nmationem adget, nam in exemplis mitioribus, motio,
gargarizationis ~~non~~ nunquam nocet, sed in gravioribus
motiones gargarizationis vitanda sit, præcipue quum plu-
-rimum molestiæ et noxæ ægro dant, tum medicamenta in
fauces a syringe injicerentur.

Temperatura conclavis nec nimis frigida nec calida, sed
jucunda sensibus ægrorum esset.

Ægri ad frigorem non exponi debent, et regimen ~~antiffla~~
antiphlogisticum esset.

Quamvis venæsectio esse necessaria in multis casibus
videtur, tamen una copiosa detractio sanguinis sæpe
curat et indurationes glandularum prævertit.

Ego secundam speciem Cynanches a prima tantum gradu differe, dixi, quod secun
-da est febris typhodes conjunctus cum symptomatibus Cynanches, et sæpe in initio prima
vehementur inflammatoria est et degenerat in febrem typhodem ob violentam
actionem vasorum sanguiferorum, et aliquando Cynanche Tonsillaris propria
depletione omissa in Cynanchem malignam degenerat.

Limites fujus dissertationis me tradere diversos modos curandi hunc morbum non
permittent, et præterea non mihi imprimis in animo fuerat de Cynanche maligna
dicere, sed de diversis remediis, quibus in hoc morbo utimur medicus pro re nata judicabit.

An

Inaugural Dissertation.

on Parabysma Splenicum

Respectfully submitted to the examination

of the

Provost, Trustees and Medical Faculty

of the

University of Maryland.

for the degree of

Doctor of Medicine

by

Thomas Owens.

of Baltimore. Md.

1831.

To Dr. Samuel Baker Proffessor of Mat. Med. in the University of Maryland.

The following essay is affectionately dedicated as a feeble testimony of regard and esteem, and as a poor memento of gratitude for the many obligations under which you have placed

Your pupil.

Thos. Owens

Parabysma. Splenicum.

Parabysma has a place in Dr. Good's nosology, as a generic term "ab παραβύω. a genuine Greek term in use among the Greek classics, and distinctly signifying morbid congestion, Coacervation or infarction." This affection is one of very frequent occurrence in this country, supervening in most cases on protracted and obstinate Intermittent and occasionally Remittent fevers, in Constitutions either weakly or strumous; but much more frequently in such as have been previously debilitated, and impaired by intemperance. Dr. Good describes several varieties of this disease, as simple coacervation vulgarly called Ague Cake; schirrous turgescence or congestion communicating to the touch an indurated sensation; and Cartilaginous in which the coverings alone become hardened and

indurated. Whether this is a correct division of the varieties I know not; but it is certain that there are cases which by feeling, we discover that although the spleen is greatly enlarged, still it is soft & yeilding, whereas in others we perceive it is hard and incompressible.

The size it sometimes assumes is almost incredible weighing several pounds; and one case is reported by Bonet, which after death was found to weigh thirty-three pounds, and to fill the whole of the abdomen! I cannot conceive in this case (without however doubting for a moment his veracity) what could have become of the Liver, stomach, intestines and other organs of the abdomen, or in what manner the system could have been nourished; as he tells us she followedy her daily avocation for seventeen years. It seems however as though after the Spleen had utterly demolished the other organs, it performed their function thereby

inclination. Whether this is a correct description of the sensations of Mary-and, but it is evident that there are such cases by feeling, we discover that although the spleen is greatly enlarged, still it is not a sensibility, which is when we perceive it is hard and not sensibly painful.

The size of sensitive cancers is almost incredible varying several pounds; and one case is reported by Chaset, which after death was found to weigh thirty-three pounds, and to fill the whole of the abdomen! A cancerous case in this case (without however absolutely a measurement this necessity) what would have be cause of the disease, whether, whether real the organs of the abdomen, or in what manner the spleen would have been necessitated; as he tells us the patient died the closely associates for twenty years. It would however be thought after the spleen had actually observed the other organs, it represented their increase thus-

standing in the same relation to the body as the other viscera conjointly. This disease is not always of itself a dangerous one, for many cases have occurred in which the patient enjoyed good general health although the spleen was much enlarged; most frequently however it is an evidence of Constitutional depravity, especially in the system of absorbent vessels; consequently it is very often present in Dropsy, and has therefore been supposed by some to produce this latter disease, by keeping up a constant abnormal irritation (from its unnatural augmentation) thereby causing the serous membrane to effuse a greater quantity of fluid than in health. Lænnec says that effusions in ~~xxxxxx~~ serous membranes so soon as inflammation commences, and I have no doubt that the spleen and its serous envelopes are sometimes inflamed, and that effusions are consequent upon

this inflammatory action. I conceive that congestion of the Spleen may exist for years without inducing any other disease; but if the irritation caused by its enlargement or from any other cause, should extend to inflammation, then there may be effusion constituting dropsy; or that its continuance may in dropsy also depend on a debility or a diminished action of the Absorbents.

I neglected to explain in its proper place, the manner in which simple infarction or turgescence of the Spleen may be produced. During the cold fit there is a quiescence of the capillaries, the blood not being propelled to the surface, in this state the blood accumulates in and distends the deep seated organs, and the more severe the paroxism, the more are the internal vessels distended, and a disposition to parenchymatous effusion promoted – As therefore the Spleen is exceedingly distensible,

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constituting dropsy; or that it continuous
may be dropsy also depend on a debility
or a diminished action of the lymphatics.

If superficial or extensive in its progress
then, the presence in vertical pressure in
function or temperature of the spleen may
be produced. During the cold fit there is a
quiescence of the capillaries, the blood not
being propelled to the surface, in this state
the blood accumulates in and distends the
deep seated organs, and the more powerful
functions, the more are the internal organs
distended, and a disturbance of functions
produces effusion produced. — In therapeutics
the spleen is regarded by the Germans

and not possessed of much elasticity or power of returning to its wonted condition after the restraining force is removed; and as a great quantity of blood in its natural state circulates through it we may very readily conceive how it is so frequently the subject of congestion and intumescence. This is what I should call Ague Cake. It is immediately associated with and dependent principally if not altogether for its exciting cause, upon Intermittent and Remittent Fevers, and very frequently dissappears a few weeks after the fever has subsided –

In the management of this affection, some distinction should be made between this which is an associate or termination of Intermittents, and chronic enlargement and Induration of the Spleen, an effect of a

peculiar constitutional derangement, which is often the sequelæ of Intermittents and other diseases, and sometimes continues during the life of the patient.

In entering on the treatment of this disease it is not conceived necessary to enumerate all the articles which have been proposed and employed for its cure, but merely to mention some of those which have been used with the most decided advantage. When there is *simply ague cake, the remedies besides those used in Intermittent fever are cups and

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* Note. It will be necessary here to append an opinion, which is maintained by some Southern Practitioners, and which I beleive was advanced by Cartwright of Natchez. viz. that ague cake is dormant Intermittent

particular constitutional disorganization, which is often the sequelae of chlorosis, tools and other diseases, and prematurely produced obscuring the life of the patient.

In entering on the treatment of this disease it is not considered necessary to enumerate all the medicines which have been proposed and employed for its cure, but merely to mention some of those which have been used with the most obvious advantage.

When there is *principally* opium coffee, the remedies described where used in intermittent fevers are equally and

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Mark. It will be necessary here to appear an opinion, which is maintained by many Practitioners, and which I believe was advanced by Gaubius of Leiden, viz. that opium coffee is decidedly intermittent

leeches over the left Hypochondriac region, especially if there be any evidence of inflammation. Blisters have also been used in this form of Parabysma, and occasionally issues & setons - All of the above may be used but with discrimination, they prove serviceable in relieving engorgement, and diverting the diseased action, or by exciting the absorbents - Emetics have been used with a view to this latter

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fever, not a sequela but Intermittent in another form of its existence. Their reasoning is predicated upon the circumstance that while it is present if the patient expose himself to cold, wet, fatigue &c. that it will be aroused from its dormant or latent state to its active - On this account they treat it as Intermittent -

effect. In scirrhous enlargements of the spleen, the preparations of mercury have been used perhaps more generally and it is probable with more success than has attended the employment of any other means which have heretofore been used. In attempting to explain its "modus operandi," we cannot do better than quote the language of Dr. Cullen who says "universally mercury, in its active state seems to be a stimulus to every ~~xxxxx~~ sensible and moving fibre in the body, to which it is immediately applied. It is therefore a stimulus to every excretory vessel of the system to which it is externally or internally applied. Besides its noted effects upon the excretories of the saliva, it seems to operate upon the whole alimentary canal. It proves often diuretic, and I have particular proof that it acts on the organs of perspiration.

Although it may sometimes operate more upon certain excretions than others, it may be presumed that when any tolerable quantity is thrown into the body, it is in part distributed over the whole; and therefore its medicinal effect is that it is the most universal aperient and deobstruent known. Mercury is therefore alleged to produce its beneficial effects, in enlarged spleen by stimulating the absorbents and thereby causing them to carry off the redundant matters. When there is an inflammatory state of the system, mercury should be used with much discrimination as by its stimulating action it is prone to excite the sanguiferous system, and produce a mercurial fever, which sometimes runs so high that mortal hemmorhages are the consequence. Salivation will however in many cases be required; and sometimes when

the first has been of no avail, a sec-
or a third has entirely removed every
obstruction and resolved the intumes-
cence. In too many cases however, es-
pecially in strumous diatheses, salivation
and that even repeated seems to
be of no benefit; but rather tends to
break down the recuperative energies
of the system - without in any remar-
kable degree proving beneficial to the
disease.

There is another remedy which
promises to be invaluable in the treat-
ment of schirrous enlargement of the
spleen. I allude to Iodine. Cartwright
of Natches has adduced in testimony
of its merits several cases which
were cured during its administra-
tion. He used the following formula

℞. Iodine grs XXV
Spts vin. Rect. ℥i M.

dose for an adult 25 drops 3 times daily. It may be proper to remark that it is generally used much stronger, as 48 grains to the ounce — During the past summer while a student at the Alms-house I had an opportunity of trying this remedy in several cases of scirrhous enlargement of the Spleen. I used

℞. Iodine grs XLVIII.

Spts Vini. Rect. ℥i. ~~℥ss~~ —

and gave five drops three times a day gradually increasing to twenty. One case particularly in which I employed this remedy exclusively, the patient represented that this affection had existed upwards of twelve years. I gave the tincture in doses of 5 drops, increased to 12 - 3 times daily, And as well as I recollect in about six or

seven weeks, the enlargement and induration completely disappeared – To a patient labouring under Chronic bronchites and ascites, to a limited extent with considerable Chronic enlargement of the Spleen, after using the usual remedies, ~~after~~ without much advantage, I gave Mercury to the extent of producing ptyalism, which removed the two former affections, but the Spleen remained in Statu quo – In about two weeks from this time owing to exposure his cough returned, & became very distressing, he was again salivated & the cough removed, but the Spleen still remained the same – I then resorted to Iodine, and increased the dose to 20 drops 3 times daily – till it produced itching of the skin and giddiness.

I then suspended it till these symptoms disappeared; commenced it again and suspended its employment when the system fully acknowledged its influence. In this case I gave occasionally Emetics and Cathartics and applied Ung. Hydriodat. Potassæ to the tumour. I pursued this plan for 6 or 7 weeks, when the swelling lost two thirds of its original size. The patient desired to go to work, & at his request was discharged.
I had two cases under my care, when I left the alms-house, that were sensibly relieved by the Iodine, and I had reason to believe that a perseverance in the remedy, would have succeeded completely. I tried it partially in many other cases, but not with much perceptible amendment, owing I suppose to its limited exhibition.

I then explained it till I thought myself thoroughly understood it; consulted it open and diligently & it seemed to me that the question fully authorized it in language. In this case I proceeded accordingly. Directly and Certainly and explicitly — thus. Medical Patients to the Insane — I pursued this plan for 6 or 7 weeks, when the swelling left the thigh & its original size. The patient obtained to go to work, & at his request was discharged.

I had this great trouble, my case, when I left the Glum-house, that were positively refused by the Patients; and I had reason to believe that a Physician in the neighbourhood would have succeeded completely. I think it practicable in many other cases, but must leave Medical Jurisprudence, pursuing Principles to the Medical reader's reflection.

I used it in a case of incipient tuberculous Thysis, without benefit. In case of scrophulous swelling and ulceration of the glands of the neck, I without perceiving any decided advantage. The Hydriet of Potassa seems in many cases to be a valuable adjuvant to Iodine used in ointment

℞. Hydrii Potassæ ℥ss.
Adeps . . . ℥i. M.

I have used this ointment in several cases of enlargement of the Spleen, as I thought with advantage. In two cases of scrofulous opthalmia I derived benefit from its employment, and also in a case of sympathetic bubo, excited in a strumous patient by Gonorrhea — I know not how to explain the modus operandi of Iodine, in removing scirrhous enlargement of the Spleen. Cartwright supposes that Iodine re-

moves that peculiar habit of body or constitutional derangement termed the paludic diathesis (the cause of scirrhous enlargement of the Spleen) in the same manner as it removes a somewhat similar diathesis, on which scrofulous sores and tumours depend. When the causes of Intermittent fever are removed, the ague cake disappears, and scirrhous enlargement of the Spleen cannot long outlive the peculiar diathesis to which it owes its existence. Some suppose it acts by promoting absorption, or producing marasmus, others that it has a tonic influence.

An Inaugural Dissertation

on

Hemorrhoids,

submitted to the Provost Faculty of Physic of the

University of Maryland

for the degree of Doctor of Medicine

by

Edward C. Fisher

of

Richmond

Virginia

1831

The acknowledged theory of any disease is generally a suffficient sanctity for its adoption and a mode of treatment suited to the received opinion of its pathology - There is so great a reluctance on the part of the medical Profession to innovate on established customs and beliefs that few will be found to come forth the writers of preconceived notions, or the despisers of long established customs. So great is the consequence attached to the precepts taught by our progenitors, and received doctrines, that by time affixing her fiat on them, that he who dares not to raise his voice against them is regarded not as the benefactor of mankind but the vain Revolutionist and therefore unworthy of public confidence - The past history of medicine furnishes an ample testimony to these facts and altho vain efforts may have been made to overturn the existing theories of the days, we must acknowledge that this spirit of ~~inquiry~~ innovation has brought a new light to shine in the medical world and placed in the hands of the Physician the means of adding much to the relief of suffering fellow man - The science of medicine like others is progressive in its nature and from what has been done we should not suffer it to afford complacency but only encourage the hope that the future will develope facts in proportion to the exertions that they are sought after -

Of the many diseases which the black Catalogue presents we find not one perhaps of a more general prevalence than that on which these few remarks are made - No age, sex or

ndition seems to be exempt from it and we see it resisting for
ars in the Surgeon and in defiance of all means to relieve it
asing only with life itself. In fact Haemorrhoids constitutes
e of the most frequent inconvenient and painfull of the diseases
ith which the human system is affected. Comparatively
aking it is one of rather obscure notice, but were we to
dge from its universality it does deserve, and ought to receive
are attention from the Profession. For a long time its origin
ature and mode of treatment remained in ~~obscu~~ obscurity
nd even at the present day more than one opinion
vails as to its true pathology giving rise to an enormous
d it is not too much to say an unusually painfull
atment.

he Etymological meaning of the term hemorrhoids, is simply
discharge of blood. Surgeons however sanctioned by long custom
are ~~employed this term to~~ implied by this word either
bleeding from the lower part of the rectum running
ore or less frequently, yet not accompanied by any distinguishable
permanent tumour within or on the outside of the
ms; or ~~lastly~~, tumours originally produced by effused blood
hich is commonly converted into an organised substance.
e lastly, tumours originally produced by effused blood which
commonly converted into an organised mass. When may
e profuse discharges of blood from the anus as there are from
e stomach & Lungs but this is a distinct disease ~~but~~ from
hat is comonly called open piles. It is well known that
e intestinum rectum is composed of several membranes which
ssent different degrees of extensibility; the muscular coat keeping

[illegible] seems to be usually from it and so we at [illegible]
see in the future and the disposition of all seems to [illegible]
persons and with life itself. In fact there should [illegible]
of the most frequent measurement and of similarity of the disease
the patient the immense injustice is afforded. Usually [illegible]
[illegible] it is one of getting obscure matters but [illegible]
[illegible] from it measurability it does disease, and [illegible]
[illegible] attention from the Religions. For a long time it [illegible]
[illegible] and needs of international measurement in ~~[illegible]~~ [illegible]
[illegible] not more at the present day more than one [illegible]
[illegible] as it is time for thinking minds to be [illegible]
[illegible] it is not to waste to see an unnecessary [illegible]
[illegible] interest.

[illegible] of modernized measuring of the true humanitarian is simply
[illegible] of God. Immense humanitarian [illegible] and ~~[illegible]~~ [illegible] for this most [illegible]
[illegible] from the lower part of the [illegible]
[illegible] yet not accomplished by any distinguished
[illegible] measurement institutions or on the [illegible] of the
[illegible] ~~[illegible]~~ institution practically [illegible] by [illegible]
[illegible] is commonly [illegible] ~~[illegible]~~ on an organized [illegible]
[illegible] practically produced by influence God [illegible]
[illegible] ~~[illegible]~~ on organized [illegible]
[illegible] of God from the [illegible] on this [illegible]
[illegible] ~~[illegible]~~ that this is a [illegible] [illegible]
[illegible] is commonly called [illegible] It is [illegible]
[illegible] institution [illegible] is [illegible] of [illegible]
[illegible] sufficient [illegible] difficulties of [illegible]

ost contractility - now in each of these coats there are arteries
ins and capillaries and like other vessels of the same character
e influenced in their functions by the adjacent parts - and
on this situation are operated on by the functions of the
intestinal canal - as the feces pass from the superior to the
ow bowels and become impacted, there will be more or less
spasm on the Rectum - as then the different membranes of the
ctum will yield more or less to this mechanical agent assisted
the action of the sphincter there will necessarily result more
less corrugating or doubling up of the gut - such hindrances
so existing there will be compression on the vessels impeding
in various functions and consequently will be distended -
- an moreover taught by morbid anatomy that hemorrhoidal
mors are of two kinds, sometimes consisting of mere spongy or
lular tumors at other they are encysted - the blood being disch
ged by exhalation and not from any rupture of an obstructed
in or artery - and we fear not to assert on the authority
another that the blood arises from exhalation (or percolation)
he epistaxis, hemoptysis &c - the only difference in these hem-
orrages being in their normal situations - We may then regard
hes as small fleshy tubercles situated within the anus or descending
om the rectum - presenting rather a solid and spongy feel
nd when cut into present a surface more or less compact
nd bloody from which blood oozes, leaving the rectum
ale and relaxed - When more external ~~and healthy~~ they are pale
nd generally also more elastic and transparent and appear
ow quickly than the former - Sometimes they take on a different

character and contains a central ~~character~~ cavity filled with coagulated blood and lined with either a smooth or granulated cyst. By minute anatomical injections a few vessels may be demonstrated thro which the blood exudes into the central cavity but no connexion with the larger vessels has been demonstrated. "The cavity usually does not exceed a pea, but is sometimes large enough to hold several drachms of blood. Sometimes there is no cavity or cyst but the substance of the tumour is infiltrated with blood which eventually becomes dark and coagulated. Piles sometimes subside by discharging the engorged blood and leave nothing but fundulous flaps; but when by constant pressure and the operation of the cicatr they have become permanent, varying in their size and forming a constant source of irritation from friction or inflammation or by occasioning a distressing prolapsus of the anus. This permanent state of the tumour has been opposed by an eminent writer to the development of the capillaries by which the interstices are gradually obliterated and partly to the organisation of the effused blood. It has been regarded by some as a constitutional disease "an effort of nature to turn an ~~part~~ side the effects of derangements in the organic balance: a substitute for other and more important functions." That the hemorrhoidal flux occurs not unfrequently vicarious to the menstrual discharge and occasionally alternates with it cannot be denied. But it is granting too much to consider this disease as playing the same part in the male economy that menstruation does in the female —

n idea of constitutional fides the formerly prevalent among
English Physicians has of late fallen into perhaps unmerited disrepute
hether this sanguineous plusion be established in the Uterus or
ectum its influence on the Economy is the same. The difference
local effects will be explained by the difference in structure
the parts. The pain and inconvenience in this species of plusion
e frequently less considerable than is felt during the menstrual
schange.

ho persons generally are subject to this disease it has been observed
at some are more liable to it than others. Inhabitants of large
ities being more frequently subject to it than those of the country
nd even climate seems to exercise an influence on it for we
ind that persons residing near the Equator are less afflicted
ith it than those living ~~near the~~ in northern climates.
metimes an hereditary predisposition entails it on several suc-
ceeding generations and we know one family consisting of
ine individuals all of whom are more or less affected
ith it. No age is exempt from it, altho generally it is a
isease of middle or advanced life. Children have been
ttacked with hemorrhoids in the first year and even in
e first month of their existence. No temperament or
nstitution can claim immunity from it tho the sanguineous
nd bilious are most obnoxious from it. persons who have
een subject to nasal or other hemorrhagies are liable
hemorrhoids especially if they exchange an active for
sedentary life.

f the <u>Causes</u> of hemorrhoids the following may be enumerated
s the most general and certain in their effects. habitual

constipation, some efforts to discharge hardened feces, the
lodgement of suppositories, worms or other foreign bodies in the
rectum – the frequent use of warm injections: the habit of
sitting on cushions filled with feathers: alcoholic liquors,
eating aliment: the abuse of drastic purgatives, compression
of the abdomen by belts or corsets, the weight of the gravid uterus
and the suppression of habitual evacuations – and the last
at least the habit of students to put their feet higher than
their seats while sitting for a long time – in fact any irritant
applied near the rectum which will excite a plethoric
movement towards that part – The maxim ubi irritatio, ibi
fluxus applies with equal force to the anal region –
hemorrhoids occasionally occur as a local disease but often
in appearance particularly if the patient has been long
subject to the disease is preceded by horripilations of the back
and loins accompanied with pain ~~in the~~ sometimes a numbness
of the lower extremities, pulse hard and contracted, the
countenance pale the eyes dull and surrounded with
a dark circle, dryness of the mouth, pain and heaviness of
the head, vertigo depression of spirits, tension and more or
less ~~depression of spirits~~ tension of the abdomen, flatulence
frequent desire to pass urine and to go to the close stool
a sensation of pressure from the anus to the perineum and
frequently a discharge of thin mucus from the rectum –
The patient is indeed affected with such symptoms as
indicate an inflamation of the lining membrane of the
intestines: such as heat itching & pain within & around the anus.

they be large and numerous they impede the expulsion of the
ces: and the straining consequent on this impediment exerts
e bowel. If however the patient be unable to restore the part
its natural situation the piles in consequence of the stricture
ound around them mortify and slough off. This process
ich is the result of an accidental circumstance corresponds
its effects to the application of a ligature the practice
w so universally adopted, than which a more painfull and
d unnecessarily tedious practice does not exist in surgery. for
e find not only that the most severe and alarming effects
sulting to the system generally producing nervous excitement
d convulsions sometimes but local effects equally serious
d generally involving in their influence the alimentary
nal.

n some cases a discharge of blood takes place which constitu
ites what is called open piles and procures immediate
lief of all the general symptoms. The discharge takes place
hen the patient is at stool. This state continues for seve
al days and has been known to take place for months nay
ven years. There are some remarkable cases related of the quantity
blood which has been discharged from the anus and con-
tinuing for several months. Paracelsus states that a Spanish
bleman voided from his anus a pint of blood daily for
months and yet enjoyed a perfect health. When no
charge ~~anus~~ of blood follows irritation of and consec-
ent pleasure to the rectum we observe at the margin
the anus and sometimes even within the rectum
e or more tumours of a round and shining appearance
a dark violet colour with more or less inflammation
& pain.

until recently the nature of these tumours ~~has~~ was imperfectly understood – It has been generally supposed that they consisted of a varicose dilatation of the branches of the hemorrhoidal veins: a ramification of the vena portalis ventricis – under this supposition it is believed there is a liability to dangerous hemorrhage when these tumours be opened – and that the magnitude of the danger is increased by the circumstance of there being no valves in the veins to prevent fatal hemorrhage – Cullen was the first to throw off the shackles of authority and contended that piles consisted in an effusion of blood into the cellular tissue of the rectum near its extremity – This opinion was confirmed by the accurate anatomical investigations of Lawrence who discovered that the ~~piles consisted~~ blood was contained in a membranous cyst formed out of the cellular tissue which connects the mucous & muscular coats together –

These hemorrhoidal tumours are in the first instance merely extravasations or an effusion of blood produced by the rupture of some capillary ~~tumours~~ ramuscle which remains circumscribed under the lining membrane of the intestines near the anus – As soon as the causes which provoked the extravasation are removed the blood is absorbed and removed – If on the contrary constipation continues with straining efforts or tenesmus connected with a plethoric habit and active congestion, or if the rectum be in a state of irritation as is frequently the case diarrhea the tumours will not only remain but increase in magnitude – If we examine these tumours we shall find the blood enclosed in a thin membranous cyst

uned by the accreted laminae of the cellular tissue
ltwn the muscular & mucous coats of the rectum -
Lantigne supposes these tumours to be a "dilated capillary
ttries" but since they are formed sometimes in a few hours
fter the plusionary movement it is not reasonable to sup-
ose that an artery could be dilated so soon -
n controversion of the opinion that hamorrhoids are always
ccase veins we deem it sufficient to mention the almost
mpossibility of veins reaching the size which these tumours
metimes possess and also the great quantity of blood which
ould inevitably follow the excision of them, and also
e dangerous consequences which would necessarily result
rom the application of a ligature to a vein - and
lso the circumstance of the cyst being formed quite empty
which could hardly be the case dance these tumours
varicose veins - The celebrated Abernethy says the piles
which he has seen possess no cysts of any magnitude
nd hence results the declaration which he makes re-
ecting the treatment of them "It is now twenty years since
first began to remove them with the knife & scissors and
am never met with any circumstance to deter me from
t."

We now come to speak of the Treatment and we will
bserve in the onset that a proper kind never has yet been
nversally employed - Among the ancients it was the custom
employ the cautery & lancet and even the moderns have
llowed the practice of excising these tumours by the
latter of the two modes which have been named -

such a practice however which bears on its very face the most glaring absurdity we are happy to state is now of limited adoption and the Profession is generally disposed to move aside this for one at least more scientific—There being generally more or less affection of the System involved in this affection the plan of treatment seems to divide itself into local and general—and first of the general treatment—in the first place we should direct our attention to the state of the alimentary canal as there are but few cases of hemorrhois in which it is not disordered—we can effect this by local bleeding from the abdomen, a suitable regulation of the diet and keeping the bowels open—care should be taken to avoid all causes which are calculated to interrupt the functions of the digestive organs and such as shall tend to weaken in the least degree—violent exercise either on horseback or in vehicles of any kind must be carefully avoided as these effects might soon be evolved on the affected part—excess in diet—is also to be avoided and an entire abstinence from all heated liquors is to be observed—

Some of the above named remedies might with strict propriety be regarded as exciting causes, but since they are also prophylactics we have classed them under the head of remedies—Respecting the local treatment we have but little to say as the whole list of remedies may be summed up in a short space—

Of the two forms under which this disease presents itself Blind & Open Piles, the latter is much the less painfull and productive of inconvenience - For the most part there is seldom any other prescription requisite for the patient than merely to avoid excess in diet and painfull exercise - should the bleeding be profuse and debilitating we are to direct our patient to lie on a mattrap, to be dieted cool placed on a rigid diet and acidulated drinks and when there is any symptoms of plethora general depletion - cold and astringent applications to the arms, the thighs & to the abdomen - cold injections are to be thrown into the rectum - If failure to arrest the hemorrhage attend these means and if by strict examination we find it to come from a projecting tumour it must be excised instantly - and if this is not sufficient we are then to introduce compressed sponge for the purpose of making firm pressure on the bleeding surface - The custom prevails among the French to apply the actual cautery -

When there has been great hemorrhagy from piles and consequent debility it has been found necessary to make use of some tonic means in order to restore the vigour of the system - and for this purpose Bark, the mineral acids & Steel have been found beneficial -

It is necessary here to observe that very serious consequences have resulted from an entire as well as immediate suppression of this discharge - some of the most dreadful of all diseases have resulted from this suppression

this evacuation - such as Epilepsy, Coughs Paralysis &c
When this does occur our first endeavour should be
to restore the evacuation, which can best be done
by applying Leeches to the part, use warm & stimulating
injections, irritating suppositories fumigations and rough
frictions around the margin of the anus -
We come now to speak of the first kind or Blind
Piles which is by far the most troublesome and painful
form in which the disease exists, for sometimes we
find the size and number of these tumours so great
that in every attempt to ease the part of the patient
from the pains the bowel will be thrown out as is
commonly expressed there will be a Prolapsus Ani - Under
such circumstances there seems to be a demand for an
operation - Of which kind the following are the prin-
cipal - caustic, Actual Cautery, the Ligature & Excision -
Against the adoption of the first method we have to
say that its action extends much beyond the point to
which they are limited, as well as the tardy manner
of its operation - The ancients were in the habit of using
the actual cautery but with a few exceptions it is
now universally abandoned - The Ligature is more
the means resorted to for the removal of these tumours
in consequence of the pain which has attended
its application - and altho it is recommended by
the highest Surgical authority we consider that its
use should in all cases give place to the knife -

If it be asked why do we advance this opinion our answer may be found in the well known fact that a ligature applied to any organised mass will produce some local effects such as pain swelling and the like and that these effects are proportional to the tightness of that ligature. As our object then is to produce a complete separation of the tumour from the surrounding part ought we not to adopt the speediest method by which we can effect this object? To this mode of operation (the knife) it has been objected on account of the severe bleeding which always occurs after it. But we depend on the authority of Mr Cooper Boyer & Dupuytren that haemorrhage does not always occur after it. in fact Abernethy says "it is now twenty years since I first began to remove them with the knife and scissors and I have never met with any circumstance to deter me from this employment. From the authorities quoted it must appear that our fears of fatal haemorrhage are perfectly groundless.

Before we excise the pile we should first restore the digestive organs to their natural functions and have the bowels in such a situation that a daily evacuation is had regularly. Just before the operation the bowels should be perfectly emptied. Having emptied the bowel to the utmost ~~we scour~~ and cleansing the parts by being bathed in warm water the pile should be seized with a double hook and when drawn upwards it may be severed by a pair of scissors — a si

methods has been advised for the excision of a thickened portion of intestine but certainly say we do not know how far the risks may penetrate and therefore recommends the best the incision made with the knife resembles the curved [illegible] found at their extremities. After the tumours have been removed, the wound should be supported to bind as long as they are disposed

method has been advised for the incision of a portion
of thickened intestine, that of cutting it out with the scissors
but abernethy says we cannot tell how deep they will
cut and therefore recommends the bistoury - The incision
made with the knife resembles two curved lines joined
at their extremities -

Abernethy advises after the tumours have been removed
the wound should be suffered to bleed as long as they
are disposed to do so. and after all bleeding has ceased
the bowel should be carefully restored to its natural place
by the finger previously anointed - In consequence of
constriction by the sphincter which will act as a constant
irritant and produce bleeding particular care should be
taken that the incised parts are not under the influence
of this muscle. after this precaution has been
observed the Patient should be placed on the back
with the Nates exposed and the parts around the
anus frequently ~~exposed to~~ bathed with cold water
in order to prevent phlegmonous movement towards the
site of the wound -

If haemorrhagy do occur in despite of these precautions
we can arrest it by the introduction of compressed
on the bleeding vessels which is to be retained there
until the mouths of the bleeding vessels are closed
by adhesive inflamation - Respecting the after treatment
we have only to remark that it is extremely desirable
that the Patient should be kept quiet as long as possible

in a recumbent posture and prevent for several days any evacuation from the bowels.

Patients affected with Haemorrhoids sometimes complain of pain in that region and Montegre thinks that there may sometimes be formed a neuralgic form of this disease. In order to relieve this pain various means have been employed but we think there is one class which particularly deserves notice. we mean Narcotics applied in the form of ointments. The writer just quoted was in the habit of using the antirrhinum linaria after preparing it in the following way. boil a handful of the bruised flowers of plant in one ounce of lard, strain and let the mixture cool. afterwards add the yolk of two eggs and mix them thoroughly. this then to be used as an ointment.

A mixture of Bonlards Cocktail and the unguent of Stramonium has long been a favorite prescription in a part of this country.

Cold injections may be also used with advantage in relieving the inconveniences attendant on this unpleasant & often painfull disease.

Some Considerations, on the different Theories of the Excitation & accumulation of the Galvanic fluid —

an Inaugural Thesis,
submitted to the Examination of
the Provost, Trustees, & Medical Faculty
of the
University of Maryland
for the degree of Doctor of Physick —

by Philip Rogers Hoffman

March 12th 1831

Some Considerations, on the different Theories of the Excitation & accumulation of the Galvanic Fluid —

by Philip Rogers Hoffman

Among the constellation of brilliant discoveries, in the different departments of science, which have so peculiarly characterised the present century, none perhaps are more remarkable, either for the novelty of their nature or the splendour of their results, than those connected with the subject of Galvanism.

This subject, comprising thirty years ago but a few scattered facts little known & apparently of little importance, has within this time, with a rapidity almost unparalled, expanded at once into a most important & extensive science, engaged the devotion & immortalized the names of some of the greatest geniuses of the age, & developed an agent whose power in unravelling the constitution of material substances is entirely unique; which forms to chemistry an ally which is invaluable; & whose importance in the great arrangements of nature we know must be great, although we cannot justly appreciate it.

Every point of this science, therefore, possessing such interest, the subject of the origin of & mode of calling into operation, this great agent, has not failed to ~~call out~~ excite the warmest interest. Different theories have been advanced & advocated to account for its origin: some of these it is our object at present to consider — There are points of difficulty connected with all — none may be considered complete or entirely satisfactory — but

"Est quodam prodire tenus, si non datur ultra" —

Of the different theories, then, which have been offered to account for the Excitement & accumulation of the Galvanic fluid, (omitting the conjecture of Galvani, which was at once satisfactorily proved to be a conjecture only) the first advanced & fairly supported was that of Volta; generally known at present under the denomination of the 'Electric theory' or the 'Theory of Excitation by contact' — This, originally started by Volta & ably supported by him, has been adopted & advocated by many of the highest philosophers from his time to the present; & certainly contains points which may be considered more generally received than those of any other theory whatever; Especially as they are to be considered essential points of the more complex theory since advanced by Sir Humphry Davy —

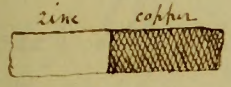
The cardinal point of this theory is, that different bodies when brought into contact with each other (as the metals in common Galvanic arrangements) have the power of so acting on each other as to alter the quantity of electricity natural to each, to Excite Electro-motion, or to cause part of the Electricity of one to flow into the other; thus leaving one in the positive, & the other in the negative Electrical state — This power of electro-motion on the contact of dissimilar substances is, I believe, considered as an ultimate fact; one which it is not attempted to explain, but which depends for its Establishment on observation & Experiment —

Among the facts & points on

which the theory is founded may be enumerated the following.—

If two discs of different metals, as copper & zinc for example, provided with insulating handles, be brought into contact with each other, & then separated by the handles so as to avoid touching the plates themselves, ~~they~~ on presenting each to a delicate condensing electrometer, the plate of which is of the same metal as the plate presented to it; (or else with the intervention of some good conducting substance which cannot be supposed to have any chemical action on either metal & may at the same time prevent any electro-motion by contact between the plate presented & the plate of the condenser) one of the metals (e.g. the zinc) will be found to be in the positive state, the other (e.g. the copper) in the negative.— This power of electro-motion on contact is found to exist, in a greater or less degree, not only in relation to any two of the metals, but to extend to the case of very many other different substances when brought together. The Abbé Haüy, however, having proved with regard to some mineral substances the principle which has been demonstrated by M. Becquerel to extend to many others (& perhaps to bodies generally) that two dissimilar substances by pressure together are placed in the relative situations of positive & negative; to avoid the possibility of part of the effect being attributable to the pressure of the dissimilar discs on each other, & to obviate also the objection that the discs were shown in different electrical states only after separation, & that the effect might possibly be owing to the separation of the discs from each other. The following

Experiment may be instituted. Let a piece of copper & one of zinc be so connected as to form one piece. If this be held by



the copper end & the zinc end be brought into contact with the copper plate of the condensing electrometer, the zinc having copper now on each side, the electro-motive energies will counteract each other, & no evidence of electrical excitement be given; but if the zinc extremity now be held & the copper end be presented to the plate of the condenser, also of copper, the former obstacle does not exist, & the electrometer will give indication of negative electricity received by communication from the presented plate — Two metals may therefore exhibit an electro-motive power while still in contact — We know that this experiment has been questioned: the truth & accuracy of the results stated are however pretty generally acknowledged, even by the opponents of the theory, who now direct their efforts to substitute another cause for the result, namely chemical action — "It is not possible (says Sir H Davy Philos Trans - 1807 - p 49) to refer the electricity exhibited by the apposition of metalic surfaces to any chemical alterations, especially as the effect is more distinct in a dry atmosphere, in which even the most oxidable metals do not change, than in a moist one in which many metals undergo chemical alteration" —

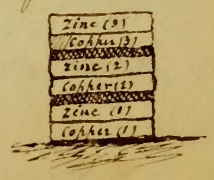
Arrangements may also be made, of considerable activity,

(as, for example of water, charcoal, & dilute nitric acid) between the different members of which, that come in contact with each other, we have no reason (either from their previously observed relations, or from the results after the electrical excitement has occurred) to believe there exists the least degree of affinity, or that the least chemical action has taken place — It is certainly unphilosophical to suppose a cause not the least evidence of whose existence is manifested in the case. We must therefore recur to our only alternative, a principle which we think is fairly deduced from this circumstance & the experiments and considerations above, viz. that on the apposition of dissimilar substances there in many cases takes place an electro-motion, or disturbance of their electrical equilibrium entirely independent of chemical action —

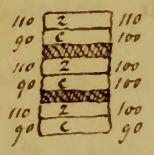
As it has been objected however (by Dr Bostock) that this theory makes no provision for the accumulation of the fluid at the zinc or positive end of the apparatus, we must now consider this (which if substantiated would form an insuperable) objection, and the answer which we conceive may be satisfactorily given —

"The two metals (says Dr B.) by their contact become one "positive & the other negative; and this is equally the case with each "pair: but the fluid that is interposed between the metals is con-"ceived to restore the equilibrium of the electricity which has been "disturbed by the metals. This is the whole effect of the apparatus;

"and we are not informed how any Electricity can be actually "produced or generated; as it would appear that the nature of "the instrument is to cause an Electric action in one part, which "must be immediately counteracted by another. Whatever defi-"ciency there was in any Copper plate would be immediately sup-"plied by the water communicating the superabundant Electricity "of the opposite Zinc plate, so that the Effect of the whole would "be reduced simply to the difference between the two Extreme plates "of Copper & Zinc! The hypothesis (says Dr B-) may be thus illustrated. C1 & Z1 produce by their contact a change in their natural state of electricity: part of what belonged to C1 is transferred to Z1, so that C1 becomes negative, & Z1 positive; & sup-posing that their natural share of Electricity is represented by 100° & that the Copper gives 1/10 to the Zinc, C1 & Z1 will be brought to the states of 90° & 110° respectively. The same alteration in their elec-trical states will, at the same time, take place in the second pair of plates C2 & Z2. The water (or fluid) which is in contact with C2 & Z1 will however, by its conducting power, have the Effect of Equalizing the electrical states of these bodies, & will therefore reduce the electricity of Z1 to 100°, & raise that of C2 to the same degree; the Electrical states of the four plates, therefore will be 90°, 100°, 100° & 110°. The third, & every succeeding pair of plates will be acted on, exactly in the same manner. The electricity of the copper (3), which was



By the reasoning of Dr B— the state of the different plates in the series will be in the beginning of the action, & before the conducti

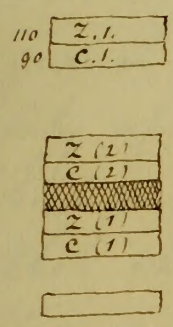


power of the fluid is supposed to operate, as is repr
-sented by the left hand column: Their state during
fullest operation, & when the conducting power of the
fluid is supposed to act will be represented by the rig
hand one —

reduced to 90° by the action of the zinc[3], will be brought to 100° by sharing a part of the excess which the former zinc plate[2] had acquired — This appears to be all the change that can be produced upon the original hypothesis of Volta. In this state of things the apparatus will be nearly inert; at least it will have no more power than a single pair of plates, for all the intermediate ones, being in contact with water, will be brought to a state of Equilibrium" —

It appears to us, however, that Dr B in pursuing his consideration of the action of the pile has forgotten to bear in mind the Essence of the proposition on which the hypothesis is founded, viz that if a plate of zinc & one of copper be in contact, & consequently whilever they are in contact, there is a principle in action which forbids them to remain in the same Electrical state. The same law therefore which is stated in the first step of the operation to break the Electrical Equilibrium of each pair of plates will prevent the continuance of an Equilibrium between any pair as long as they continue in contact; or, referring to the diagram, the same law which on the first contact of Z1 with C1, or of Z2 with C2 broke their Equilibrium & made their relative state as 90° to 110° will tend to preserve the same relative state, & will prevent Z2 & C2, or any other pair from continuing, during any stage of the action, at the same degree 100° — An additional flow must therefore certainly take place in the direction of the zinc —

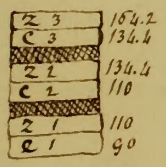
Our idea of the action of the pile in this case may perhaps be more clearly expressed by considering it synthetically - Suppose the first pair of plates C1 & Z1 to be placed in contact: by the hypothesis there is (as stated by Dr B) an electro-motive power brought into action by their contact which places their relative electrical states as 90° to 110° - If we then bring into contact with each other the second pair, Z2 C2, their Electrical states will also stand as 90° to 110° - Now place the second pair upon the first, with the moistened cloth intervening, & a flow will take place from Z1 to C2 to establish an Equilibrium, and the conducting power of the fluid being supposed perfect, an amount which may be expressed by 10° will pass, depressing Z1 & raising C2 to 100° each - The same electro-motive force, however, which originally placed C2 & Z2 to each other as 90° to 110° tends to preserve between them the <u>same</u> <u>relation</u>; & as the quantity of electricity in the second pair of plates may be now expressed by 210° (C2=100 + Z2=110) this will tend to be divided between them in the proportion of 90 to 110, or their respective shares will be as 94.5 & 115.5 - Moreover C1 & Z1 are left by this supposition in the relative states of 90° & 100, but their tendency is to assume to each other the relative proport of 90 to 110 - C1 therefore must give to Z1 an additional share of its Electricity to bring them into this ratio - This will enhance the state of Z1, in a slight



degree, and as this was already above that of C2 (94.5) an additional flow must take place thro' the Conducting fluid to C2, & part of this of course be distributed to Z2, whose Electrical state must therefore be raised somewhat higher than that stated above. (115.5)

This will all take place even on the supposition that C1 is insulated, & entirely unable to recover either from the general reservoir, the earth, or from the surrounding air a quantity of Electricity to replace that which by Contact is has been compelled to impart to the Zinc. But on the supposition that the Contrary is the case, & that C1 has the power to draw from surrounding objects Electricity to restore its natural share of which it has been deprived by Z1, the flow of Electricity from C to Z must be much freer throughout the pile, & consequently the accumulation at Z3 be very much greater also —

Supposing C1 to have the power to recover entirely the electricity which it has imparted to Z1, & the Conducting power of the fluid to be perfect, then on the supposition that the states in which the Electro-motive power tends to place the plates C & Z to each other are to each other as 90° & 110, then whatever Electricity Z1 imparted to C2 to bring them to an Equilibrium (110°) it (Z1) would draw from C1 & that from the ground & surrounding air, and the state of the plates might be expressed thus —



As 90° : 110 :: C1 (=90) : Z1 (=110)
" 90 : 110 :: C2 (110) : Z2 (134.4)
90 : 110 :: C3 (134.4) : Z3 (164.2) ——

The great flaw, however, in the theory of galvanic Excitation by Contact (and that which has given its opponents the fairest chance of Condemning the whole by subverting this point) is the point advanced by Volta & strenuously insisted on by him & other advocates of the theory, that the interposed fluids act entirely as Conductors, and have no Effect as chemical agents in producing the phenomena — "Without disputing, says Dr Henry, the accuracy of the facts which suggested his theory it is sufficient for its refutation that it is irreconcileable with other phenomena; & especially that the chemical agency of the liquid on the more oxidizeable metal of galvanic arrangements is essential to their sustained activity" — This certainly may be considered a refutation of part of the theory, but (it will be remembered) of part only.

The position however, that the part performed by the fluid is that of a conductor only, & that any chemical action in the different parts of the pile (or trough) is merely Extraneous & incidental, & of no importance to the galvanic Excitement, is contradicted apparently by so many facts, & the contrary so often Evidenced, as to lead many to adopt an opinion directly the contrary; viz. that Chemical action is in all cases the first step in the process, & indeed the sole cause of the development of the galvanic fluid in our Common arrangements — "When we consider, says Dr Bostock, how readily water transmits the Electric fluid, we can scarcely attribute to a deficiency

in its conducting power the comparatively small effect which it produces in the pile, nor to a mere increase of this conducting power the vastly greater activity of diluted acid or neutral salts" — That chemical changes do take place in the series & that these are highly important to the galvanic excitation & accumulation are so evident as not to require to be dwelt upon — Suffice it to say that the chemical action of the fluid on one of the metals in our common arrangements is necessary to their sustained activity — Pure water entirely deprived of air, appears (by the experiments of Sir H Davy), to be inefficient; & the degree of activity in galvanic arrangements appears indeed to be pretty nearly proportioned to the chemical activity of the fluid — To infer, however, that chemical action is not only the first step in the action of any galvanic arrangement, but also the only cause of all the excited fluid is, we think, to draw a wider conclusion than the premises warrant, & one which can scarcely be maintained —

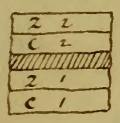
The positions upon which the (purely) chemical hypothesis rests (to use the words of one of its strongest advocates, Dr Bostock) are these — "1. One of the metals, the zinc for example, is oxidated, "the oxidated part has its capacity for electricity diminished, "& the electricity is consequently evolved — 2. This electricity is "received by the contiguous fluid, & is transmitted by it to the "surface of the other metal, the copper which is not oxidated, and

*By Dr Murray (Vol 1. 367) we find this a little differently st
"The action, it is conceived alters the relation of the more
"oxidable metal to Electricity, & causes it to evolve a portio
"of that power at the surface acted on. The electricity of t
"Zinc plate (Zn) is thus put in motion, & determined to the outer
"surface, which thus becomes positive; & the other surface be
"negative, & communicates the same state to the Copper in con
"with it" —

We cannot conceive, we must say, how t
evolution of a quantity of free electricity at the surface of a
(as that of Zn next the fluid) can thus put in motion & det
to the same surface the electricity of the remainder of the p
which is unacted on by the fluid —

"& is therefore disposed to receive it, & the whole of the copper plate "hence becomes positive: 3x The remaining part of the Zinc which is "not oxidated remains in its natural state, & therefore, as relates to "the Copper, is negative" —

Allowing the first position that by the oxidation of the Zinc Electricity is liberated or generated, we must confess ourselves in the same situation, in regard to the subsequent steps of this theory, in which Dr Bostock was in regard to the previous one: we do not see how the subsequent steps provide for the accumulation toward one end of the apparatus — The surface of Z1 which is in contact with the fluid becomes oxidated and a certain portion of Electricity evolved: but by position 3d the remaining part of Z1 which is not oxidated remains in its natural state: what therefore prevents the liberated Electricity from entering the substance of the plate Z1, or determines the whole of it to C2, to place it in a higher Electrical state than Z1 which it left? — If it be "by the attraction of the next copper plate for Electricity" (Bostock, view of Galvan.n p 125) C2 must be in a negative state: & whence does this negative state arise? — from contact? —



Although, therefore, Chemical action may be considered an important source of Electrical Excitement, & and the Effects of this action be too obvious in our galvanic arrangements to permit us to disregard it, some other principle, we think, (if we have reasoned rightly) must be brought in to account for its accumulation at one end of the series —

Of the theories advanced to connect in some degree the two conflicting opinions, the most important, both in regard to its high source & the generality with which it is advocated, is that of Sir H. Davy; which supports the primary Electro-motive power of different substances brought into contact, while it also acknowledges the importance, & requires the aid, of chemical changes in continuing & keeping up this Excitement — "The electrical "energies of the metals, (says Sir Humphry) with regard to each other "or the substances dissolved in the water (in the Voltaic, & other ana-"logous instruments) seem to be the causes that disturb the Equilibrium "and the chemical changes the causes that tend to restore it; & the "phenomena most probably depend on their joint agency" — Phil. Trans. 1807. p. 45

A fundamental point, however, in the theory of Sir H Davy, & which he applies to account for the restoration of equilibrium between the two dissimilar plates in any one cell or compartment as well as to explain the decompositions effected, & the accumulation of different substances about the opposite poles) is, that different substances possess different natural electrical states — This he infers from various Experiments — On the contact of the acids which are capable of existing in the solid state, with a plate of metal (copper) the acids were found to evince distinct negative electricity, or to become negative; & the metal positive — When the same plate was made to touch dry lime, strontites, magnesia, soda (after exposure to a great heat) or any alkaline

"In the Voltaic pile of zinc, copper, & solution of muriate
"of soda, in what has been called its state of electrical
"tension, the communicating plates of copper & zinc are in op-
"posite electrical states. But solution of muriate of soda
"being composed of two series of elements possessing opposite
"electrical energies, the oxygen & acid are attracted by the
"zinc, & the hydrogen & alkali by the copper. The balance
"of power is momentary only & for solution of zinc is formed,
"& hydrogen disengaged. The negative energy of the copper
"& the positive energy of the zinc are again excited (enfeebled
"only by the opposing energy of the soda in contact with the
"copper, & the process of electromotion continues as long as

substance whose affinity for water was not too great, so as to interfere with the result, the alkaline substance was always found positive; & the metal negative — On the contact, also, of dry lime with oxalic acid, the acid became negative, & the lime positive — The acids & alkalis are hence inferred to possess different natural Electric energies — to be naturally in different electrical states — or the acids naturally negative, the alkalis naturally positive — The same conclusion is drawn with regard to oxygen & hydrogen; not by direct Experiment, but by the agency & habitudes of their compounds —
These Electrical states or Energies must also by the hypothesis continue inherent in the substances, whether they be in combination or not — (Phil. Trans 1807. p. 20) — The first step, in the action of the pile (or trough) being, that the zinc & copper plates of each pair, by their contact, break the Electric Equilibrium, all the zinc plates of the series become, at the same moment, positively Electrified, & all the copper ones negatively — The second step now is, that the salt of the intervening fluid, or the fluid itself, being composed of two elements possessing different natural electrical states decomposition takes place, by the strong attraction of the positive zinc for the negative acid, or oxygen, ~~overcoming~~, & of the negative copper for the positive alkali, or hydrogen, overcoming the affinity which kept them together, & the two elements are evolved in their different electrical states; & passing, each to the metal opposite in electrical state to itself, tend to restore an equilibrium.

the chemical changes are capable of being carried on". (

Sir H Davy, it may be remarked, throughout his exposit^n of his hypothesis, & the Experiments illustrative of it, uses different Electrical "Energies" — If he does not intend 'Electrical energies', however, as synonymous with 'Electrical states' it is rather difficult to understand his Exact meaning: and the two terms are used synonymously by Dr Murray, Henry, & others in the Exposition of his theory —

These results & deductions really appear to us such, that we feel some diffidence to trust implicitly to our own reasonings: & approaching the subject with the veneration for Sir H. Davy which we have, we are more disposed to fear that we have possibly misconceived his meaning, than to believe him capable of a palpable inconsistency. —

To this theory, however, there are objections which, to us, are insuperable — In the first place the proofs of the fundamental point that different bodies are naturally in different electrical states, are by no means direct or conclusive — That Electromotion is excited by contact of the metalic plates of the series is the first step in this hypothesis; but the different electrical states of the acids & alkalis, after contact also, are not referred to the same electromotive power, but are considered as proof that these substances have naturally different electrical states — That is, for the same result (electricity) evidenced under exactly similar circumstances (contact) two entirely opposite causes are assigned —

Again, the electricity evidenced by the acids and alkalis after contact, & which is considered to prove them to be naturally in different electrical states, must be free electricity in order to affect the electrometer: the electricity of the elements developed by decomposition (in their different natural states, according to the theory) must, in order to be acted on by the the electricity of the plates, (to determine the elements to oppositely electrified surfaces) be free electricity also — But the tendency of free electricity being always to an equilibrium, can we imagine a substance to possess (whether in combination or not) a quantity of free electricity — which must therefore be constantly tending to be communicated to surrounding bodies — & which is at the same time natural (& therefore essential?) to itself — or how can the elements (hydrogen. e.g) preserve during combination,

without coming to an equilibrium, the opposite Electricities with which they are developed, & which they afterwards yield to restore the Equilibrium of the metalic plates? —

After the exposition of the entire failure, in our opinion, to Establish, as yet, any sufficient & comprehensive theory of the Excitation of the Galvanic fluid, it will scarcely be expected of us to undertake it — We leave it now — with the impression strong upon our minds however, that apposition (or contact) & chemical action are both efficient causes in putting this power into motion; & that a full theory of the mode of Excitation & accumulation of the Galvanic fluid as Exhibited in our usual arrangements is reserved to be accomplished by him who shall consistently Explain their combined Effects —

Our labours, in the mean time, however, have not been entirely in vain, if they only teach us how little we really know on the subject; & enable us at least to avoid adopting the Errors of others: — Especially if the sentiment of the poet be correct,

"Virtus est vitium fugere, Et sapientia prima
Stultitia caruisse" —

Saturday March 12th 1831 —

End