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MEMOIRS

OF THE

MEDICAL SOCIETY

OF

L O N D O N.

INSTITUTED IN THE YEAR 1773.

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V O L. I.

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L O N D O N:

PRINTED BY *BYE AND LAW,*

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M.DCC.XCII.





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## P R E F A C E.

**N**OTHING has contributed more to the advancement of science, than the establishment of literary societies; these excite a generous ardour in liberal minds, and raise even envy itself into useful emulation.

In that science, which rational estimation has placed first in the scale of honour; the science which proposes the noblest objects for its end, the preservation and restoration of health; the improvements which have already resulted from the formation of societies are well known to the medical world.

The principal part of our knowledge must be ever derived from comparing our

own observations with those of others. In this view the utility of societies, which afford an opportunity for the mutual communication of our thoughts, must be sufficiently apparent. Deceased authors cannot solve our difficulties, nor will the observations made in other ages and climates, hold always true in our own.

There are some circumstances peculiarly favourable to a rising society ; each member thinking the honour of the association in some measure dependent upon himself, is stimulated to the highest exertion of his powers : unawed by the fame, and fearless of being eclipsed by the lustre of his predecessors, no damp is cast upon the vigour of that genius, which can alone produce great discoveries.

The institution of this Society is to give the practitioners in the healing art, frequent



## P R E F A C E.

quent opportunities of meeting together, and conferring with each other, concerning any difficult or uncommon cases which may have occurred; or communicating any new discoveries in medicine which have been made, either at home or abroad.

Medical papers, which may tend to the advancement of the science, will be received by the Society; and such as may be deemed worthy of publication, carefully preserved, until sufficient matter for a volume shall be collected.

Many useful facts are lost from the want of a proper opportunity of conveying them to the world; and though, when considered separately, they may not be of sufficient importance to claim the attention of the public, yet when a number of them are collected together, they may become highly deserving of notice: to such facts,

when properly authenticated, the Society will always be particularly attentive.

In order to excite practitioners to bring those talents to light, which would otherwise lie buried, and useless to the community, the Society, on its first institution, proposed to hold forth honorary rewards to those who should improve the medical art.

They have likewise founded a medical library, that its members might have an easy access to the best ancient and modern authors.

Further to promote these intentions, Dr. LETTSOM, one of its earliest, most active, and steady members, has, with unequalled generosity, given to the Society a spacious freehold house, in which, besides rooms for the meetings and other purposes

poses of the Society, there is a library capable of containing several thousand volumes.

The same very worthy and zealous member, has also vested in the public funds, a sum of money sufficient to enable the Society to give annually a Gold Medal of the value of ten guineas, subject to the regulations hereafter to be mentioned.

The Society, with the greatest pleasure and gratitude, record these splendid donations, which so fully enable them to execute their original plan; and although *nothing similar has been hitherto attempted in this kingdom*, yet, they hope that the example may appear not altogether unworthy of imitation.

In printing the Memoirs of the Society, the *Fellows* and *Corresponding Members* are distinguished by initials affixed to their names, from the other respectable gentlemen of the faculty, who have kindly furnished valuable communications.

In the recollection of the enjoyment of the company and labours of their members, the Society cannot but regret the loss of any individual of their body; to preserve, however, some honourable memorial of their former associates, it is proposed to introduce, in the publications of the Society, memoirs of their deceased members.

The members of this Society have extended its foundation as much as possible: wishing to rise superior to all low distinctions, they have endeavoured to render  
every

every person useful in that branch of the science to which he properly belongs.

Animated with an ardent desire of promoting medical knowledge, and the good of the community, the Society lay the following volume before the public, and request the further assistance of the faculty, in order to render their labours more extensively beneficial to mankind.

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THE Society consists of Physicians, Surgeons, and Apothecaries; and others, versed in sciences connected with medicine; divided into Fellows, Honorary, and Corresponding Members.

The Fellows alone direct the affairs of the Society, and are eligible to any office.

No person is eligible as a Fellow, unless resident in the city of London, or within seven miles thereof; nor is any person residing *within* that distance, eligible as a Corresponding Member.

No Physician is eligible as a Fellow, who is not a member of the college of physicians of London, or who does not produce a diploma, and testimonials of his having studied medicine regularly at some university.

No Surgeon is eligible as a Fellow, who has not been approved of by the court of examining Surgeons of London.

Every candidate for admission as a Fellow of the society, must be recommended by three or more Fellows on their personal knowledge; but the recommendation of a Corresponding or Honorary Member may

be founded on an acquaintance with his character or writings.

The recommendation, containing the profession and place of abode of the person proposed for election shall be delivered to one of the Secretaries, and first read in the council; that they may be satisfied that the person recommended has been informed of the regulations of the Society, and is eligible according to its statutes: It shall then be read at the ensuing meeting of the Society, and hung up in the common meeting room for *three* succeeding ordinary meetings, if the recommendation be of an *honorary* or *corresponding* member; but if of a *fellow*, it shall be hung up for *six* ordinary meetings; and on the last of these meetings, the votes shall be taken by ballot, if eight Fellows be present; and if three-fourths of the Fellows present ballot

in favour of the candidate, he shall be declared duly elected.

If it appear upon the ballot, that the person proposed, is *not* elected, no notice thereof shall be taken in the minutes.

If any person who has been elected a Corresponding Member shall come to reside in London, or within seven miles thereof, and desire to continue in the society, notice thereof shall be hung up in the meeting room for three successive nights: and on the third he shall be balloted for as a Fellow, and if elected, shall be admitted on making the usual payment and signing the obligation.

Any Fellow, going to reside in the country shall, if he desire it, be considered as a Corresponding Member during his absence.

Cor-



Persons of distinguished character, eminently versed in sciences *connected with* medicine, may be elected as *Honorary* Members.

Honorary and Corresponding Members have the privilege of being present at all meetings of the Society.

No proprietor of any empirical nostrum can be a Member of this Society.

REGULATIONS *respecting the Gold Medal, founded in Commemoration of*  
Dr. JOHN FOTHERGILL.

1. THAT the Medal be given annually to the author of the best Dissertation, on a subject proposed by the Society, for which the learned of all countries shall be invited as candidates.

2. Each Dissertation shall be delivered to the Secretary, written in a legible hand, in the Latin, English, or French language, on or before the first day of NOVEMBER.

3. With it shall be delivered a sealed packet, with some device on the outside; and within, the author's name and designation.

4. The same device shall be put on the  
Dissertation,

Dissertation, that the Society may know how to address the successful candidate.

5. There shall be a Committee appointed by the Society, for the purpose of adjudging this Medal, consisting of the Council; to whom shall be joined such other members as the Society shall think proper; and their sentence shall be final.

6. The Medal shall be adjudged on the 8th day of March, in each Year, that being the birth-day of the late Dr. FOTHERGILL. The first Medal was adjudged in the year 1787.

7. No Dissertation with the name of the author affixed can be received, that the Committee may decide on the merits of each, without any knowledge of, or partiality for, the author.

8. All

8. All the Dissertations, the successful one excepted, shall be returned, if desired, with the sealed packets unopened.

9. The Society propose to give *Two* SILVER Medals annually: One of which shall be adjudged for the best Essay or Essays, read before the Society within the Year, written by a FELLOW; the other for the best Essay, or Essays, by a CORRESPONDING MEMBER, or by any person, NOT a member of the Society.

10. Any Gentleman who has had the honor of acquiring the *Fothergillian* MEDAL, cannot come into competition for the SILVER MEDAL, at the adjudication of the Medals *in the ensuing Year*.

The following Question was proposed as the subject for the first Prize Medal:

“ *What diseases may be mitigated or cured  
 “ by exciting particular affections or passions  
 “ of the mind?*”

Which was adjudged in favour of Dr. William Falconer, of Bath, Corresponding Member of the Medical Society.

The following Question was proposed as the Subject for the Prize Medal for the year 1788 :

“ *How is the human body in health, and  
 “ in a diseased state, affected by different  
 “ kinds of AIR?*”

Question for the year 1789,

“ *What circumstances accelerate, retard,  
 “ or prevent the progress of INFECTION?*”



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A R T I C L E I.

*On the Character of ÆSCULAPIUS, in a Letter addressed to JOHN COAKLEY LETTSOM, M. D. F. R. S. &c. and by him communicated to the Medical Society of London.*

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*Prefatory Letter to Dr. LETTSOM.*

“ S I R,

“ **Y** O U desire me to send you my  
“ opinion concerning Æsculapius,  
“ the reputed God of Physic. In con-  
“ sequence of this, I transmit to you an  
“ account of this Deity from papers which  
“ I formerly drew up. It is only a part of  
VOL. I. B “ a larger

2 *Prefatory Letter to Dr. LETTSOM.*

“ a larger Treatise, in which I have con-  
“ sidered the history of the principal gods of  
“ the Gentile world. And in the process  
“ of this inquiry I have endeavoured to  
“ shew, first, that most of these deities  
“ were but one: and that their history  
“ relates ultimately to the same object:  
“ and in the next place to intimate, what  
“ the prototype, that original object, was.  
“ As this is only a part of a larger work,  
“ the account, which I give, may ap-  
“ pear sometimes imperfect; and my in-  
“ ferences not so plain, as might be wished:  
“ for they sometimes depend upon an an-  
“ tecedent history, with which you are  
“ not acquainted. It will therefore be  
“ necessary, in the perusal of the follow-  
“ ing Treatise, to make this allowance.

“ I am, Sir,

“ Your most sincere Friend

“ and humble Servant,

London,  
December, 1785.

“ THE AUTHOR.”

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CONCERNING THE  
C H A R A C T E R

O F

Æ S C U L A P I U S.

HAVING given examples of the variety, and at the same time, identity of the Gentile divinities; and, having particularly described Apollo, Pan, Priapus, Jupiter, Neptune, and some others of the most distinguished characters, in the performance above alluded to, I proceed now to Æsculapius; or, as he is expressed by the Greeks, Asclepius. For this history we must not depend solely upon the writers of Greece, as their evidence cannot be admitted without some restriction. It appears plainly, that they oftentimes misinterpreted their ancient hieroglyphical

histories, having lost sight of the original purport. But before I apply to the mythology of Greece, I shall consider the accounts afforded from Asia Minor; and those still more early from Phœnicia and Egypt.

According to the learned Sir John Marsham, the *Æsculapius* of Greece was a thousand years more recent than the deity of the same name among the <sup>a</sup> Egyptians. By this he seems to intimate, that they were two distinct persons: but they were undoubtedly the same; and this may be proved from their history. Therefore this only should have been said by the learned writer above, that *Æsculapius* was revered in Egypt one thousand years before he was known in Greece. As his history was manifestly imported, it will be proper to apply to persons of those countries from whence it came. He will be found to be represented under various characters, like

<sup>a</sup> *Æsculapius Græcus mille annis recentior Ægyptio.*

Marsham Canon Chron. p. 43.

the persons of whom I have before treated : but of all these characters the principal is that of a physician. This at first may make his department seem rather limited, and not afford that considerable character, which he will be found to maintain. It will however appear, upon examination, that he was esteemed the principal deity ; the same as Jupiter and Apollo ; the same also as Osiris, Hermes, Thoth, and Apis the physician. To these others may be added, each of whom at particular times was reputed chief.

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*Of his Worship and Titles.*

ÆSCULAPIUS was much revered in Asia Minor ; and had many temples in Caria and Ionia, and particularly at Pergamus : being greatly honoured by the people of those parts. Aristides of that country mentions his being worshipped under the title of ΖΕΥΣ Ασκληπιος, or Jupiter Æsculapius, and he gives him the following high

character—<sup>b</sup> ΖΕΥΣ Ασκληπιος—ὅπως, εν τοις  
 ἱεροῖς εἰρηται· οὐλος εσθ', ὁ το παν αγων και νεμων,  
 Σωτηρ των ὀλων, και φυλαξ ἀπαντων. *This*  
*is the deity, as we learn from the sacred*  
*writings, who manages and directs the whole*  
*world: the conservator of all things, and*  
*guardian of the immortal gods.* These gods,  
 whatever their titles may have been, were  
 in reality dæmons, or men <sup>c</sup> deified. Of  
 these there was one principal and parent of  
 the rest, and among the many denomina-  
 tions, with which he was distinguished, one  
 was Æsculapius.

He was esteemed the chief deity at  
 Memphis, where a live <sup>d</sup> serpent was pre-  
 served, as an emblem of him, and treated  
 with a religious reverence. From hence  
 we may perceive, that he must have been

<sup>b</sup> Aristides. Orat. vi. p. 67.

We find him represented in the same manner by the  
 Emperor Julian—Σωτηρα των ὀλων. Orat. iv. p. 153.

<sup>c</sup> Upon this subject the reader may have recourse to a  
 very valuable treatise, by the Rev. Mr. Farmer, of Wal-  
 thamstow.

<sup>d</sup> Ælian de Animal. l. xvii. c. 39. p. 912.

the same as <sup>e</sup> Apis, the god of phyfic : who was also looked upon as the principal god of that place. They indeed esteemed him the sovereign of all. We therefore must not wonder, if we find him styled <sup>f</sup> Θεος ενεργεσατος, a deity the most energetick and operative of any. <sup>g</sup> Θεος μεγαλος, the greatest of all gods. He was, we find, the supreme of the whole ; yet he was only a dæmon : and we may judge of his history and antiquity from the words of Sir John Marsham. <sup>h</sup> Æsculapius Memphites inter primos hominum numeratur, qui opinione hominum Dii facti sunt.

He must have been the same as <sup>i</sup> Sydyc, *the man of justice*, recorded in the histories of Phœnicia, though those histories are

<sup>e</sup> Apis in Civitate Memphi solis instar excipitur.

Macrob. Sat. l. i. c. 21. p. 212. See also Strabo. l. xvii. p. 1058. and Ælian above.

Æsculapius the same as Osiris. Diodorus. l. i. p. 19. and p. 76.

<sup>f</sup> Ælian de Animal. l. xi. c. 10. p. 615.

<sup>g</sup> Lucian de Sacrificiis. vol. i. p. 359.

<sup>h</sup> Chron. Can. sect. i. p. 41.

<sup>i</sup> צדק. Justus.

sadly confounded; as they now stand in the version of Philo Byblius. Æsculapius was ΖΕΥΣ, or Jupiter: and Sydyc must have been the same; for his sons were the Διοσκουροι, Dioscouri. \* Ἐκ τε Συδυκ Διοσκουροι. They are said to have been seven in number, and Καβειροι, the deities called Cabiri. But in another place Æsculapius is made the <sup>1</sup> son of Sydyc, by which son must be meant a second Æsculapius, and he is styled αδελφος, or brother to the rest; if the reading be true. We have a particular history given of these Cabiri by Damascius in Photius, where the name of Æsculapius is subjoined, but the word αδελφος is not mentioned. <sup>m</sup> Συδυκω εγενοντο επτα παιδες, ες Διοσκουρας ερμηνευεσι, και Καβειρας, Ογδοος δε εγενετο επι τετοις ο Εσμβνος, ον Ασκληπιον ερμηνευεσι. Το Sydyc were born seven sons, who are by interpretation the Dioscouri, or sons of Jupiter, and Cabiri; to these was an additional eighth, who is esteemed the same as Æsculapius.

\* Sanchoniathon apud Euseb. P. E. l. i. c. 10. p. 36.

<sup>1</sup> Ογδοος αυτων αδελφος Ασκληπιος. Ibid. p. 39.

<sup>m</sup> Photii Biblioth. p. 1074.



Philo affords a similar history of these persons. <sup>n</sup> Εξ τῶν Συδύκ Διοσκουροί, ἡ Καβειροί, ἡ Κορυβάντες, ἡ Σαμοθράκες. From Sydyce came the persons called Dioscuri, Cabiri, Corybantes, and Samothracae. The last name was given them from their being particularly worshipped in Samothracia: where their rites were esteemed the most solemn and mysterious of any, and of the highest antiquity. They are styled by <sup>o</sup> Cassius Hemina θεοὶ μεγάλοι, θεοὶ χρηστοί, θεοὶ δυνατοί: great, benevolent, and powerful deities. As they were the same as the Corybantes, their father Sadyc or Sydyce, must have been Corybas; and this history may be further illustrated from the account given of that person. We accordingly find Corybas styled in an Orphic hymn, <sup>p</sup> Νυκτερινὸν Κερητα, the nocturnal Cures: Αἰολομορφὸν ἀνακτα, the prince of various forms, θεὸν διφυή, a deity of a two-fold nature; μορφήν ὑποφερτοῦ δράκοντος, who was represented under the figure of a dark ser-

<sup>n</sup> Euseb. P. E. l. i. c. 10. p. 36.

<sup>o</sup> Macrobian Saturn. l. iii. c. 4. p. 276.

<sup>p</sup> Orph. H. 38.

pent, under which figure Æsculapius is continually found. Corybas therefore and Æsculapius were the same.

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*Of the CABIRI.*

THE Cabiri are said above from Philo to have been seven in number, and all sons, but they are differently described by other writers. <sup>q</sup> Acusilaus Argivus made them the children of Camilus, and six in number: and they were said, according to Pherecides Syrus', to consist of three sons, and three daughters. According to Mnaseas, whose authority is quoted in the Scholia to <sup>s</sup> Apollonius Rhodius, there were only four Cabiri: and there is still a further difference of opinion concerning them, as may be found upon consulting their history. Camilus, the supposed father, as mentioned from Pherecydes by Strabo, is

<sup>q</sup> Strabo. l. x. p. 724.

<sup>r</sup> Strabo. above, p. 724.

<sup>s</sup> Scholia to. l. i. v. 917.

by other writers expressed Cadmilus and Casmilus, the same as <sup>t</sup> Hermes. Herodotus takes notice of a temple dedicated to the Cabiri at <sup>u</sup> Memphis, where we know Æsculapius was the chief deity, Memphim urbem præsentia numinis Æsculapii <sup>w</sup> claram. Two live serpents were preserved there and held sacred, thence we may be assured that Cadmilus, Sydyc, Corybas, Hermes, Jupiter Apis, and Æsculapius, were the same person: and they will be found all to terminate in the Orphic Protogonus, the reputed first man: the same who is represented <sup>x</sup> Ωογενη, διφυη, sprung from an egg, and of a twofold nature, γενεσιν Μακαρων θνητωντ' ανθρωπων, from whom all, both the Makares, or deified persons, and those who are mere mortals, are descended.

<sup>t</sup> 'Ο δε προσιθεμενος Κασμιλος, Ἑρμης εστιν. Schol. above, l. i. p. 917.

<sup>u</sup> Herod. l. iii. c. 37. p. 214.

<sup>w</sup> Marcellinus. l. 22. p. 277. Ælian de Animal. l. xvi. c. 39. p. 912.

<sup>x</sup> Orph. Hymn. 5.

We have seen that according to Philo, the sons of Sydyc, the man of *justice*, amounted to seven, with a person added, who made eight. But this does not appear to be accurate, and is contradicted by every other writer. If then we correct the Phœnician mythology by the Samothracian, we may allow that Sydyc had a family of seven persons: and that Æsculapius, the same as Sydyc, made the eighth. In acting thus we shall hardly fall short of the truth. The difference in the numbers specified seems to have arisen from this. If the whole of the family was included, they amounted to eight, and the eighth person is particularly taken notice of, as being of more consequence than the rest. If six are mentioned, then they consist of three sons, and three daughters. But if four only, then we may infer that it was the <sup>♂</sup> male part of the family: and still there is one distinguished person specified, whom we may presume to have been the head of the four. This is confirmed by a

<sup>♂</sup> Some include Ceres and Proserpine among the four, but this is only surmise.

passage in the Scholia, to which I have before applied. For the author in that passage makes mention of three Cabiri, and at the end subjoins a fourth, as the principal of the whole. <sup>z</sup> Ὁ δὲ προσθεμενος τεταρτος Κασμιλος, Ἑρμης εἰν, ὡς ἴσῳρει Διονυσιδωρος. From whence we find that the fourth person annexed was Casmilus, who was the same as Hermes. Now it has been shewn, that Hermes was the same as Sydyc, the father of all, the same also as Æsculapius.

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*Concerning the Time of his Appearance.*

THE æra of Sydyc may be further known from the person whom he is supposed to have wedded. Σαδυκῶ δὲ λεγομένῳ δικαίῳ μίᾳ τῶν Τιτανιδῶν συνελθῆσα γεννα κ. τ. λ. Euseb. l. i. c. 10. p. 37. From hence we learn, that Sydyc, denominated the Just, had a wife of the Titanian race, and

<sup>z</sup> See Scholia, above, v. 317.

consequently of the Titanian times, who bore him a son, &c. These times were antecedent to the flood of Ogyges and Deucalion, and before the renewal of the world: when Sydyc was in his primitive state. The son born is said to have been Æsculapius; who is made the offspring of many fathers. This was owing to a particular mistake of the Grecians, in respect to the Eastern mode of expression. When a person was said to be the son of Sydyc, or Themis, that is, of *Justice*, it only meant, that he was a just man. A son of Cronus was a man of ancient days: a son of Prometheus, a man of wisdom. A son of the earth, an husbandman: a son of the ocean, one, who was connected with the sea. It is a common Hebraism. Hence we read in the Scriptures of a son of *valour* for a *brave man*: of a son of a *murderer* for a person *guilty of blood*. Also of a son of *peace*: a son of *consolation*: a son of *perdition*: a son of *Belial*: and a son of *the morning*.—<sup>a</sup> *How art thou fallen, O*

<sup>a</sup> Isaiah, c. xiv. v. 12.

*Lucifer, thou son of the morning!* This is spoken of a person rising to the zenith of his glory, but cast down for his impiety. The same mode of expression is to be found in Homer, where he is speaking of Memnon the Æthiopian, who slew Antilochus.

Ἦ Ὀν ῥ' Ἡεῖς ἐκτείνε φαεινῆς ἀγλαοῦ υἱοῦ.

Also in Virgil, where he makes mention of the same person.

ᶜ Nunc quibus Auroræ venisset Filius armis.

But these poets, and the people of their times, took Eos, the same as Aurora, to have been the real mother of Memnon. Whereas in this instance *the son of the morning* signified merely *Orientis Filius*, a man born in *the east*, an oriental person. These misconceptions gave birth to many ideal parents: so that a person is often made his own son, and is brought under different degrees of relation to himself.

ᵇ Odyss. iv. v. 188.

ᶜ Æneid. l. i. v. 751.

It has been shewn, that Æsculapius was the same as Zeus or Jupiter, by the Dioscuri, or Jove nati, being his children: yet we have seen him introduced as their brother. According to Stobæus he was the offspring of Pan, and Hephæstobule.—

<sup>d</sup> Πανος και Ηφαιστοβουλης. Pan was the same as Sydyce, the origin of all mankind: but represented under the character of an husbandman and shepherd. As to Hephæstobule, it seems a strange compound: for the word <sup>e</sup> βουλη is a Grecian term, and could not, I think, be the termination of the ancient and original name. What the Grecian mythologists have expressed Hephæsto-bule, was probably in the Egyptian language Hephæsta-bala or baala. By this is signified the lady or princess Hephæsta, in other words the deity <sup>f</sup> of fire. Through the whole history of Sydyce or Æsculapius, under whatever denomination, there is an uniform reference to this element: and

<sup>d</sup> So it should be read instead of *Κπανος*, &c.

Stobæus in *Eclogis Physicis*, p. 117. l. 28.

<sup>e</sup> Analogous to *תלע*.

<sup>f</sup> Hephæsta is the feminine of *Ἡφαιστος*, or Vulcan.



the person, who had the name of Hephæsta in Egypt, was in Syria styled Νερια, and Νωρια, a name of the same <sup>s</sup> purport. It was by the Grecians translated Πυρρῶα, Pyrrha: which is precisely of the same signification. In consequence of this, the wife of Deucalion, the reparator generis humani, is uniformly stiled Pyrrha.

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*His Improvement of Science.*

ÆSCULAPIUS is said to have found out <sup>h</sup> letters, and his sons, the Cabiri, were the first of all men who made use of them in transmitting to posterity the re-

<sup>s</sup> Nour (נור) in Hebrew, and many other languages, denotes fire. Νερα εν τη Ἑβραϊδι πυρ, & καὶα την βαθειαν γλωσσαν, αλλα και Συριακη διαλεκτῳ. Eriphanus. Hæref. vi. p. 82. If the context would permit, one would imagine, that the original reading was—& μονον καὶα την βαθειαν γλωσσαν, αλλα και. Eriphanus adds—φασι την Νεριαν ειναι τῃ Νωε γυναικα. Ibid. The same is said of Pyrrha by Tzetzes.

<sup>h</sup> Ταυτα πρωτοι παντων υπεμνηματισαντο—οι κασειροι, ως αυλοις ενειλατο Θεος Ταυτος. Euseb. P. E. l. i. c. 10. p. 39.

cords of Taautus or Thoth. The invention is likewise ascribed to Toforthrus, a supposed king of Egypt, but he is esteemed the same as <sup>1</sup> Æsculapius. It is also attributed to <sup>k</sup> Menon, an Egyptian, who is justly imagined to have been the same as Menes, and to have lived before Phoroneus of Greece. The more general opinion has been, that letters were the invention of Taut or Thoth. <sup>1</sup> Πρωτος εστι Τααυλος, ο των γραμματων την ευρεσιν επινοησας, ον Αιγυπτιοι μεν εκαλεσαν Θωθ. It was Taautus, or as the Egyptians express the name *Thouth*, who first brought about the invention of letters. This history of Thoth is mentioned by Socrates in the Phædrus of Plato: who takes notice of this person as a reputed deity of great antiquity, <sup>m</sup> των παλαιων θεων, one of the most ancient gods. αυτω δε ονομα τω Δαιμονι ειναι Θωθ, and the name of this Dæmon, or deified person,

<sup>1</sup> Ουτος εστιν Ασκληπιος. Syncellus, p. 56.

<sup>k</sup> Menonem quindecim annos ante Phoroneum antiquissimum Græciæ Regem. Pliny, l. vii. c. 56. p. 413.

<sup>1</sup> Euseb. P. E. l. i. c. 10. p. 31.

Τααυλος ευρε την των πρωτων σοικειων γραφην. Ib. p. 36.

▪ Vol. iii. p. 274.

was *Thoth*. By him the most useful arts were found out, και δη και γραμματα: among the rest, letters. Ἑρμην δὲ Ἕλληνας<sup>n</sup> μετεφρασαν. The Grecians render this person *Hermes*. Accordingly; we find, from • Plutarch and other writers, this invention attributed to *Hermes*. Ἑρμης λεγεται θεων εν Αιγυπτῳ γραμματα πρῶτος εὑρειν. *Hermes*, of all the gods in Egypt, is said to have been the first, who found out letters. Hence we may infer, that these were all the same person under different denominations. In another passage<sup>p</sup> of Plato, the writing found out is supposed to consist of those elementary and alphabetical letters, which are still in use. But this cannot be true. And we are told for certain from Manetho of Egypt, that the characters were<sup>q</sup> hieroglyphicks, and that he copied some of them from<sup>r</sup> pillars, εν γῆ Συριαδικῆ (forte

<sup>n</sup> The same is said by Manetho. Θωθ πρῶτος Ἑρμης. *Thoth was the first Hermes.*

<sup>o</sup> Plutarch Sympos. l. ix. q. 3. p. 738.

<sup>p</sup> In Philebo. v. 2. p. 18. *Hermes* is here styled Θευθ.

<sup>q</sup> Syncellus. p. 40.

<sup>r</sup> Ἑρμης Στηλαι, the pillars or obelisks of *Hermes*. Ibid.

Συριγγικη), which had been engraved there by Thoth, the first Hermes. † Marcellinus mentions some curious inscriptions of this sort, which were to be seen in the Syringes of Upper Egypt. These were subterranean passages, which the ancient Egyptians had formed in the rock with many windings: et excisis parietibus, volucrum ferarumque genera multa sculpsērunt, et animalium species innumeras, quas hieroglyphicas litteras appellārunt. He speaks of them as having been executed before the deluge. And Manetho would fain give them the same age: and mentions their being translated † μετα τον κατακλυσμον, *after the deluge*: and, as he intimates, soon after. The letters, we find, were certainly † hieroglyphical, and have been attributed to a person of various denominations, one of which was Toforthrus, the inventor of many arts. † Ουτος Ασκληπιος Αιγυπτιοις δια της

† Marcellinus. l. xxii. p. 263.

† They are to be seen entire at this day, and have been visited by Pocock, Norden, and others.

† Syncellus. p. 40.

† Ibid. p. 56.

ιατρικην νενομισαι, και την δια ξεσων λιθων οικοδομιαν ευρατο· αλλα και γραφης επιμεληθη. *He is esteemed the same as Æsculapius by the Egyptians for his knowledge in physick. He first found out the erecting of buildings with stones cut and smoothed. He also made the science of letters his study and care.* Some have attributed the science of physick to Apis, and supposed that Æsculapius only improved the art. But he was the father of the Cabiri, and esteemed μεγαισος θεος, *the supreme of all. Σωτηρ των ολων, the conservator of the whole world;* and stands too high to have received instructions from Apis. Indeed I take the name Apis to have been only a mark of relation: and given to a person called by way of eminence, *the Father,* who was the same as Æsculapius, Protonus, and Sydyce. Æsculapius must have been also the same as the serpentine deity Cneph, who was represented with an egg before his mouth, to signify, as is gene-

\* Clemens Alexand. Strom. l. i. p. 362.

rally supposed, that he was *ωογενης*, or produced from the <sup>y</sup> mundane egg. He was looked upon as the most ancient of the gods, and superior to all: and we have seen that *Æsculapius* was esteemed the same. The god *Pan* was held by the *Ægyptians* in the like estimation. Accordingly *Herodotus* tells us, <sup>2</sup> Παρ' Αιγυπτιοισι Παν μεν αρχαιοτατος, *Among the people of Egypt, Pan is looked upon as most ancient of the gods.* In the orphic verses he is styled, <sup>3</sup> παντοφους, *the producer of all things*; γενετωρ παντων, *the universal father.* These three, therefore, must have been the same person, who was differently denominated in his several places of worship.

<sup>y</sup> They represented him of an human shape, of a dark complexion, inclining to black.—*ερμηνευειν δε τον τον κοσμον.* *They interpreted this egg to be the world.* Euseb. P. E. l. iii. c. 11. p. 115.

He might be said both to have proceeded from the egg, and to have produced it.

<sup>2</sup> L, ii. c. 145. p. 174.

<sup>3</sup> Orph. H. 10.

*Concerning the Emblematical Serpent.*

WE have seen above that the deity Hephæsta was reputed to have been the wife of Pan, and the mother of Æsculapius. She is also said to have been the wife of the first Memphite king Nechorophis. The reason of this person being esteemed a monarch in Egypt, and Hephæsta holding the same rank with him, was owing to that custom of colonies from all parts prefixing the names of their ancestors to the lists of their princes. Nechor in the <sup>b</sup> language of Egypt signified a king; and Ophis denoted a *serpent*, under which symbol this chief ancestor was worshipped. His various titles have been enumerated, among which were Hermes and Æsculapius: and upon gems, coins, and marbles, inscribed with these names, a serpent is continually to be <sup>c</sup> found. Cneph was

<sup>b</sup> What is here rendered Nechor, is at other times expressed Necho, Nechao, Necus, and Negus.

<sup>c</sup> See Spanheim de usu & præstantiâ Num, v. i. p. 12, 16, 217, and 417.

styled <sup>d</sup> Agathodæmon, or *the good Dæmon*, and Æsculapius was esteemed the same, on account of the benefits which he bestowed upon mankind. And as he was supposed to have had a return to life, and a renewal of youth, he was on that account worshipped under this symbol of a serpent; the meaning of which I have mentioned <sup>e</sup> before. The Phœnicians gave the name of Agathodæmon both to the deity, and to the animal; and the <sup>f</sup> Egyptians did the same. At Thebes, where Cneph was particularly worshipped, two serpents were

<sup>d</sup> Sanchoniath: apud Euseb. P. E. l. i. c. 10. p. 41.

<sup>e</sup> *Because it gets rid of its old age, and grows young; επει το γηρας αποβαλλει.* Scholia in Aristoph. Plutum. v. 773. Ælian mentions the spring season, *οταν αποδυσηται το γηρας ο οφης.* De Animal. l. ix. c. 16. p. 499.—*γηρας εκδυσ μεταφορα απο των οφιων.* Scholia in Aristoph. Ειρηνη. v. 335.

<sup>f</sup> *Φοινικες δε αυτο (το ζων) αγαθον δαιμονα καλεσιν, Ομοιως οι Αιγυπιοι Κνηφ επονομαζεσι.* *The Phœnicians call this animal Agathodæmon, and the Egyptians annex the same name to Cneph.* Philo apud Euseb. l. i. c. 10. p. 41.

See also Plutarch. de Amatorio. vol. ii. p. 755.



preserved alive, and called after their <sup>g</sup> manner. Philo Byblius speaking of a complex hieroglyphick, in the middle of which a serpent was described, says, that the Egyptians placed it there, <sup>h</sup> τον Αγαθον Δαιμονα σημαινουντες, *as an emblem of the good Daemon.* Plutarch, however, will not allow that any such serpents were preserved at Thebes, nor that any mortal man was esteemed a deity. He insists <sup>i</sup> ως θνητον Θεου εδενα νομισαντας, αλλα ου καλουν αυτοι Κνηφ αγεννητον οντα και αδανατον. *That the people of Thebes did not allow any god to be a deified man: and as to their god Cneph, they looked upon him as an original, unproduced, and immortal being.* Porphyry also speaks of him as a <sup>k</sup> mysterious, incomprehensible essence. But these were all late refinements, concerning which I shall treat hereafter.

<sup>g</sup> Herodot. l. ii. c. 74. p. 138.

<sup>h</sup> See Eusebius above, p. 42.

<sup>i</sup> Isis et Osiris, v. i. p. 359.

<sup>k</sup> Λογος δυσσευρετος, και κεκρυμμενος, και ου φανος και νοερως κινειται. Porphyry apud Euseb. P. E. l. iii. p. 115.

As to the two serpents, which Plutarch denies to have been ever kept at Thebes, Herodotus saw them, and describes them very <sup>1</sup> particularly, and I think we may safely trust him, when he professes to have been an eye-witness. Serpents therefore were certainly preserved in that temple by the Thebans. And in respect to the assertion, that no mortal deity was there worshipped, the very term Agathodæmon shews the contrary. Whoever was styled in this manner, must have been a mere <sup>m</sup> mortal, for by Dæmon is signified *a man deified*. It is a title which the Egyptians would never have bestowed upon the Eternal God. There is too much reason to think, that from the baseness of their worship they had nearly, if not entirely, lost sight of him. Hesiod informs us, that the persons esteemed Dæmons were men of the golden age.

<sup>1</sup> Herodot. l. ii. c. 74. p. 138. He also mentions a sacred crocodile being kept there alive, l. ii. c. 69. p. 136. A live serpent was preserved in the chief temple at Memphis. Ælian de Animal. l. xvi. c. 39. p. 912.

¶ See the treatise by the learned Mr. Farmer.

ἌΥΤΑΡ ΕΠΕΙ ΚΕΝ ΤΟΥΤΟ ΓΕΝΟΣ ΚΑΤΑ ΓΑΙΑ ΚΑΛΥΨΕΝ  
 ΤΟΙ ΜΕΝ ΔΑΙΜΟΝΕΣ ΕΙΣΙ—  
 ΕΣΘΛΟΙ, ΕΠΙΧΘΟΥΙΟΙ, ΦΥΛΑΚΕΣ ΘΥΗΤΩΝ ΑΝΘΡΩΠΩΝ.

*After this race had been buried and extinct, they became Dæmons, a kind of benevolent beings; who are conversant upon the earth, and the guardians of mankind. Plutarch himself mentions it, as the opinion of the most learned writers, that there were both good and bad Dæmons, and so far from any of them being esteemed the great first cause, they were often looked upon as of an inferior order to those principally held to be gods. ° Δαιμονας ὑπηρετας των θεων. Porphyry makes a similar distinction: and speaking of improper sacrifices, he says, whoever first exacted them, ῥ εκ ην αρα θεος, εδε τις αψευδης και αγαθος δαιμων· he was neither a god, nor a benevolent and just Dæmon: in this place and others he may be*

▪ Opera et Dies, v. 121.

° De defectu Orac. v. ii. p. 418, 419.

ῥ Porphyry περι αποχης. See Euseb. P. E. l. iv. p. 153, 174; also l. iii. p. 141-2.

too <sup>9</sup> nice in his distinctions; yet from every authority, we may be assured that the only true God could never be esteemed a Dæmon.

It seems, I think, manifest from what has been said, that Cneph could not be the Supreme Deity. He was the same as Sydyc, *the man of Justice*, whose family consisted of the memorable eight persons, the same also as Protogonus, <sup>1</sup> διφύης ωσγενής, that *first-born, two-fold being, who arose from the mysterious egg*, who was the original of the ever-happy Macares, or immortals; and of those also who were mere men. He likewise could have been no other than

<sup>9</sup> I mean too nice in distinguishing between the popular gods and Dæmons, for they were in general the same. The author of the Orphic Hymns calls Neptune, ποσειδαιμον, *reverend Dæmon*; Apollo, φωσφερε δαιμον, *a light-producing Dæmon*; and Jupiter, δαιμονα ζηνα μεγα. See Hymns xvi. v. 8. xxxiii. v. 5. lxxii. v. 1. Many other instances might be produced. Plato speaks of Dæmons and their origin, and mentions among the principal, Oceanus Tethys, Ops, Jupiter, and Juno, and with these, all that had any supposed relation. Timæus, vol. iii. p. 40, 41.

<sup>1</sup> Orph. Hymn v.

Camephis,

Camephis, who was mentioned in the Hermetick writings, as ἡ προπατερος, και παντων προγενεσες; *the forefather and first-born of all men.* In respect to the title of Agathodæmon given to two deities, we may from hence, and from the preceding history, be assured, that they were the same person: and that Cneph of Thebes was no other than Æsculapius of Memphis; the great physician Apis, the father, and supposed conservator of all mankind.

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*The Grecian Account of Æsculapius.*

THESE accounts of this deity, though transmitted through the hands of the Greeks, were originally from Egypt and the east, as is manifest from the evidence which has preceded. It will now be proper to obtain his history from the Grecians themselves, as it was preserved in the cities

\* In *Eclogis Physicis Stobæi*, p. 120. Jablonsky, l. i. c. 4. p. 96.

and temples where he was worshipped, and as it is to be found in their mythological writings.

In prosecuting these views we must take care not to be misled with what the Grecians have alleged concerning the births and deaths of these deities, and the particular places of their residence. For the whole history was imported, and the persons whom they have given out to be natives, were all foreign to their country. We must likewise give little heed to the degrees of relation which they have established; for they will be found for the most part very contradictory, and inconsistent, so that the history will confute itself. Their rites and mythology they copied from hieroglyphicks, which were not well understood even in the countries from whence they were borrowed. They were in their nature equivocal, and the true purport could not be preserved long. There was only one history, from which the true meaning might have been obtained  
by

by comparing; but with this history they were totally unacquainted.

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*Of the Birth of Æsculapius.*

TARQUITIUS, as he is quoted by Lactantius, acquaints us, ' ab incertis parentibus ortum Æsculapium, et expositum, That Æsculapius was of very uncertain parentage, and had been exposed. And we are informed by Pausanias, " θνητην γυναικα εδεμιαν μητερα, no woman of mortal race was his mother. Yet according to Cicero he was the son of " Arfippus and Arfinoe, and is mentioned particularly as a physician. Pausanias likewise makes him the son of \* Arfinoe, and the grandson of one Leucippus. In both instances he is made a descendant of Hippus, the mystical

' Tarquitijs de Viris illustribus. Lactant. de F. R. l. i. c. 10. p. 39.

" Pausan. l. vii. p. 583.

^ Cicero de Nat. Deor. l. iii. § 57.

^ Pausan. l. iii. p. 277. l. ii. p. 171.

horse. By some he was represented as the son of <sup>y</sup> Vulcan: but the most popular opinion seems to have been, that he was the <sup>z</sup> son of Apollo, and the nymph Coronis. She was worshipped at Sicyon, where he had also a temple, in which two live serpents were maintained. Coronis is by interpretation a <sup>a</sup> raven, and in the accounts given of her, there is often some history of that bird. The principal circumstance is, that her lover Apollo had been deceived by the raven, which was by him changed from its original colour white to black.

It has been before observed, that Æsculapius came not regularly to birth, but was taken from the side of his <sup>b</sup> mother, and

<sup>y</sup> Cicero de Nat. Deor. l. iii. § 57. Cicero makes mention of four of this name.

<sup>z</sup> Υιον Απολλωνος, ον εγεινατο δια Κορωνις. Homer. H. 15.—Απολλωνα Ασκληπιω πατερα. Pausan. l. vii. p. 583.

<sup>a</sup> Paus. l. ii. p. 137. Of the Ravens delay, see Hyginus, p. 492; also Ovid. Fast. l. ii. v. 253.

<sup>b</sup> Ex utero exsectum Æsculapium. Hyginus, Fab. ccii. p. 334.—Excisum utero matris. Lactant. Placidus, in Ovid. Metamorph. l. 2. Fab. vii.



was preserved during his childhood in the cavern of Chiron. Apollo

——<sup>c</sup> Natum flammis uteroq. parentis  
Eripuit, geminiq. tulit Chironis in an-  
trum.

This circumstance of his birth is very similar to the account given of Bacchus: it was looked upon as a renewal of life, and he was esteemed to have been a second time conceived in this cavern. Accordingly, the sea nymph Ocyrhœe intimates as much in her prophecy concerning him, though she seems to make it commence from his being a second time exposed to fire.

<sup>d</sup> Cresce, puer, dixit; tibi se mortalia sæpe  
Corpora debebunt: animas tibi reddere  
ademptas  
Fas erit: idq. semel diis indignantibus  
ausus  
Possè dare hoc iterum flammâ prohibe-  
bere avitâ,

<sup>c</sup> Ovid. *Metam.* l. ii. v. 629.

<sup>d</sup> Ovid. l. ii. v. 643.

Eque Deo corpus fies exfanguē, Deusque  
Qui modo corpus eras; et bis tua fata  
novabis.

This history is transmitted to us with a deal of false colouring; but the principal parts are plain, that the person spoken of should *be a great benefactor to the world, and even raise the dead to life; that he himself from a deity should be reduced to a state of death; and from that state should be restored to a second existence.* Nay, his being, according to this prophecy, *was to be twice renewed.* Ocyrhœ, who is introduced above as a prophetess, is said to have been a daughter of Oceanus, and was at last changed into Hippa, *a mare.*

I have mentioned the history of several deities, who after a state of confinement were restored to life, and had a renewal of

ε The same is said of Bacchus Protogonus.

Πρωτογονον—διφνη τριγονον Βαχχιον ανακτα.

Orph. Hymn 29.

*The two-fold thrice-begotten prince.*

youth.

youth. This was particularly the case of Bacchus, and of Osiris, the god of medicine. The latter was enclosed in an ark, or bier, and having been exposed upon the waters, was lost and extinct; and his death was commemorated with many tears. He was at length found, and restored; and he revived in the character of the youth Orus, the physician, the same, who was admitted to the converse of the gods. The like we find told of Æsculapius, and in consequence of this renewal of youth, he had a temple in Arcadia, styled † Ἄσκληπιος παιδος ἱερον, *the temple of the boy Asclepius*. Nor was the dove forgot, which was supposed to have tended him in his childhood. For near the temple above mentioned of Æsculapius Puer, stood Τρυγονος μνημα τροφης, *the monument of the dove, who was his nurse*.

† Pausan. l. viii. p. 651 and 667.

See notes to Fulgentius in Hyginus. p. 928, 9.

## C O R O N I S.

THE raven also was farther commemorated; and the city of Corone in Messenia, so called from Coronis, was no other than the city of the raven. Why it was particularly so denominated, many reasons were given: one was, that when they laid the foundation of the city, they found a <sup>a</sup> brazen figure of that bird. But a better reason may be inferred from the persons there worshipped: these were Bacchus, and Æsculapius, the supposed son of Coronis; and Artemis Diana, styled above *τρυγων παιδοτροφος*, *the nursing dove*. In the citadel was Minerva, or divine wisdom, holding in her hand a <sup>b</sup> raven, which shews it was a sacred emblem, and had a relation to the deities of the place.

<sup>a</sup> Pausan. l. iv. p. 365.

<sup>b</sup> Ibid.

Concerning a two-fold Reference in the  
Term CORONIS.

IT has been mentioned concerning Pro-  
togonus, and some other deities, that they  
were *ωογυεις*, or *sprung from an egg*. The  
same was said of Æsculapius, as we find  
it intimated in the *Pseudo-Mantis* of Lu-  
cian: where a serpent in an egg is intro-  
duced, as a true emblem of this deity.  
The object to which it alluded, has been  
already pointed out, and the emblem Co-  
ronis must sometimes have had a reference  
to the same. When it is said of Æscula-  
pius <sup>k</sup> *Δια Κορωνίς ἐτίκτε*, that *the heavenly  
Coronis produced him to the world*: this  
could not relate to the raven, which though  
connected with the history of the chief  
person, yet could have no concern with  
his second birth; or with his birth at all.  
Coronis was certainly a name given by the  
poets, and mythologists, to a particular  
machine: the same in which the gods are

<sup>i</sup> Lucian, *Pseudo-Mantis*. p. 870. Edit. Salmurii.

<sup>k</sup> Apollonius Rhod. l. iv. v. 616.

supposed to have been enclosed; and to have suffered a temporary death. Coronis is accordingly said to have been a vessel or float, whose extremities were equally raised and turned up like a crescent, and as those of an Indian canoe are in these days. It is so interpreted by the scholiast upon Homer, Κορωνις—<sup>1</sup> ναυς, επικαμπεις τας ακρας εχουσα. *By Coronis is signified a ship which has its two ends bent and turned up.* The same may be learnt from Hesychius, Κορωνιδες, καμπυλοπρυμνοι νηες. *Coronides (in the plural) are ships with their prows turned upwards.* The name was adapted to vessels of this form, from their representing the lunar emblem, the mystical machine Selene. This was the original Coronis: and the name was given from a bird of the sea. It is certain that the Larus, Aithyia, and all the species of gulls and sea mews, were made emblems of secure navigation, and of surviving in the waters: and all these birds were styled Κορωναι, *Coronæ*, of the same purport as

<sup>1</sup> Iliad. iv. v. 170.

Coronides. This we may learn from Hesychius. Κορωναι, άλιαι, Αιθυιαι, Κολυμβιδες, *Coronæ, are sea birds, such as Aithyia, by which are meant coots and divers.* The ox or steer had a name of the same purport, Coronius, Κορωνιος, μηνοειδη εχων κερατα βας. Hesych. *By Coronius is meant an ox which has its horns (that is its budding horns) like a crescent or new moon.*

From hence we may perceive that Coronis was a machine, the same as the *ναρθηξ* of Bacchus, the Cetus of Hercules, the Baris of Osiris, the *λαρναξ* of Deucalion: in which those persons were said to have been confined and exposed. And this confinement was represented as a state of death, and the place itself as a cavern: also as Hades and Tartarus. It is mentioned of Æsculapius, that like the Indian deity<sup>m</sup> Budda, he was taken out of the body of

<sup>m</sup> Expressed Βυττα, & Βυτα: an Indian philosopher and lawgiver: called also Budda. See Cœl. Rhodos. l. iv. c. i. and Clemens Alexand. Strom. l. i. p. 359.

his mother, and came indirectly into the world, through an opening in the side, made for that purpose. This circumstance seems to be tacitly alluded to by Apollonius Rhodius, in a passage where he is speaking of the supposed anger of Apollo upon the death of Æsculapius. He was said to have been slain by Jupiter, though he afterwards revived.

<sup>n</sup> Χωομενος περι παιδι, τον εν λιπαρη Λακερεια  
Δια Κορωνις ετικτεν επι προχοης αμυροιο.

Apollo, it seems, was displeas'd at the death of Æsculapius, whom the goddess Coronis brought forth at Lacerea. Now in this term Lacerea there is an apparent allusion to that *rent* or *opening*, through which this person is said to have come indirectly to light. Lacerea is probably an ancient Pelasgic term, of the same purport as λαχίς, a *rent*, *opening*, or *fissure*: λαχίς χθονος, χασμα χθονος. Hesych. When the word *lachis* is applied to the earth, it denotes a

<sup>n</sup> Apollon. Rhod. l. iv. v. 616.



*chasm or rupture.* Analogous to this, is the term *lacero*, among the Romans, which signifies *to tear*: and *lacer*, *any thing torn.*

Hic *lacer* admissos terruit Hector equos.

By *lacer* is meant *laceratus*, a person *wounded and torn.* I am sensible that the Greek words above, between which I have formed an analogy, are not expressed precisely in the same manner. But this amounts to little: for the same difference is to be found between other words, which have a like relation; particularly between two, which are much to the present purpose. These are *λαχαινω*, and *λακκος*. *Λαχαινω* signifies *to dig, or break up the ground,* and *λακκος*, a *trench, or ground so broken up.* These bear a close analogy with the term *Lacerea.* There were more places than one of this name, so called in memory of this exit of *Æsculapius*, or at least of the person figured under that character. For there were many cities and some regions in Greece, as well as in  
I other

other parts of the world, whose names were given in order to record the circumstances of this history. And there were rites instituted, by which it was still farther commemorated. Instances to this purpose may be found in the names of Larissa, Argos, Arene, Arcady, Bœotia, Corone, Coronea, Theba, Pyrrha, Iolchus.— Among these we may reckon ° Lacerea, which is said by Stephanus to have been in Magnesia, where the history, both of the Argo, and of Deucalion were particularly commemorated. He adds farther, that Hellanicus treated of it in his history of Deucalion, and that it was also called Hermion, and Ἑρμιονη—Herm-Ione. There is another circumstance remarkable in this second birth of Æsculapius, when he came out of Coronis; that he was not produced in a sheltered valley, nor amidst groves and fountains, as they fabled of other deities: but ἐπι προχῶνς ἀμυροῖο, upon a shore or beach: or rather upon a collection of ooze and mud. Ἀμυρος καθυγρος τοπος. Hesych.

• See Stephanus Λακέρεια.

By amyrum is signified a place of a damp and marshy nature: and by προχονη is intimated a collection of such moist and oozy matter, as places of this sort abound with, especially after a great inundation. I go no farther, than to mention historical facts: the sagacious reader will make proper inferences.

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*Of some particular Temples erected for his  
Worship: and of the Deity MILIDATH.*

AT Pergamus he had a <sup>p</sup> temple, which is represented as very splendid; and there was another at Lecte in Caria, where he was worshipped jointly with Venus <sup>q</sup> αναδυομενη, rising from the waves. He was held in particular honour by the people of Epidaurus; where stood a temple built <sup>r</sup> Ασκληπιω, και Απολλωνι Αιγυπτιοις—to the

<sup>p</sup> Lucian Icaro Menippus. vol. ii. p. 295.

<sup>q</sup> Strabo. l. xiv. p. 971.

<sup>r</sup> Pausan. l. ii. p. 174.

*Æsculapius and Apollo of Egypt.* At Cenchreæ near Corinth he was worshipped jointly with <sup>s</sup> Isis. From hence, I think, we may perceive, from what part of the world his rites and history were imported; and be assured that they came from Egypt. From his being twice born, and sustaining two characters, both as old and young, he was accordingly at times represented with a beard, *γενεῖα ἔχων*, as at <sup>t</sup> Delphi: at other times *ἀγαλμα ἄκ' ἔχον γενεῖον*, he had a statue without a beard; as at <sup>u</sup> Sicyon. At the former place he was worshipped under the significant title of *Ἀρχαγέτης*, <sup>w</sup> Archagetes. There is a temple not to be omitted, which the Cretans dedicated to him at a place called Lebena, <sup>x</sup> *Ἐν τῇ Λεβηνῇ τῶν Κρητῶν εἰσὶν Ἀσκληπείον*. Now by Lebena is signified ( לב ) *the moon*; not the planet in the heavens; but the mystick moon, whose

<sup>s</sup> Pauf. l. ii. p. 114.

<sup>t</sup> Ibid. l. x. p. 879.

<sup>u</sup> Ibid. l. ii. p. 141.

<sup>w</sup> Ibid. l. x. p. 879.

<sup>x</sup> Ibid. l. ii. p. 172.

history was here recorded. Mount Lebanon was denominated from the same object; as we may learn from the temple of Venus <sup>y</sup> Architis, which stood there, and from the rites observed. For here the death of Adonis, like that of Osiris, was commemorated with tears; and his return to life with joy and <sup>z</sup> exultation. Other rites of the same nature were observed in Crete; where this lunar deity, under a different, but more significant denomination, Minoüs, was described, as returning to life, and renewing his youth. Min and (Μην) Men, signified the moon: and the name given him of Minous, was a compound of Min and Noüs. The history is to be found in Claudian.

<sup>a</sup> Cretaque, si vere narratur fabula, vidit  
Minoum rupto puerum prodire sepulchro.

Minoüs, or Men—Noüs is the same person

<sup>y</sup> Macrob. l. i. c. xxi.

<sup>z</sup> Lucian de Syriâ Deâ. vol. ii. p. 878.

<sup>a</sup> Claudian de Bello Getico. v. 442.

as Æsculapius Archagetes, and Ασκληπιος παϊς: and his history is the same. The purport of the above description is, that Men-Noüs, after he had been in a state of death, and entombed, as we may infer, in Lebena; at last burst his cearments, and came out in a state of childhood. The poet adds,

Quem senior vates avium clangore re-  
pertum

Gramine restituit: miræ tam munere  
fortis

Dulcia mella necem, vitam dedit horridus  
anguis.

This was undoubtedly taken from an hieroglyphical representation of a very ancient tradition: in which were described birds and bees, together with the emblematical serpent. Providence also, under the figure of an aged person, was described as receiving Min-Noüs, restored to life, and childhood, and reclining him upon the ground. As to the serpent, we know it to have been the emblem of life renewed,  
and

and bees have a continual place in these allegorical descriptions. They nourished Jupiter in his childhood, they fed Daphnis. They also preserved Cometes, when he was in a state of confinement.

Ἡ ΚΑΙ ΤΥ ΚΑΤΕΚΛΑΣΘΗΣ ΕΣ ΛΑΡΝΑΚΑ, ΚΑΙ ΤΥ  
ΜΕΛΙΣΣΑΝ

Κηρια φερβομενος ἔτος ὠριον εξετελεσσας.

You was moreover shut up in an ark, and survived a ° long season upon the honey afforded by bees. It may be worth while to inquire into the origin of this notion. It is to be observed, that there was an oriental deity mentioned by <sup>d</sup> Herodotus and others, under the name of Mylitta, which Selden says, was the ° Moon, or Venus. Of the two it was more properly the Moon. According to Scaliger <sup>f</sup>, it was

<sup>b</sup> Theocritus. Idyl. vii. v. 84.

<sup>c</sup> Ετος ὠριον. Some make it two months, some three, some a year.

<sup>d</sup> Καλεσσι δε Ασσυριοι την Αφροδιτην Μυλιττα.

Herodot. l. i. c. cxxxi. p. 66. & c. cxcix. p. 95.

<sup>e</sup> De Diis Syris. p. 174.

<sup>f</sup> See Selden above.

taken from a Chaldaic term Mylidath, which signified γενετειρα, or parent. Both <sup>e</sup> Voffius and <sup>h</sup> Bochart take notice of it, and think it relates to *birth* and *delivery*: and that as a deity it is no more than Lucina, and Ilithyia. Selden also shews that it was the same as <sup>i</sup> Mithra of the Persians, which they esteemed the moon upon its increase; and, like Demeter, the mother of the world. It is very certain that Mylidath or Mylitta was supposed to be that being, by whom all things were nursed, and through whom the whole world was <sup>k</sup> restored. She was represented as the moon: but, as I have repeatedly said, not the luminary in the heavens; for what one of these attributes can be made to agree with her history or appearance?

<sup>e</sup> Voffius de Idololat. v. i. l. ii. p. 413. Melittam—puta Lunam.

<sup>h</sup> Bochart Hierozoic. Pars prior. l. ii. c. xxx. p. 292. Lucina et Ilithyia Pars poster. l. iii. c. xi. p. 408.

<sup>i</sup> Lunam nascentem. Selden de Diis Syris. p. 175. and p. 180.

<sup>k</sup> Μητερα την Σεληνην τα κοσμου καλεσι. *The Egyptians denominate the moon the mother of the world.* Plutarch. Isis et Osiris. p. 386.



No, it was the mystical hieroglyphical moon, <sup>1</sup> Μαια Θεων, τροφη παντων, χρονε μητηρ, κοσμος μητηρ, ταυροκερως, *the foster mother of the gods, the nurse of all things, the parent of time, the mother of the world,* who was represented as a crescent, and with *the budding horns of a steer.* She was the same as nocturnal Venus.

<sup>m</sup> Νυξ γενεσις παντων, ην και Κυπριον καλεσωμεν, so esteemed as having a relation to *that state of darkness, out of which all things proceeded.*

This Mylitta was worshipped in Crete, and her priestesses were reported to have nursed Jupiter in his state of childhood. But the Grecians expressed the original Milidath, not only Mylitta, but ΜΕΛΙΤΤΑ, and <sup>n</sup> Μελισσα, Melitta, or Melissa; and

<sup>1</sup> So denominated in the Orphic Hymns.

<sup>m</sup> Orphic Hymn. ii.

<sup>n</sup> Melissa, a Cretan princess, is said to have nursed Jupiter. Columella. l. ix. c. ii. p. 389.

Melissa and Amalthea, according to Didymus, fed him with goat's milk and honey.

the priestesses were stiled Melissæ, which unfortunately signified *bees*. Hence it came, that these insects were introduced into their hieroglyphicks: and those persons, to whom the Melissæ were by the mythologists assigned as attendants, were supposed to have been nursed by bees, and fed with honey. Upon this account, we find it said above of Cometas, that he was nourished in this manner.

In like manner they are mentioned as nourishing Jupiter.

Diætæo Cæli Regem pavere sub antro.

*They fed the great regent of heaven during his infancy in the Diætæan cave. His life by these means was preserved; but of Men-Noüs it is said—dulcia mella necem dederunt—the same diet proved fatal. This disagreement arose from the unavoidable ambiguity of all hieroglyphical representation: to which may be added the uncertainty of oral tradition. The natives, I imagine, had an ancient tablet before*

fore them, in which a person was restored to life, and from thence they conjectured that he must have been killed. He was restored by the serpent: they therefore concluded by way of contrast, that his death was owing to the bees, and that he died of a surfeit of honey. Such are the misconceptions, with which mythology has been obscured: and mistakes of this nature must necessarily have arisen in a long course of years, because all emblematical descriptions are liable to be interpreted, not only in a different, but in a contrary manner.

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### *HIPPOLYTUS.*

AS Æsculapius was the same as Protonus, and as those, who had been with him in his state of confinement, were restored to their former situation, which was looked upon as a renewal of their lives: he was accordingly supposed to have the power, not only of preserving life, but

even of restoring it. Hence they fabled of him, that he raised Hippolytus from the grave: who was on that account by the people of Latium worshipped under the name of Virbius, as having been *twice a man*. Some say that it was not Hippolytus, who was raised from the dead, but • Pæan: others again, that it was <sup>p</sup> Hymæus. But what does all this amount to, when the thin veil is withdrawn from the mystery? The purport is merely this, that the science of medicine revived in him: and that the rites of marriage were renewed. As to Hippolytus, he seems to have been the same as Æsculapius, if we consider his name and history. For by Hippolytus is signified the *loosener* and *opener* of the Hippos or Hippa. And we have seen that Bacchus for the same reason was styled Λυσιος, Lusius.—<sup>q</sup> Κλυθι Μακαρ,

o Damascius apud Photium. p. 1074.

p Apollodorus. l. iii. p. 172. the like history was given of Glaucus, the marine deity. It is said of him, that he was the person restored by Æsculapius.

q Orphic Hymn. xlix. v. 2.

Βακχε.—Πολυωνυμε, Λυσιε Δαιμον. *Hear me, O Bacchus, thou who art one of the Macares; who art represented under so many titles, and art the deity who setteth all things free.* Pan, αρχαιοτατος, *the most ancient of the gods,* was styled <sup>†</sup> Λυτηριος, *the great Liberator,* who loosened, and gave freedom to all. These epithets have all a reference to the same history, and person.

The Grecians supposed Hippolytus to have been a son of Theseus at Athens; who flying from his father, was torn to pieces by his own horses. Others say, that they were sea-horses, from which his death proceeded. He was worshipped in different places; but particularly at <sup>§</sup> Træzen: where the people maintained, that he never was torn to pieces by horses, and that the story was a fable. And if they said true, he could not have been an Athenian: for the Træzenians shewed the

<sup>†</sup> Pausan. l. ii. p. 187.

<sup>§</sup> Ibid. p. 186.

house where he <sup>t</sup> dwelt, but did not, like the Athenians, pretend to shew his <sup>u</sup> tomb. In truth, he was neither of the one place, nor of the other: but antecedent to both. There was a statue of Hippolytus near this temple at Træzen: but many affirmed, that it was designed for <sup>w</sup> Æsculapius. This shews that they did not perfectly know the true object of their worship: and that their traditions were very uncertain. Hard by, was the temple of Venus Speculatrix, and another of Pan, under the above-mentioned title, *Λυτῆριος*, *the setter free*. We may perceive here an assemblage of emblematical memorials, all pointing to the same history and person.

The accounts given of him by the Grecians are so contradictory, and incon-

<sup>t</sup> Pausan. l. ii. p. 187.

<sup>u</sup> The Athenians had a *ταφος*, which they gave out to have been his tomb. Paus. l. i. p. 51.

It was near the temple of Æsculapius and Themis. Others maintained, that he was buried in Arcadia. See Lactant. de Falsâ Relig. l. i. c. ix. p. 39. and Cicero de Nat. Deor. l. iii. §. 57. in Cynosuris sepultum.

<sup>w</sup> Ibid. p. 187.

sistent,

sistent, that it is manifest, they were ignorant of his true character, and that he could not have been of that country. There is nothing in his history, as an Athenian, which could have entitled him to divine honours. A young prince of Athens flies in his chariot from an incensed father, and is overturned and killed. What one article is here to induce people of other places to adopt him as a deity? I can perceive none. And as I have above said, there is no more reason to suppose him a native of Athens, than of Træzen. Indeed, the people of the latter place seem to have the advantage: for they pretended to shew his house, intimating that he was an inhabitant of their city.

The notion about his being torn to pieces by horses proceeded from the mistakes of the Athenians, who did not understand their emblematical histories; and from hence arose these fictions. The same may be observed in other parts of the world: and of this many instances may be afforded.

A crocodile was an emblem of preservation in floods and deluges: and, I imagine, that Achthoes, who is placed, as the first Heracleotick king, was represented with that animal. Hence it was given out, that he was killed by a <sup>x</sup> crocodile. In like manner Menes Lunaris, esteemed the first king of the country, was described with an Hippopotamus: and he was in consequence of it supposed to have been devoured by a <sup>y</sup> river-horse. Prometheus the wise, the guardian deity of Egypt, in the time of a fearful <sup>z</sup> deluge, was represented with an eagle, and sometimes a vulture: and with an emblematical heart. For Egypt was described hieroglyphically by an <sup>a</sup> heart: probably from the figure of the region Delta. And the river was called both the eagle, and the vulture: whence the country had the name of

<sup>x</sup> Ὑπο κροκοδείλου διεφθαρη. Syncellus. p. 59, 60. Euseb. Chron. p. 15.

<sup>y</sup> Ὑπο Ἴπποπόταμου διεφθαρη. Syncellus. p. 54.

Ὑπο Ἴπποπόταμου ἤρπαθε. Euseb. Chron. p. 14.

<sup>z</sup> Μαλιστα τετο το μέρος, ἃ Προμηθευς ειχε την επιμελειαν. Diodor. Sic. l. i. p. 16.

<sup>a</sup> Horapollo. l. i. c. 22.



<sup>b</sup> Aetia, and Ai-guptus, as well as Ποταμίης, all from the stream. These circumstances were misapplied by the <sup>c</sup> poets and mythologists, as Diodorus Siculus confesses. In consequence of this, Prometheus was described with an <sup>d</sup> eagle, or vulture, preying upon his vitals.

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### CONCLUSION.

FROM the premises above afforded we may perceive, what strange contradictions arise in the first histories of the world, if we suppose the same science to

<sup>b</sup> Εκληθη και Αἷτια, Stephanus.

Δια το γενομενον εκρηγμα φασι Αἷλον ονομασθηναι.  
Δια δε την οξυτήλα και την Ειαν.—Τον ποταμον Αἷλον ονομασθηναι. Diod. Sic. l. i. p. 16, 17.

Αι-γυπτ, signifies the land of the vulture.

<sup>c</sup> L. i. p. 17.

<sup>d</sup> Aquilam apposuit, quæ cor ejus exesset. Hyginus Fab. l. v. c. i. p. 252. ΑΙΕΤΟΝ φερβε. Apollon. Rhod. l. ii. v. 1254.

Some make the bird a vulture, preying upon his liver—rostroque immanis vultur adunco immortale jecur tundens, &c. Virgil. l. vi.

have originated in persons so various: and if a circumstance which is peculiar, and should be limited to one only, is attributed to many. The only and true way to remedy these anomalies, is to refer the whole to one general benefactor; call him either Sydyc, *the just*, or Protogonus, or Agathodæmon, or Osiris. The title is of little consequence. — Such an one did exist; to whom a too grateful posterity referred all science, and every beneficial art: as they were thought to commence from him. Among these was the science of physick, which was of the greatest repute in Egypt: there being scarcely a family of consequence which had not its physician. Πάντα δὲ ἰητρῶν ἐστὶ πλεονα. *All parts of Egypt, says* • Herodotus, *swarm with people of this profession.*

It is plain, I think, from what has preceded, that there had been of old, a person revered in Egypt for different attributes, and under a variety of deno-

• Herodotus. l. ii. c. lxxxiv. p. 141.

minations;

minations; and these were represented by as different hieroglyphicks. But these emblems and these titles produced at last as many distinct deities; and as such they were borrowed and adopted by the Grecians: but, I believe, whoever will examine deeply and impartially, will find, that most of the principal deities may be reduced to one. The Apis of Heliopolis, the Mnevis of Memphis, Pan of Mendes, Anubis of Cunopolis, Bacchus, who planted the vine, Osiris, who planted the same, Thoth, of whom it is said, that he first gathered the fruit of it; all these, and many more, will be found to be one and the same person.

## ARTICLE II.

*A Case of a Gangrene, after Castration, successfully treated, by giving Alkalis and Acids separately: by EDWARD LUTTRELL, Surgeon at Tunbridge; communicated by NATHANIEL HULME, M. D. F. M. S. Physician to the CHARTER-HOUSE; and Physician extraordinary to the GENERAL-DISPENSARY.*

Read at the SOCIETY, April 20, 1779.

**I**L. aged forty-three, laboured under an indurated and greatly diseased testicle, which was judged to proceed from a venereal cause, having frequently had the *Lues Venerca*.

The *testis* was considerably enlarged, but without any great pain, except from its weight. As castration was thought to be the only means of eradicating the disease completely,

completely, it was proposed to him, and he readily consented.

For about a fortnight after the operation, the wound went on pretty favourably; it was dressed with a digestive ointment, and at the same time he took mercurials, with a decoction of *sarsaparilla*, for the venereal affection, which was supposed still to exist in his habit. But between the second and third week, the wound began to have an unfavourable appearance; namely, to enlarge, and be accompanied with frequent hæmorrhages from every part of the sore, and the discharge instead of being laudable *pus*, was a thin and strongly fœtid matter, mixed with blood in a coagulated form, lying upon the surface of the wound; and although these clots of blood were removed twice a day, yet they again presented themselves at every dressing. The ill-formed discharge and bloody appearance increased daily, and the lips of the sore evidently put on a gangrenous appearance. At the commencement of these bad symptoms,

toms,

toms, the mercurials and decoction of *sarsaparilla* were laid aside, and in their stead he took peruvian bark with elixir of vitriol every three hours. His dressings were of the warm kind, with *spir. vin.* and *ol. terebinth.* varied as was found necessary; but neither these applications, nor the internal remedies, which were continued five or six days, had any effect in stopping the progress of the disease: for he now began to sink apace, the mortification gained ground, he was extremely weak and emaciated, had no appetite, his eyes were languid, and his pulse frequent and small. Under these discouraging circumstances, it was agreed upon to join with the bark an alkali and an acid, and to give them separately, soon after each other, so as to cause an extrication of the fixed air, while in the stomach, as recommended by Dr. Hulme, in a late treatise \*. With this view three large spoonfuls of the follow-

\* A safe and easy Remedy, proposed for the Relief of the Stone and Gravel, the Scurvy, Gout, &c. Lond. 1778.

ing mixture, were given immediately after each other, every three hours :

℞ *Decoct. cort. Peru.* ℥viii.

*Spir. sal. ammon.* ℥iss. *ut fiat Mistur.*

℞ *Decoct. cort. Peru.* ℥viss.

*Pulv. cort. Peru.* ℥ij.

*Acet. distillat.* ℥iss. *ut fiat Mistur.*

He began to take these medicines on Thursday the 11th of March, continuing them day and night. In twenty-four hours, the wound put on a better appearance, the *fætor* was abated, there was less discharge of blood, and he passed a tolerably good night; and by the 13th, the third day from this course, the sore had an exceeding favourable aspect, the slough threw off, florid granulations appeared, with well-digested *pus*, and little or no *fætor* remained, which before was almost intolerable; his pulse became stronger and less frequent, his skin moist, but he complained of a little heat. The former dressings were now laid aside, dry lint, and over that *cerat. epulot.* were made use of, and

and his medicines were ordered to be continued. On the 14th, both his health and the wound continued mending, his appetite returned, and he requested to have a greater allowance of food, which was granted him. After this time he continued to recover daily, and persevered in the use of the above medicines for about three weeks, until the wound was entirely filled up with granulations, and in a great part cicatrized, when they were omitted, as it was thought no longer necessary to continue the use of them. Upon leaving them off, a slight *diarrhœa* came on, which was removed by a little rhubarb and *confect. Damocrat.* The wound at present wants a little of being perfectly cicatrized, but otherwise the patient is in a good state of health.



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A R T I C L E III.

*Observations upon the Cause and Cure of the Tetanus: In a Letter from BENJAMIN RUSH, M.D. Professor of Chemistry in the University of PHILADELPHIA, and Corresponding Member of the MEDICAL SOCIETY of LONDON, to J. C. LETTSOM, M.D. Fellow of the ROYAL, ANTIQUARY, and MEDICAL SOCIETIES of LONDON, and Physician extraordinary to the CITY of LONDON LYING-IN-HOSPITAL; GENERAL, and FINSBURY DISPENSARIES.*

Read February 10, 1786.

S I R,

**D**URING my attendance upon the military hospitals in the course of the late war, I met with several cases of the *Tetanus*. I had frequently met with this disorder in private practice, and am sorry to say, that I never succeeded with

the ordinary remedy of *opium* in any one case that came under my care: I found it equally ineffectual in the army. Baffled in my expectations from a remedy that had been so much celebrated, I began to investigate more particularly the nature of the disorder: I found it to be a disease of warm climates, and warm seasons. This led me to ascribe it to relaxation: I resolved to attempt the cure of it by a set of medicines, in some measure the opposites of most of the medicines that had been employed in that disorder. Soon after I adopted this resolution, I was called to visit colonel John Stone, who was wounded through the foot at the battle of German-Town, on the 4th of October 1777. He was in the third day of a *Tetanus*: his spasms were violent, and his pains so exquisite that his cries were heard near a hundred yards from his quarters; his head was thrown a little backwards, and his jaw began to be stiff and contracted. He was under the care of a skilful regimental surgeon, who was pouring down *opium* in large quantities without effect. Duty and  
friendship

friendship both led me to do my utmost to save the life of this valuable officer. I immediately dismissed the *opium*, and gave him large quantities of bark and wine, to the amount of two or three ounces of the former, and from a bottle to three pints of the latter in a day; in a few hours I was delighted with their effects: his spasms and pains were less frequent and violent, and he slept for several hours, which he had not done for several days and nights before. With the same indication in view, I applied a blister between his shoulders, and rubbed in two or three ounces of *mercurial ointment* upon the outside of his throat. He continued to mend gradually under the operation of these medicines, so that in ten days he was out of danger; although the spasm continued in his wounded foot for several weeks afterwards.

In the summer of the year 1782, I was called to visit a servant girl of Mr. Alexander Todd, merchant of this city, who had brought on a *Tetanus* by sleeping in

the evening on a damp brick pavement, after a day in which the Mercury in Fahrenheit's thermometer had stood at near 90 deg. Her case was nearly as violent and alarming as the one I have described. I treated her in the same manner, and with the same success. To the above-named medicines, I added only the oil of amber, which she took in large doses, after I suspected the tonic powers of the bark and wine began to lose their effects. The good effects of the oil were very obvious. She recovered gradually, and has continued ever since in good health.

In the summer of the same year, I was called to Peter Leslie, a Joiner, who had run a nail into his foot. I found him the day afterwards in extreme pain, with small convulsions, and now and then a twinge in his jaw: the wound in his foot was without swelling or inflammation. I dilated the wound, and filled it with lint moistened with spirit of turpentine; this in a little while produced a good deal of pain, and a great inflammation in his foot. While I  
was

was preparing to treat him in the manner I had treated the two former cases, his pains and spasms in his body suddenly left him, and in four and twenty hours after I saw him, he complained of nothing but of the pain and swelling in his foot, which continued for several weeks, and did not leave him till it ended in a suppuration.

From the history of these three cases, I beg leave to make the following remarks :

I. That the predisposition to the *Tetanus* depends upon relaxation ; this relaxation is generally produced by heat ; but excessive labour, watchings, marches, or fatigue from any cause, all produce it likewise ; and hence we find it more frequent from wounds received in battles, than from similar wounds received in any other way. These wounds more certainly produce the *Tetanus*, if they have been preceded for some time with warm weather. Dr. Schoepft, the physician general of the Anspach troops, that served at the siege of New-York, in the year 1781, informed me of

a singular fact upon this subject: upon conversing with the French surgeons after the capitulation, he was informed by them, that the troops who arrived just before the siege from the West-Indies with the Count de Grasse, were the only troops belonging to their nation that suffered from the *Tetanus*. There was not a single instance of that disorder among the troops who had spent a winter in Rhode-Island.

II. As the *Tetanus* seems to be occasioned by relaxation, the medicines indicated to cure it are such only as are calculated to remove this relaxation, and restore a tone to the system; the bark and wine appear to act in this way. The operation of the blisters is of a more complicated nature; that they are sedative and antispasmodic in fevers, is universally acknowledged; but in the peculiar state of irritability which occurs in the *Tetanus*, perhaps their effects are more simply *stimulating*. But I will go one step further. In order to cure this disorder, it is necessary not only to produce an ordinary tone

in the system, but something like the inflammatory *diathesis*; the absence of this *diathesis* is taken notice of by all authors, particularly by Dr. Cullen<sup>f</sup>. Mercury appears to act only by promoting this *diathesis*; hence it never does any service, unless it be given time enough to produce a salivation. The irritation and inflammation produced in the mouth and throat, seldom fail to produce the inflammatory *diathesis*; as blood drawn in a salivation has repeatedly shewn. I apprehend that the oil of amber acts as a stimulant chiefly in this disorder. I have heard of a *Tetanus* being cured in the island of Granada by large doses of mustard. Dr. Wright, lately of the island of Jamaica, relates, in the sixth volume of the London Medical Essays, several remarkable cases of the *Tetanus* being cured by the cold bath. Both these remedies certainly act as stimulants and tonics. By reasoning *a priori*, I conceive that electricity would be found to be an equally powerful remedy in this disorder.

<sup>f</sup> First Lines, vol. iii.

III. As general inflammatory *diathesis* disposes to topical inflammation, so topical inflammation disposes to general inflammatory *diathesis*. Wounds upon this account are less apt to inflame in summer than in winter. In the *Tetanus*, I have uniformly observed an absence of all inflammation in the wound or injuries that produce it. A splinter under the nail produces no convulsions, if pain, inflammation, and suppuration follow the accident: it is by exciting pain and inflammation, I apprehend, that the spirit of turpentine acts in all wounds and punctures of nervous and tendinous parts. I have never known a single instance of *Tetanus* where this remedy has been applied in time. It was to excite an inflammation in the foot of Mr. Leslie that I dilated the wound, and filled it with the spirit of turpentine; I was not surpris'd at its good effects in his case, for I was prepared to expect them.

I find a remarkable case related in Dr. William Monro's *Thesis*, published in  
Edinburgh



Edinburgh in the year 1783, of a black girl, who had a *Tetanus* from running a nail in her foot, being perfectly cured by deep and extensive incisions made in the wounded part by Dr. John Bell, of the Island of Granada. It is by producing inflammation in a particular part and tone in the whole system. I apprehend that the amputation of a wounded limb sometimes cures a *Tetanus*. And it is because the degrees of both are too inconsiderable to oppose the violence of the spasms in the advanced stages of the *Tetanus*, that amputation often fails of success.

I have been informed by a Physician who resided some time at St. Croix, that the Negroes on that island always apply a plaster made of equal parts of salt and tallow, to their fresh wounds, in order to prevent a locked jaw. The salt always produces some degree of inflammation.

If the facts that have been stated are true, and the inferences that have been drawn from them are just, how shall we  
account

account for the action of *opium* in curing this disorder? I do not deny its good effects in many cases, but I believe it has failed in four cases out of five, in the hands of most practitioners. It is remarkable that it succeeds only where it is given in large doses. In these cases I would suppose that its sedative powers are lost in its stimulating. It is upon a footing therefore, in one respect, with the stimulating medicines that have been mentioned; but from its being combined with a sedative quality, it is probably inferior to most of them. I am the more inclined to adopt this opinion from an account I once received from Dr. Robert, of the island of Dominique, who informed me that after having cured a Negro man of a *Tetanus*, he was afterwards seized with a disorder in his stomach, of which he died in a few days. Upon opening him he found his stomach inflamed and mortified. I do not forbid the use of *opium* altogether in this disorder. I think *small* doses of it may be given to ease pain, as in other *spasmodic* disorders, but as its qualities are complicated,

plicated, and its efficacy doubtful, I think it ought to yield to more simple and more powerful remedies.

To this account of the *Tetanus*, I beg leave to subjoin a few words upon a disorder commonly called the *Jaw-fall* in infants, which is nothing but a *Tetanus*. I have met with three cases of it in this city, all of which proved fatal. The stage of the disorder in which I was called, and the age and weakness of the infants, all forbade me to attempt any thing for their relief. I have introduced the subject of this disorder in children only for the sake of mentioning a fact communicated to me by the late Dr. Cadwallader Evans, of this city. This gentleman practised physic for several years in Jamaica, where he had frequent opportunities of seeing the *Tetanus* in the black children. He found it in every case to be incurable. He supposed it to be occasioned by the retention of the *meconium* in the bowels. This led him invariably to purge every child that was born upon the estates committed to his care.

care. After he adopted this practice, he never met with a single instance of the *Tetanus* among children.

Perhaps it may tend to enlarge our ideas of the *Tetanus*, and to promote a spirit of inquiry and experiment, to add that this disorder is not confined to the human species. I have known several instances of it in horses, from nails running in their feet, and from other accidents. It is attended with a rigidity in the muscles of the neck, a stiffness of the limbs, and such a contraction in the jaw as to prevent their eating. It is generally fatal. In two cases (the one in my own horse) I had the pleasure of seeing the disease perfectly cured by applying a potential caustic to the neck under the mane, by large doses of the oil of amber, and by plunging one of them into the river, and throwing buckets of cold water upon the other.

With great respect I am, sir, your much obliged friend, and humble servant,

Philadelphia,  
July 16, 1785.

BENJ. RUSH.

ARTICLE

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A R T I C L E IV.

*Cases of Palpitation of the Heart, attended with peculiar Symptoms: By J. C. LETTSOM, M. D. &c.*

Read March 20, 1786.

C A S E I.

**T** S. a delicate lively boy six years old, first had my assistance on the 3d of January 1786. I was informed that he had laboured under a rheumatism with fever for about five weeks past; but that, although his pains, which had affected his body, as well as the limbs, had subsided, a cough had come on and increased, with some degree of difficulty of breathing.

When I saw him, the pulse was not strong, but thready and small, beating 126 strokes in a minute, with occasional intermissions; a *Palpitation of the Heart* was  
so

so conspicuous, as to be immediately discernible across a large room; and upon laying one hand on the thorax, and the other on the back, the vibrations of the strokes were so violent, as to shake the whole body, and to give an impression on the hands as if the partition between them and the pulsation was very thin. The breathing was short and sometimes laborious; and particularly about every four or five minutes, when a more deep and full inspiration was taken, assisted with a writhing or serpentine direction of the body, as if designed to admit a more copious inspiration. He was able to lie in any position of the body, without increased *dyspnœa*; the cough was short and quick, but not very violent; the countenance delicate and pale, and the body emaciated, excepting the ancles, which acquired a little tumescence towards evening: he had intervals, and sometimes days, that he was so well as to enjoy his books and play-things with cheerfulness. His appetite was good; but as he was a tractable child, and his parents extremely prudent, the vegetable  
nutriment

nutriment which was enjoined, was strictly pursued for several weeks.

I ordered him as a medicine, the emulsion of almonds with nitre, and Hoffmann's anodyne liquor; and to have five ounces of blood taken from the arm.—This was on the 4th of January, and the medicine was continued till the 9th, when the bleeding was again repeated. As an addition to the emulsion, I ordered a grain of extract of hemlock, and half a drachm of *syrupus e meconio*, to be taken three times a day.

After each bleeding the symptoms were much milder, but they continued in degree; the pulse was never slower than 110, rarely indeed under 120. With this little respite, he gradually became so weak, that I was deterred from the repetition of *venæ-section*.

Towards the end of January, the legs became more *anasarcous*, and debility gradually undermined the frame. To re-  
peat

peat every prescription, wherein so little was done by medicine, would be useless. A purgative of *calomel* was occasionally given, which always afforded some relief for a day or two afterwards. The nights were rendered easy by such a quantity of *syrupus e meconio* as procured rest.—When the weather admitted, as some days in January and February were unusually warm, he was taken into the air, and slept in the country-house of the family; he had asses milk every morning, and was guarded with every attention, as to the weather, as well as diet, that affection could dictate towards a promising son.

In the beginning of March a more general *anasarca* ensued, with a slight fluctuation of water in the *abdomen*, though he still kept up some part of the day with the family; but from this period weakness more rapidly ensued, and he was obliged to keep his bed some days before he died, which happened on the 10th of March. Two days preceding this event, a quantity of water passed off by the urinary passages,



and the tension of the abdomen abated; but in less than twelve hours, a similar fulness took place.

On the 12th of March the body was opened by the Surgeons Field and Sherlock, when I also attended. On removing the integuments, the whole site of the *abdominal viscera* was natural, as in a sound healthy state, excepting in the appearance of the *omentum*, which was almost without fat; the liver, gall bladder, spleen, and other *viscera*, free from any apparent disease: about a pint of water was effused into the *abdomen*.

On opening the *thorax*, which was more elevated and enlarged on the left side, a similar effusion of water, of nearly half the quantity, was discovered; the *pericardium*, at its first exposure to the eye, appeared considerably enlarged, and afforded a suspicion of water likewise within its cavity; and upon dividing it, there appeared to be about an ounce of fluid contained in it.

It was the heart itself that was so much enlarged, appearing of twice the natural magnitude; for in cutting open the right ventricle, at least five ounces of blood were discharged from it: and on a similar division of the left ventricle, about two ounces more; but the right ventricle, although so considerably enlarged, appeared to possess its natural consistence.

The left *lobe* of the lungs adhered strongly to the parts in vicinity; laterally to the ribs; inferiorly to the *diaphragm*; posteriorly to the *pleura*; as well as to the *pericardium* by the *mediastinum*; and on the surface under the *sternum* there appeared a slight *extravasation* of blood: in cutting into the substance of the left lung there was no sign of disease, except here and there a small spot of *extravasated* blood, but nothing that in the least could interfere with respiration.

The external surface of the right *lobe* afforded very extensive appearances of *extravasation*, but without any adhesion to

the neighbouring parts, and in cutting into its substance, it was found generally diseased from inflammation; it cut like a firm solid substance, but it was not in a *scirrhus* state in the least; nor were there *tubercles* in any part of its substance or coat: the colour was nearly black, the air and blood vessels almost obliterated; and portions of it cut out and thrown into water, suddenly sunk. In no part of these *viscera* was any suppuration or *pus* observable; and for the most part appeared just as solid as liver, and of the same aspect.

It has been observed, that exclusive of the enlargement of the *ventricles*, no morbid affection appeared in their coats; and the *arteria pulmonalis*, though enlarged at its trunk, had no disease; but the ramifications branching from it, were soon obliterated in the dark-coloured, heavy portions of the right *pulmonary lobe*.

The immediate cause of death must appear obvious from this sketch of the

diseased parts ; the blood thrown from the right ventricle into the *arteria pulmonalis*, being greatly obstructed by the diseased state of the right *lobe*, a regurgitation of the blood into the ventricle must ensue ; and under such an immediate contingency the patient probably expired, as the ventricle and *arteria pulmonalis* were found loaded with about five ounces of blood, part coagulated, and nearly as much fluid.

This obstructed exit of blood, and regurgitation, might occasion the enlargement of the right ventricle, and likewise that palpitation and laborious breathing which he endured for many weeks, and which gave some suspicion of an *aneurism* near the heart.

Oppressed in breathing as he was, and with a sense of load about the chest, he frequently gave writhing serpentine positions to his body, as has been remarked, which seemed at length involuntary, in order probably to overcome the impeded  
circulation

circulation of blood through the heart and large vessels.

From all the different remedies employed during his illness, three only afforded some relief—occasional bleedings, the anodyne of *syrupus e meconio*, and a purgative of *calomel*.

From the state of the lungs, there is sufficient reason to conclude that inflammation, first in the left *lobe* and *pleura*, and afterwards communicated to the right *lobe*, was the original disease; and how far bleeding, and the plan of treatment usual under such a state, could it have been discovered, might have obviated the fatal termination, is not ascertainable.

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C A S E II.

S R— a young lady, about eleven years of age, was, during the year 1776, much afflicted with darting pains

about the region of the stomach. In the spring of 1777, she had a slight cough, and felt a considerable difficulty of breathing, accompanied with such a *Palpitation of the Heart* as was discernible at a considerable distance; and upon laying the hand on the *sternum*, it gave a sensation to the touch not easily described; somewhat like a fluid passing through a cylinder, in the central substance of which a ball had been infixed, against which the impulse of the circulating fluid had been directed, and by it repelled with a vibratory motion along the cylinder: this vibration, as well as the *Palpitation of the Heart*, were diminished upon holding the breath, but this undulating motion was more regular when the breathing was equally maintained, which was usual when asleep, and sometimes so when awake in a reclined position: when this equal balance was once overcome, which was several times in an hour when out of bed, the patient would attempt a full and laborious inspiration with a writhing serpentine flexure of the body, which again restored the  
lost

lost balance ; but in this effort the vibration was attended with a kind of double undulation, as if a convulsive, had immediately followed the natural action, of the cylinder. Upon motion, respiration became more difficult, and a sense of suffocation sometimes ensued ; but throughout the whole disease there was no acute pain in the *thorax*, though sometimes slight shooting pains in the pectoral muscles were noticed ; the principal pain complained of, was about the upper part of the *larynx*, and this continued throughout the disease almost invariably.

The pulse was generally quick, sometimes hard and thready, seldom beating under 130 strokes in a minute ; it often intermitted, especially upon motion, when it also was attended with a fluttering irregularity : there was rarely any fever, at least for days successively she was free from any ; sometimes an increased heat came on, with a flushed hectic appearance of the cheeks, but this was more apparent near the end, than in the recent state of

the disease. The voice was shrill, hasty, and impetuous, as if from impatience in suffering, though she applied it to no particular cause, but an inability to do otherwise.

The patient took *cicuta*, Hoffmann's anodyne, the Peruvian bark, and many other medicines, without any obvious benefit; a blister was applied to the breast, and long kept open; bleeding was tried, and as the blood was very fizy, it was repeated; but temporary mitigation only resulted.

In September the cough became more troublesome, with a frothy expectoration, which she described as arising from the *larynx* or superior part of the *trachea*; where her pain was most perceptible, and now extended over the whole chest: she grew daily and rapidly more and more emaciated, and she expired on the 2d of October, 1777.

On the 4th of the same month the body  
was



was opened by Mr. Headington, Surgeon, in Spitalfields, when I was likewise present.

The *pericardium* contained a considerable quantity of fluid, amounting to three ounces and a half; about the same quantity floated in the cavity of the *thorax*: both *lobes* of the lungs were set with several small glandular *tubercles*, some of which were in a state of suppuration; and on the right there was a slight adhesion to the *pleura*.

The *ventricles* of the heart were loaded with coagulated blood, as well as the ascending *aorta*; and in tracing the course of this artery, which passes over the *trachea*, a tumor was discovered near the origin of the *aorta*, and situated immediately between it, and the *trachea*, in such a manner as equally to press upon them.

This *tumor*, of the magnitude of a large walnut, supposed to be an enlarged *lymphatic gland*, was *steatomatous*, with a slight  
suppuration

suppuration on the surface in vicinity to the *trachea*, and the coats of the latter were become thinner on that side: the *artery* itself, though compressed on the side touching the *tumor*, was of a healthy texture. The *abdominal viscera* were in general in a natural state; even the *mesenteric* glands, were free from disease, as well as the liver and its appendages.

In exhibiting this view of the *thoracic viscera*, the *hydrops pericardii*, the *pulmonary* suppurations, and the glandular *tumor*, might singly be considered as a sufficient source of fatality. As the cough was very trivial till near the approach of death; it might be suggested, that the *pulmonary* affection was subsequent to the *tumor*; which was so situated as to obstruct the free transit of blood through the *aorta*, and thus impeding the functions of the heart, first laid the foundation of the *hydrops pectoris*. The patient was upwards of twelve months indisposed, a period of time she could not have subsisted under such a degree of *hydrops pectoris*:

*pectoris*: hence it might be inferred, that the *tumor* gave rise to the other diseases, and was the source of the fatal termination. Added to these considerations, the writhing serpentine flexure of the body, adopted by the patient, determine me to this opinion, as well as the large quantity of blood, found in the *ventricles*, which alone appeared to result from the mechanical pressure of this hard body upon the *aorta*, producing congestion of blood in the heart, whilst the descending *aorta* was found unusually empty of this fluid.

Though the *larynx* and whole course of the *trachea* were not diseased, yet the pain was generally referred to the superior part of this tube; the cough might occasion some irritation, but by no means equivalent to the sufferings of the patient. If we reflect upon the condition of other parts of the body, wherein pains are perceptible at a distance from the exciting cause, we may risk a conjecture in the present instance; thus a *calculus* in the *vesica urinaria*, gives a painful sensation  
at

at the *glans penis*; and obstructed *fæces* in the intestines occasion pain at the *sphincter ani*; in like manner a tumor pressing on the *trachea*, may convey a sense of pain at its termination in the *larynx*: if muscular fibres resemble other elastic bodies this conjecture is further established; thus, in vibrating cords the force of impulse will be strongest at their fixed extremities.

In both the preceding cases, I have particularly mentioned, the writhing serpentine directions of the body, which accompanied the *dyspnœa*, and general symptoms of oppressed circulation; and from further inquiries, among medical gentlemen, who have been attentive to dissections of uncommon diseases, I am induced to think that these particular attitudes of the body, are the usual concomitants of obstruction in the blood vessels of the heart, and of the larger vessels immediately communicating with it.

This symptom has not hitherto been noticed as an attendant on the *angina pectoris*.

*pectoris*. The difficulty of breathing upon motion; the lancinating pains about the *pectoral* muscles and arms, and the intermitting pulse, are the most *pathognomonic* symptoms of a disease scarcely yet established, although the most accurate dissections have been made; but in all the cases of obstructed blood near the heart, the periodical voluntary or involuntary attitudes of the body already described, have been prominent features. I do not recollect to have seen that sense of sudden suffocation usual in the *angina pectoris*, and probably the very symptom above mentioned tends to obviate it, by giving an impulse to the action of the heart that overcomes the resistance in the large vessels.

Fatal as these diseases have hitherto been, I thought it would afford some useful addition to our scanty stock of medical knowledge respecting them, thus to make some discrimination in their leading symptoms, which future experience may probably apply to elucidate facts beyond the reach of present investigation.

## ARTICLE V.

*Observations on Deafness, from Affections of the Eustachian Tube : By JAMES SIMS, M. D. President of the MEDICAL SOCIETY of LONDON, &c.*

Read May 20, 1786.

THE tube which passes from the internal cavity of the ear beyond the *membrana tympani*, to the back part of the *fauces*, is called the *aqueduct* by some, but is more commonly known by the name of the *Eustachian tube*, from its having been first accurately described by that excellent anatomist. Some writers, as Le Clerc and Haller, have supposed Alcmaeon and Aristotle, acquainted with this tube, from their asserting that goats breathe through the ear. This assertion, however,

however, is given both by Pliny and Varro to Archelaus. But it appears to me that a knowledge of this *tube*, and even its uses, may with much more reason be attributed to Hippocrates, what they have averred concerning goats being false; whereas, in his book *de locis in homine*, he says, that in suppurations of the ear, a sponge dipped in a drying medicine is to be put into the external ear, and at the same time a purgative, by which he means stimulating, medicine is to be put into the nose, so that the matter which before flowed into the ear may be carried into the nose.

Many uses have been ascribed to this *tube*, yet I am apprehensive one of the principal ones has not as yet been pointed out. From several circumstances I am of opinion, that it conveys the sound of our own voice to the organ of hearing, in the same manner as the *meatus auditorius externus* conveys to it all other sounds whatever; on which account it is the principal regulator of our own voice. Had I not formed this opinion from a variety of facts,

facts, I should have been led to give it up on the authority of the celebrated Dr. Monro, of Edinburgh, who in his tenth chapter of the *Physiology of Fishes*, asserts, from what he thinks a conclusive experiment, that no distinct impression is transmitted through the *Eustachian tube*. As this is intended merely as a practical paper, I would not have mentioned my opinion here, if it had not served to illustrate some of the remarks which follow; and as I am venturing to dissent from one great physiologist, I hope I may be allowed to point out what I think an error in another, no less celebrated one, I mean Haller, who, § 5. c. iii. l. xv. of his *Elementa Physiologiae*, says, that in inspiration a torrent of air enters the *Eustachian tube*, and presses the membrane of the *tympanum* strongly outward: that this happens in expiration, especially if the mouth or nose be closed, or the expiration be sudden and violent, as in sneezing, may be easily demonstrated; but that it should happen in inspiration, is contrary to the laws of mechanics.



Be these matters, however, as they may, no one I believe at this time doubts that Deafness ensues when the *Eustachian tube* is obstructed, as well as when the *meatus auditorius externus* is stopped up. These two species of Deafness being, perhaps, almost the only curable ones, are therefore most worthy of our attention. The manner of treating each, being entirely different from the other, it becomes also of great importance to find out marks by which we may distinguish them. To point out the symptoms by which we may know the *Eustachian tube* to be the seat of the disease, and how to remedy it when seated there, shall be the subject of this paper.

Previous to any general deductions, I think it best to give a historical account of what I have observed from my first paying particular attention to this subject until the present time. In the summer of 1773, I was desired to visit a young gentleman in Fenchurch-Street, who from having taken cold, had been seized with Deafness about three weeks before. The disorder was at

first attended with feverishness, and some degree of inflammation about the *tonsils*, for which he had been bled. The other symptoms of the case, such as an eruption upon his face of a leprous appearance, which afterwards yielded to the æthiopic pill, are not necessary to be related here; let it suffice to say, that on the morning before my first visit he had been perfectly restored to hearing, by a violent fit of sneezing, his ears giving a loud crack at the same time. That a stoppage of the *Eustachian tube* might occasion a Deafness, I did not doubt, from having frequently observed, both in myself and others, the hearing injured for a short time during colds, together with a noise in the ears, which usually went off on their giving a smart crack. But that this might be so permanent, as in the following case, and yet still be remediable, I must own did not fall within my conception; I shall therefore relate it circumstantially as given to me by the gentleman himself, the application of it seeming very important in medicine:

Mf.

Mr. Robert Stephens, a student of medicine, of a strong make and about twenty-one years of age, on his return in the month of April, 1770, from Edinburgh to Ireland, embarked at Greenock in a small vessel, and as there were a great number of passengers, he suffered many inconveniences during the voyage, which proved very tedious. When at sea, they were becalmed in such a situation as rendered it equally inconvenient to turn back or proceed; making choice however of the latter, they endeavoured to hasten their arrival at Belfast, by towing the vessel with the long boat. This employed them by turns for three days, and as many nights; during which time, Mr. Stephens was often violently heated and afterwards much exposed to cold. Being an unexperienced sailor, he neglected applying to spirits, their nostrum in such circumstances, of which imprudence he began to find the effects before his departure from the vessel, being seized with a very severe fit of the Rheumatism, which lasted many months. Eight or ten days after his arrival in Ire-

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land, he was seized with an inflammation in the *tonsils* that almost threatened strangulation; nothing could be swallowed but thin diluting liquors, even thick water-gruel not finding a passage downwards, without the most exquisite pain, and the least motion of the *glottis* in swallowing the *saliva* being attended with such torture, that the remotest member of the body felt its effect. For three days it had the appearance of suppurating, but on the fourth it subsided so much, that he had recourse to his usual manner of life. Immediately after its abating, he perceived his hearing begin to decrease, with a prodigious noise in his ears, which continued for three weeks, until it brought him to such a situation that he could not hear common conversation, or even when spoken to in a louder voice, he lost the half of what was said, from the impression of the first sound remaining so long upon his ear, as to render the following ones indistinct. Under these disagreeable circumstances he continued a whole year, during which he tried blisters, syringing, and every

every thing that could be thought of, both by himself and some very eminent physicians whom he consulted, without receiving the least advantage. His patience was at length quite exhausted, and he resolved to resign himself to his fate, and lay aside the use of all applications, thinking that they clogged his ears, and rendered sounds more confused. In this state of inactivity and despondence he continued two months, without perceiving the least alteration, until at last fortune, who often bestows upon us those good gifts that reason and forecast have in vain sought for, cast a person in his way, whose daughter had suffered under the like calamity, for a space of time he does not at present recollect, and whose hearing had been luckily restored in a very simple and unexpected manner. Her nose happening to be stopt by a cold, that hindered the intercourse of air through that organ; to rid herself of this inconvenience and make a passage for it by that way, she closed her mouth, and applying her fingers to her nose, made a violent effort to emit her breath, when instead of pro-

curing a passage through her nose, she found one into her ears, which occasioned each to crack like a pistol. The experiment was attended with so little trouble, that he made the trial in the same manner; but after many attempts it proved unsuccessful. Loth, however, to remain in that melancholy state, which is so remarkably the lot of Deafness, he at last made some little alteration in his method, and to his inexpressible joy it had the desired effect. Instead of filling his mouth with air, he kept his lips closely pressed to his gums and teeth; this made the air exert its full force about the entrance into the *larynx*, and the first trial with these alterations succeeded with one ear. In twenty-four hours, during which time his many anxious efforts to recover so valuable a blessing, may be more easily conceived than expressed, the like success attended him with the other ear. For the space of three days afterwards, he was obliged to avoid all company on account of the disagreeable impression each sound made upon his ears; he could hear distinctly a whisper from  
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from a distant part of a room, frequent trials of that kind having been made, to prove the reality of the cure: he has ever since enjoyed as usual that inestimable faculty. From the circumstances of this case, the situation of the disorder in the *Eustachian tube*, was evident; and the extraordinary and unexpected cure roused my attention in the highest degree. I must own, that the almost magical manner in which it was performed, caught my fancy so much, that I obliged all my deaf patients to make efforts similar to those described in this case. The natural consequence of which was, that I failed in vast numbers of instances where the disease was not situated in the *Eustachian tube*. One good, however, resulted from these indiscriminate trials, which was, that I became able in a considerable degree to point out the characteristic differences between it and other kinds of Deafness. Among the instances wherein I failed, or was only partially successful, two being attended with remarkable occurrences shall be mentioned here.

A single lady who had been formerly deaf for some weeks and been suddenly relieved from it, was after a cold, seized a second time with Deafness, which continued increasing upon her for some months. I saw her after the malady had continued three months, when I recommended to her the method already described, without effect. She afterwards applied to an aurist in this town, who pronounced the case to be nervous, and applied a perpetual blister behind the ear; after this had been kept on for some weeks, she was as before instantaneously relieved by a sudden noise in her ears. Both from the suddenness of the relief and other symptoms, I am led to believe that the seat of complaint was in the *Eustachian tube*: I am likewise convinced that she never used the method prescribed with sufficient force, as I could not persuade her to try it before my face, she seeming displeas'd with its simplicity, and immediately applying to an aurist, who treated it with becoming importance.

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The second case was of a beautiful young lady, sister to an ingenious Surgeon of this town, who had been deaf to a considerable degree for above two years. From a thorough conviction of the seat of the disorder, I strongly recommended the foregoing method, and got her brother to second my persuasions. The consequence was, that she appeared at first perfectly cured; but I find that the complaint has since repeatedly returned: she is, however, always considerably relieved by the same method as at first.

I shall come now to some more general remarks upon the disease, drawn from all the cases I have seen of it. The most frequent cause I have found to be the catching of cold, as it is called in this country, which answers to the *Coryza* of Hippocrates, and *destillatio* or *gravedo* of Celsus. This probably acts by inflaming and swelling the soft mucous glandular membrane that lines the part of the tube next the *fauces*. The secretion of these glands becoming viscid, may likewise block up the tube, and so  
occasion

occasion Deafness, as we see in and after many fevers. It is likewise known that a *polypus*, a swelling of the palate, or repeated inflammations of the *tonsils*, produce the same consequence. *Apthæ*, or an erosion of the muscles of the tube likewise produce it; any inflammation that produces cohesion between its sides will likewise have a similar effect.

From what I have seen, women appear more liable to Deafness than men, and also I believe to this particular species; but upon this I am not able to determine at present.

There seems to be a considerable consent between the two ears, perhaps as great as between the eyes. Thus, upon one ear being stopt with the finger, the hearing of the other is rendered very dull and confused. *Sanious* or *purulent* discharges frequently appear from both; and one ear is seldom long affected without the other suffering in the end. These facts are obvious in the external ears, and are, I believe,

believe, equally true, as to the *Eustachian tubes*.

The marks by which Deafness is known to proceed from an obstruction of the *Eustachian tube*, are, 1st, Its being preceded by some of the causes already mentioned. 2dly, On making an effort to expire, and at the same time retaining the breath by stopping the mouth and nose, no pressure is found upon the *tympani* of both ears; whereas if the tube be not obstructed, and the effort be very considerable, the pressure is so great as to be attended with pain, and to endanger the rupturing of the *membrana tympani*. And here it is to be remarked, that a pressure upon the *tympanum* of one ear is not sufficient, on account of the sympathy mentioned in the last paragraph, unless that pressure be observed in each of the ears at different times, a thing not likely to happen. 3dly, The sound of the deaf person's voice appears different from what it did before, and also from the sound of any other person's. This, however, is only remarkable

where both tubes are stopt, as where one only is affected, the person's own voice is heard equally as well as formerly. 4thly, There seems always to be a noise heard by the person, as if in their own ears. This sometimes resembles the sound of a tea-kettle before it boils, at others it is a roaring like water, or like high wind blowing through trees, or even like thunder. This noise is heard when one ear only is affected, though perhaps not in the same degree. An easy experiment may be thought to militate against this opinion, which is the stopping one or both ears with our fingers, when immediately a sounding is heard in the head of the kind just mentioned: but it is to be considered, that in this case a quantity of air is included between the finger and membrane of the *tympanum*, a thing which can never happen in diseases of the external *meatus*, but is precisely what happens in obstructions of the *Eustachian tube*. 5thly, Persons deaf from this cause hear better in a carriage, or in any considerable noise. I am sensible that this has been attributed by some to the tension  
given

given thereby to the muscles of the small bones of the ear; whether this, however, be not hypothetical, must be submitted to physiologists. 6thly, When one tube is obstructed, the hearing is much more impaired in proportion than when the external *meatus* of only one ear is stopt. This is not to be understood of the sound of their own voice, which is perceived equally as before. And I am led to conclude, that in all cases of Deafness, where one or both tubes remain open, and when the internal parts of the ear are not disordered, the patient hears his own voice as well as formerly, and therefore we find them always speaking in a lower voice than other people.

After all I have said, however, of the distinguishing marks of these different species of Deafness, there are cases where it is very difficult to decide. And in many cases it appears evident that both the tube and the external *meatus* are affected, which is no more than what we perceive in diseases of most other parts of the body; the

parts

parts in contiguity and connected with them becoming frequently affected.

According to the different causes from which the obstruction of the tube arises, the consequent Deafness is curable or otherwise. Where it is owing to any glutinous matter stopping the passage, or a simple swelling of the membrane which lines it, or a tumor in the neighbourhood, it is plainly within the reach of the medical art. To these causes I shall therefore principally refer in what is to follow.

When it is slightly infarcted with this matter, the first and most simple way in which it is freed from it is by the action of swallowing. This seems to produce its effect by putting the anterior cartilaginous and membranaceous part of the tube in motion. That this part of the tube is moveable, or at least contractible, all authors agree; and any person who will carefully attend to his own feelings, will perceive a peculiar sensation in his ear in performing deglutition. I have often  
found

found that a slight obstruction in my ear has been removed by this effort, and therefore whenever I perceive the hearing stopt with a little ringing in my head, I, as it were, mechanically perform it. Others, I doubt not, have experienced the same, though without taking notice of it, or knowing whence the benefit arises.

Gaping, yawning, and gargling, have all been known to cure it, and probably act in a similar manner to the last.

Whatsoever forces a current of air into the tube, often removes Deafness; and this will have its effect whether the disorder proceeds from viscid matter, as in the last case, or from a swelling and puffiness of the *mucous* membrane. In the action of bawling or speaking very loud, the air is forced out of the *thorax* with impetuosity, and though part of it finds a vent through the mouth and nose, yet some of it will pass into any cavity that will admit of dilatation, which is the case of the *tympanum*, the membrane of which may be protruded

protruded considerably outward. Coughing has a similar and more powerful effect, and sneezing still a greater; these have been therefore known often to give relief. The action of vomiting falls likewise under this head, although at first the propriety of placing it here may not be evident. It is, however, a compound action, for we not only evacuate the stomach, but at the same instant force the air out of the lungs with great violence, to prevent, I suppose, any of the matters then passing over the top of the *larynx* from dropping into the *aspera arteria*. Another species of effort has been said to cure this complaint, and may, I think, be ranked here, although the connexion be less apparent than in the former case, that is, retention of the breath. After retaining the breath for any considerable time, we are obliged almost convulsively to expel it, the effect of which latter action has, I apprehend, been confounded with the former, by those who have recorded its usefulness in the disease.

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I have already mentioned that a swelling of the membrane which lines the inside of the tube will cause Deafness. This besides may produce the former cause by thickening the *mucus* secreted there, as we most-ly see in inflammations of glandular parts. Whatsoever therefore astringes this membrane, or even the parts in contiguity with it, may be of service. It is in this way that gargles may have cured the disease. Unloading the vessels of this membrane is also evidently a natural and efficacious mode of cure. This may be accomplished by cupping, blisters, or issues, in the neighbourhood, or by producing general depletion by purgatives, all of which modes have been sometimes successful. Under this head may be also arranged the advantage often perceived from wearing a flannel cap, or other warm covering of the head at night. These latter remedies may likewise be combined with those in the former paragraph, inasmuch as the lessening any swelling of the solids will make the obstructing matter more easily removed.

Syringing the external ear may sometimes have been of service from the effect of applications never being confined to the part alone which they touch, but being propagated to the contiguous ones, especially those parts that are connected with them.

The last mode of cure which I shall mention, is by injections into the tube, either from the mouth or nose. The injecting from the mouth seems rather impracticable; from the nose it has beyond a doubt sometimes succeeded: and whoever would wish to know more of this method, may consult Mr. Wathen's very ingenious paper on the subject, in the forty-ninth volume of the Philosophical Transactions.

Having thus run over the various things that have sometimes been successful in the cure of this disease, it remains only to point out the degree of dependance that can be placed in them. The simplest, and apparently, the most certain and powerful, is the mode of injection; in which the rest  
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of the frame is in no way strained or put out of order. But this is liable to objections. The liquid used may fall into the *trachea*, and raise a troublesome cough, or what is of much more consequence and appears to me insuperable is, that the most skilful person can never be certain that he has introduced the point of the syringe into the orifice of the tube; and even although it be, unless it can be pressed on so far as to be firmly wedged into the narrow part of it, the fluid will all return by its side into the nose or mouth, exerting little or no force on the obstruction. I am more confirmed in this opinion from conversing with Mr. Wathen on the subject, who I find is not nearly so sanguine in his hopes of cure from it as he was originally.

All the other modes of cure mentioned, evidently fall short in power and efficacy of the one mentioned in Mr. Stephens's case, I shall therefore content myself with laying down such farther directions as I have since found useful in the prosecution

of it. Perseverance in repeating the efforts is very requisite in this way, in the same manner as we see in reducing Hernias, or in child-bearing, a number of efforts succeed, any one of which singly appears of no service whatever. Considerable force is likewise requisite; indeed, I always order the force to be increased until the air is found to rush against the *membrana tympani*, and, by forcing it outward, to give pain. In cases where only one ear is originally affected, I think it best to stop the other one externally with wax, or some other soft adhesive substance, whilst using the efforts to expel the breath, lest their violence might rupture the membrane of the *tympanum* of that ear in which the tube is free, or at least give it considerable and unnecessary pain. Where the Deafness has been of long standing, if the efforts made in this way do not succeed at first, I think it best to have recourse to blisters, or some of the methods mentioned in a preceding paragraph for emptying the vessels of the tube, after which the efforts are renewed at times with superior efficacy.

Deafness

Deafness from other causes I do not mean to investigate here, and hope to be excused the conciseness with which I have treated the subject, as it is not my wish to write to those who will not take the trouble of reflecting. My chief intention is to procure a fair trial to a method I have in several instances found successful, and I shall think myself happy, if by means of what I have written any persons recover the inestimable gift of hearing.

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A R T I C L E VI.

*Case of a Retention of Urine from external Violence, cured by puncturing the Bladder through the Rectum. By Mr. WILLIAM NORRIS, F. M. S. Surgeon to the CHARTER-HOUSE and GENERAL-DISPENSARY.*

Read December 11, 1785.

OF the innumerable diseases to which mankind are liable, those which affect the bladder and its appendages are far from

being the most inconsiderable. Whether we consider a Retention of Urine as immediately affecting the patient's life, by occasioning the bladder to burst, or the urine to be absorbed; or, as laying the probable foundation of future diseases, in many instances worse than death, such as *fistulæ in perinæo*, &c. &c. it highly deserves the Surgeon's most sedulous attention. Any fact, therefore, founded on experience, which tends to prevent or alleviate those evils, is certainly worthy of being communicated; especially when it in any degree opposes the doctrine of those whose opinions have, with great justice, so universal an influence on the practice of surgery in this country.

On Saturday the        of June, 1785, I was desired by Mr. Slater, of Red-Cross-Street, to visit, with him, William Revell, who had a Retention of Urine. The account which Mr. Slater gave of this case was as follows: That the patient, aged thirty-six, having been at work the Thursday preceding, upon a scaffold about six or seven  
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feet high, which unexpectedly giving way, he fell upon his breech, and his *perinæum* came with considerable violence against the ridge of a penthouse; that he had an immediate inclination to make water, but that notwithstanding his utmost endeavours he could not pass a drop; and that immediately after this the *perinæum* and *scrotum* became swelled, black and painful. That he had been bled, some purging medicine given him, and that the parts had been fomented. The next day the appearances were nearly the same, and the *catheter* was attempted to be introduced, but in vain.

On Saturday morning, when I first saw him, the *scrotum* was distended to the size of a child's head, the cellular membrane of the *penis* loaded in a remarkable degree, and both, together with the *perinæum*, were as black as ink; the *abdomen* was tense, and extremely tender to the touch, and the blackness extended up on each side, though in a smaller degree, as far as the ribs. The *preputium* was so extremely loaded with extravasated blood, that it was

not without great difficulty and long endeavours I at last succeeded in getting a sight of the orifice of the *urethra*.

In attempting to pass the *catheter*, the instrument met with no obstruction until it came to the anterior part of the prostate gland, at which place it seemed to get into a kind of pouch, and out of the proper direction of the *urethra*. I tried bougies of various sizes, from the largest to the smallest, but with no better effect; they all stopped at the same part of the *urethra*, which was opposite to that of the *perinæum* on which he had fallen. I ordered the parts to be fomented, a dose of purging physick to be taken directly, and afterwards sixty drops of *tinctura thebaica*, with a little warm water to be injected *per anum*. As this case appeared to be highly dangerous, and would probably require an operation, I desired a consultation, and in the course of the day I met Mr. Vaux and Mr. White. The *catheter* and bougie were repeatedly attempted to be introduced by those gentlemen, but to as little purpose



purpose as before. It was then agreed to puncture the bladder through the *rectum*; but as the confirmation of our opinion, by some person of more experience, would give satisfaction, especially as the case was in some respects new, it was proposed to wait for such advantage. The next morning at ten o'clock we met Mr. Watson, of the Westminster-Hospital, who likewise endeavoured to introduce the *catheter*; and had it been possible, I doubt not that this gentleman's dexterity and perseverance would have effected it—but he also was foiled. Mr. Watson's opinion then coinciding with that which we had before given, the man was placed upon a table in the situation of one who was to be cut for the stone, and with a curved *trochar* I punctured the bladder from the *rectum*, as high up as I could reach with my first and second fingers. About three pints of urine came away, and the man was instantly relieved. A deep incision was then made into each side of the *scrotum*, from which a large quantity of extravasated blood was discharged, together with some  
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air; for *emphysema* and a small gangrene had taken place on one side; the parts were then rolled up in a piece of doubled linen, which was kept constantly moist with *spir. vin. ten.* and orders were given that the man should live very low. The next day he was tolerably easy; the tension of the *abdomen* had in a great measure gone off, but it was still very tender on being pressed. Urine came through the wounds in the *scrotum*, as well as through the puncture. On the third day after the operation, he began to pass some of his urine in the natural way; and each succeeding day he was able to retain a greater quantity, and more passed through the *urethra*. At the end of a week a large slough was thrown off from the *scrotum*, and the wounds began to heal. At this time, notwithstanding the strictest injunctions of Dr. Hamilton, who did me the favour to see the patient, it was impossible to keep him to a low regimen; neither entreaties, nor the representation of the probability of the artificial opening not closing, owing to such irregularities, could prevent him  
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from eating roast beef and drinking wine. I therefore discontinued my attendance, and I heard that he was quite well, and following his business, at the end of three weeks from the operation<sup>s</sup>.

This inability to discharge the urine might have proceeded from the tumor formed by the extravasated blood mechanically pressing against the sides of the *urethra*—or, by the violence of the blow, a breach might have been made in the *urethra*, through which the urine might have passed into the cellular membrane of the *scrotum*, and neighbouring parts.

That the latter was a principal cause, I am fully of opinion, for the following reasons.

<sup>s</sup> Before I began to copy this paper from the notes I had taken, I sent for the patient, by whose account I found, that when he made water, some generally came through the *rectum*. He said that this was the only inconvenience he felt. He now imagines that no urine came through the wounds in the *scrotum*; but why he thinks so, I could get no reason, except that the wounds healed: at the time, he was as perfectly convinced as I was, or am, that it did come through and in considerable quantity.

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The tumor in the *perinæum* and *scrotum* became very considerable immediately after the accident, and the man's strong endeavours to make water.

In the different attempts to introduce the *catheter* and bougie, little force had been employed.

On the day of the operation, and afterwards, urine was observed to come from the wounds in the *scrotum*. The bladder contained only about three pints, though the man had not made water from Thursday until Sunday, and had in the mean time, I understood, drank freely of barley-water. And on the supposition that this increasing tumor was formed solely by blood, it is reasonable to suppose that an opening being made, some bleeding vessel would have been discovered; but no appearance of fresh blood was observed.

It may also be worth noticing, that several times between those days, while the patient strained to make water, he had strongly the idea of the urine passing, and

could only be convinced of the contrary, by examining the end of his *penis*.

I am therefore persuaded that he had, at different times, voided his urine into the cellular membrane; and should a case so circumstanced ever again occur to me, I should, with strong hopes of success, try the effects of incisions into the *scrotum* only. In the foregoing instance, I think they would have been quite sufficient. The *canula* was left in the wound, and covered by a compress and the T bandage, but the man having occasion to go to stool in the course of the night, it was forced out by his efforts, and the passage of the *fæces*. To replace it in the morning might have been very difficult, but I was not anxious about it, and therefore made no attempt; for, I imagined, the longer the *canula*, or any other foreign body, was suffered to remain in the artificial opening, the more liable would its edges be to inflame and slough, and less likely afterwards to heal, though the natural passage should be restored—and that so long as the *urethra* continued obstructed, the contraction of  
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the bladder would force the urine through the opening, so as effectually to prevent its closing. In the foregoing case no inconvenience arose from its removal; and I believe it might always be omitted with advantage, after the operation. In this opinion I have since been much strengthened by the relation of a case by Mr. Forster, wherein he punctured the bladder through the *rectum*: he withdrew the *canula* as soon as the urine was discharged, and the wound healed almost immediately. In another case which happened to the same gentleman, the operation was deferred too long, and the patient died. If it be necessary to puncture the bladder, the operator will find considerable advantage from placing two fingers in the *rectum* instead of one, as has been recommended; for the *canula* may very conveniently be passed up between them, and kept in a proper direction without giving any pain, while with the other hand the *stile*t may be introduced, which should never be done until the upper end of the *canula* has been placed exactly against the spot where the opening is intended to be made.

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The practice<sup>h</sup> adopted in the above case has not the claim of novelty to recommend it, as it was published in the year 1760 by M. Pouteau, in his *Mélanges de Chirurgie*, from a paper of Monf. Flurant. But it has not been common in this country; and I have seen two cases which ended fatally, in which I think the lives of the patients might have been saved by a timely performance of this operation<sup>i</sup>.

<sup>h</sup> For the hint of introducing two fingers instead of one, I am indebted to Mr. Watson.

<sup>i</sup> Nothing can be farther from my intention than to advise this operation to be had recourse to, wantonly. I only mean to state it as my opinion, that, when the ordinary and more gentle means have been tried unsuccessfully, this is a mode of giving relief that may be very easily adopted.

A Retention of Urine is a disease highly dangerous, there being few practitioners of experience who don't know of more than one case of it proving fatal; and the proposed remedy is, comparatively speaking, without danger.

A very respectable author, speaking of the puncture of the bladder, even *above the os pubis*, which is, I think, a much less eligible situation, says, “D’ailleurs, je n’ai jamais vu arriver d’accidens en conséquence de cette ponction; je la regarde, pour ainsi dire, comme un coup d’épée dans l’eau, j’ai pratiqué souvent cette opération, & je m’étonne qu’elle ne soit pas autant usitée qu’elle merite de l’être.”

Traité des Mal. Chir. par M. J. L. Petit. tom. iii.

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 ARTICLE VII.

*Some Remarks on the Effects of Lignum Quassiaë Amaræ, by J. C. LETTSOM, M.D. &c.*

Read April 3, 1786.

**I**N the year 1763, Carolus M. Blom gave some account of the *Lignum Quassiaë Amaræ*<sup>k</sup>, in a Thesis which was published in the sixth volume of *the Amœnitates Academicæ* of Linnæus.

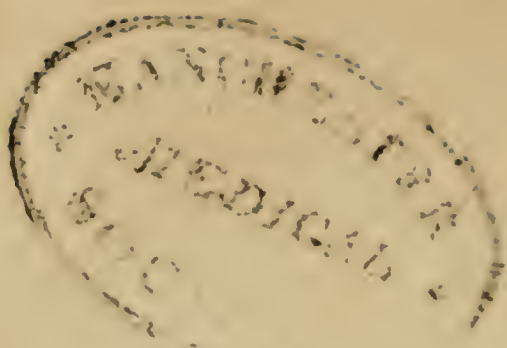
Few estates in the West-Indies, cultivated as they universally are, by the labour of Negroes, are without one of these miserable slaves of the name of Quassi. In

<sup>k</sup> To distinguish it from the *Quassia Simaruba*. *Quassia floribus monoicis, foliis abruptè pinnatis: foliis alternis subpetiolatis, petiolo nudo, floribus paniculatis.* Lin. fil. suppl. 234. *Simaruba*, Aubl. Aët. Paris. ann. 1776. *Simaruba Amara*, Aubl. Guian, t. ii. p. 859. *Euonymus fructu nigro, vulgo Simaruba*, Barr. Franc. Equinox. Buchoz, Dissertation sur le Quassi.





*Zingiber officinale*



the province of Surinam, a negro of this name was the first who applied the roots of a tree to medicinal purposes, which has since been distinguished by the same appellation. It is said, that by his successful exhibition of this vegetable, in Fevers, he acquired such reputation among his equals, as soon to be consulted by their masters, and thereby drew the attention of M. Dahlberg, counsellor of the province, by whose endeavours the tree was ascertained, and specimens of it sent to the late Professor Linnæus, who introduced it into his public lectures on the *Materia Medica*. It was described as almost peculiar to Surinam, but subsequent inquiries have shewn it to be indigenous to some West-India islands, particularly the Caribbæan; inso-much that the tree has been applied to the purpose of staves, to head sugar hogsheds, till the bitterness of it was found to give this taste to sugar, nearly to the extent of an inch next the wood.

Its botanical characters are described in the *Amenitates*, in the follow-

ing words, to which I shall add a translation.

## QUASSIA.

CAL. *Perianth.* pentaphyllum, brevissimum: foliolis ovatis, persistentibus.

COR. *Petala* quinque, lanceolata, elongata, sessilia, æqualia. *Nectarium* squamis quinque, ovatis, villosis, basi filamentorum interiori infertis.

STAM. *Filamenta* decem, filiformia, equalia, longitudine corollæ. *Anthera* oblongæ, incumbentes.

PIST. *Receptaculum* carnosum, orbiculatum, elevatum, germine latius. *Germen* ovatum, ex quinque compositum. *Stylus* filiformis, longitudine staminum.

PERIC. quinque, lateralia, distantia, receptaculo carnosio orbiculato inserta, ovata, obtusa, bivalvia.

SEM. Solitaria, globosa.

CAUL.

CAUL. teretes, arborei, cinerei: ramis raris nec multum subdivisis: ramulis ultimis viridibus: punctis impalpabilibus albis adspersis.

FOLIA pinnata, alterna, \* petiolata, patentia: Petiolis communibus, spithamæis, utrinque marginatis membrana latiuscula, ad ortum foliorum contracta, terminatis in mucronem mollem, subulatum, marcescentem, pubescentem. Pinnæ s. Foliola trijuga seu quadrijuga sessilia, rarius exacte opposita, lanceolato-ovalia, acuminata, integerrima, lævia, glabra, nonnihil venosa, patentia, pervigilia, coccis hesperidum (in hybernaculis nostris) valde obnoxia, ante explicationem conduplicata, digiti longitudine, duorum pollicum latitudine membranæa, nec rigida, persistentia sæpe per totum autumnum, non tamen perennia, læte viridia.

\* This is corrected in the annexed plate. The younger Linnæus, explains the mistake of the Father. "Figura Floris in Dissertatione Parentis de Quassia vera est," sed ramulus cum foliis ad aliam pertinet. Vide Supp. Plant. p. 235.

FULC. *Stipulæ* nullæ sunt, nec *arma*.  
 RACEMI terminales, simplices. *Brac-*  
*teis* alternis, linearibus reflexis: corol-  
 lisque magnitudine et fere statura  
 Dictamni albi.

Ex dato itaque caractere omnino qui-  
 dem liquet QUASSIAM nostram proxima  
 cum ZYGOPHYLLO, quod etiam squamas  
 ad basin filamentorum habet nectariferas,  
 affinitate conjunctam esse. Utramque vero  
 arborem non ejusdem esse generis satis indi-  
 cat fructus, qui in Quassia, more OCHNES,  
 ad idem receptaculum carnosum pericar-  
 piis quinque gaudet distantibus, monosper-  
 mis; in Zygophyllo vero capsula 5-locu-  
 laris est atque polysperma. Atque sic  
 genus QUASSIÆ in eodem a ZYGOPHYLLO  
 differt gradu, quo differt a Ruta Dictamnus.

I. QUASSIA *amara*. *Spec. Plant.* ii. pag.  
 553. unicum verum nomen est, quod huic  
 vegetabili impositum esse reperio.

Nux Americana, foliis alatis bifidis.  
*Comm. Hort.* i. p. 183. t. 94. juvenis est  
 arbor,

arbor, quæ nostram admodum refert, utut nondum satis adulta. Non me quidem fugit, quod DOM. BROWN aliique, Meli-coccam hanc Figuram Commelini habeant; vero tamen est simile, illam Quassiæ potius adjiciendam esse, nec forsan ullo modo ab illo differre. Ceterum nulla alia hujus vegetabilis invenire potuit synonyma.

Quod ad arborem Quassiæ attinet, illa pluribus abhinc annis, in horto nostro Academico læte viguit, adque altitudinem octo pedum pertigit. Quoniam vero flores hæc proferre nunquam visa est, semper pro specie quadam *Sapindi*, cui multum facie externe assimilatur, habita est, donec tandem NOBILISS. DOM. PRÆSES folia supra commemorata, in Musæo Dahlbergiano, obtinuit, et eadem esse cum foliis arboris nostræ observavit, unde sic verum hujus nomen nobis innotuit.

LIGNUM QUASSIÆ est caudex descendens, seu radix prædicta arboris, a plurimis tamen lignis nulla se distinguens nota singulari. Albicans est, crassitie brachii

humani, at, aeri per aliquot tempus commissum, nonnihil flavescens. Medulla cum alburno cohæret, nec ab illo ullo modo separatur. Cortex est tenuis, colore griseo, inæqualis et rudis, interdum fissuris quasi exulceratus. Hinc ratione structuræ externe difficillimè ab aliis dignoscitur.

CALYX, a *Perianthium* of five leaves, very short: the leaves ovate and permanent.

COROLLA, composed of five, long, lanceolate, sessile, equal *Petals*. *Nectary* consisting of five, ovate, villous scales, inserted on the inside of the base of the filaments.

STAMINA, ten filiform equal *Filaments*, the length of the corolla. *Antheræ* oblong and incumbent.

PISTILLUM, *Receptacle* fleshy, orbicular, elevated, broader than the germen. *Germen* ovate, formed of five. *Style* filiform, the length of the stamina.



SEED-VESSELS five, lateral, remote, ovate, obtuse, two-valved, inserted into the fleshy orbicular receptacle.

SEEDS solitary and globular.

STALKS round, woody, ash-coloured; branches few and not much subdivided, the extreme small branches green, and sprinkled with impalpable white dots.

LEAVES pinnated, alternate, \* standing in foot-stalks, spreading: the common foot-stalks about five inches long, edged on each side with a broadish membrane, which becomes narrower at the base of the leaves, terminating in a soft, awl-shaped, withering, downy point. Pinnæ or leaflets growing in three or four pair, sessile, seldom exactly opposite, betwixt lanceolate and oval, running out to a point, perfectly entire, hairless, slippery, a little veiny, spreading, very wakeful, extremely subject (in our stoves) to the

\* Leaves opposite.

Coccus hesperidum, previous to their expansion folded together, a finger in length, skinny, without any rigidity, frequently continuing through the whole of the autumn, yet not evergreen, of a pleasant green colour.

PROPS. *Stipulæ* wanting, as well as every kind of *arma* or defence. *Racemi* terminal and unbranched. *Floral-leaves* alternate, linear, and reflex'd: flowers nearly as large as those of the *Dictamnus albus* or *Fraxinella*.

“ It appears clearly from the character here exhibited, that our *Quassia* is next in affinity to the *Zygophyllum*, which also has nectareous scales at the base of the filaments. But that both trees are not of the same genus is sufficiently apparent from the fruit, which, in the *Quassia*, as in the *Ochnes*, has five remote single-seeded seed-vessels, attached to the same kind of fleshy receptacle; but in the *Zygophyllum* the capsule has five cavities, and is many-seeded. And thus the genus *Quassia* differs

fers from the *Zygophyllum* in the same degree as Rue does from *Fraxinella*.”

“ *Quaffia amara*, Spec. Pl. v. ii. p. 553, is the only true name that we find given to this vegetable.”

“ The *Nux Americana foliis alatis bifidis*, Comm. hort. i. p. 183, t. xciv. is a young tree, which very much resembles ours, and, like ours too, is not sufficiently grown. We are aware that Dr. Brown and others have considered this figure of Commelins as a *Melicocca*, but it would perhaps with more propriety be referred to the *Quaffia*, as it scarcely differs from it in any particular. Nor could the before-mentioned author find any other synonyms of this vegetable.”

“ As to what relates farther to the *Quaffia* tree, we may observe, that it has flourished many years in the garden of the Academy, and grown to the height of eight feet; but as it never produced any flowers, it was always considered as a species of *Sapindus*,  
which

which it much resembles in its external appearance, till our illustrious President obtained the leaves before mentioned from the Dahlbergian Museum, and discovered them to be the same with the leaves of our tree, and thus we became acquainted with its true name.”

“ QUASSIA WOOD is the descending trunk, or root of the before-mentioned tree, which, however, is not distinguished from most other woods by any particular mark. It is of a whitish colour, the thickness of a man’s arm; but exposed some time to the air, it assumes a yellowish hue. The Medulla or pith adheres to the Alburnum, nor is it by any means separated from it. The bark is thin, of a grey colour, the surface uneven, rough, and sometimes chapped or cracked. Hence from its external appearance also, it is with difficulty distinguished from other woods.”

Dr. Patris\* procured seeds of the Quassia from Surinam, and planted them at Cay-

\* See Gazette Salulaire, 1777. n. 41. 42.

enne, where they have vegetated, and flourished, and where the gardens are now ornamented with their beautiful foliage and flowers.

M. Buchoz, of Paris, has published a Dissertation on this Exotic, taken chiefly from the *Amœnitates Academicæ*, with additional cases extracted from his *Journal de la Nature considérée, année 1777, t. iii. p. 107.*

In the *Philosophical Transactions*, vol. lviii. p. 81, 82, J. Farley, of Antigua, speaks of the good effects of the Quassia in fevers, and particularly in some, wherein the Peruvian bark could not be retained upon the stomach.

Mr. Long, in his *History of Jamaica*, vol. iii. p. 820. art. 188. under the title of *Quassia arbor*, recommends the Quassia in dropsies, and in putrid and nervous fevers; he describes the following, as the method of administering it in practice at the Windward-Islands. “ Boil four ounces  
“ of the bark in two quarts of water until  
6 “ reduced

“ reduced to one ; rack it off ; then add  
 “ a gill of best Coniac brandy, which will  
 “ preserve it from turning sour ; and bottle  
 “ for use. A wine glass is the dose for a  
 “ grown person, to be taken twice a day  
 “ for swellings and dropfical cases ; when  
 “ it is applied in fevers, the wood is pul-  
 “ verized, and the powder given from  
 “ eighteen to twenty grains, as frequently  
 “ as the Jesuits Bark is usually exhibited  
 “ for the like intention ; or a decoction is  
 “ made of the wood, and given in as large  
 “ a quantity as the patient can bear it ; it  
 “ is so inoffensive and mild in its nature,  
 “ that no extraordinary restrictions are  
 “ necessary in regard to diet.”

The virtues of Quassia have not been established on the continent of Europe by many experiments, as Dr. Blom candidly acknowledges, though it has been recommended by Haller and Tissot\* ; and in England it has not been long in use : Dr. Blom

\* See also Rozier Observations sur la Physique. Tom. IX. 1777. p. 140. Fermur Description de la Colonie de Surinam, Tom. I. p. 212. Ebeling. Diss. de Quassia, p. 14. Leverius, Comm. in quo Medicatæ Quassiae vires expenduntur. p. 77. Marray App. Med. Vol. III. p. 432.

has mentioned, however, three cases of its successful exhibition; Fever of the putrid type; Asthma from misplaced gout, and Cholic; but from its sensible qualities; and particularly from its bitter taste, he considers it in general as a tonic and stomachic medicine.

Within the space of a few years, I have tried it in several hundred instances, from whence I shall offer the following remarks on its medicinal qualities.

In cases of a weakened tone of the stomach, and of a relaxed nervous habit, Quassia proves highly beneficial. In debility succeeding febrile diseases, the Peruvian bark is most generally more tonic and salutary than any other vegetable hitherto known; but in hysterical atony, to which the female sex is so prone, the Quassia affords more vigour and relief to the system than the other, especially when united with the *vitriolum album*, and still more with the aid of some absorbent. A formula like the following has generally agreed with such constitutions.

R *Ligni*

℞ *Ligni Quassia, raspati, ʒss.*

*Aquæ fontan. ebullient. ʒvi. stet in digestionem per horulam et cola.*

℞ *Hujus colaturæ, ʒiss.*

*Vitrioli albi, a gr. ʒss. ad gr. ij. vel iv.*

*Tinct. Cardamom. ʒi.*

*Test. ostreor. pp. ʒi. m. ft. Haustus ter de die sumendus.*

The number of instances of *hysteria*, and nervous debility, which I have seen thus relieved, would be tedious to enumerate here; the following case, however, of *epileptico-hysteria*, is so singular, that I am induced to offer a short detail of it.

A lady, twenty years old, of a delicate habit, who had had children; without knowing any cause, became liable to languor, and great nervous debility; any sudden noise, any circumstances calculated to excite emotion, brought on hysterical affections; but they were supportable, as they were not attended with fainting, or the loss of intellect. In process of several months, she became more seriously affected,

ed,



ed, without any previous cause, by paroxysms, wherein the senses, for a few moments, were suspended: in her family, without any motive of hurry or uneasiness, and almost in the moment of cheerful enjoyment, she would sink away in her chair, or fall down, if not supported, with struggling, or other slight symptoms of epilepsy; it lasted usually four or five minutes; at the first appearance, the fits occurred once or twice a week, but at the end of six months, when I was consulted, they seldom were absent a whole day, and sometimes attacked her two or three times a day; the most general time was a little after dinner; she had the *menses* regular; was a person of genteel station of life, who with opportunity of indulgence, was of strict temperance and moderation. She was habitually costive, on which account I ordered some laxative pills, with an injunction to attend carefully to the due regulation of the body; and, in conjunction with Dr. Sims, the Quassia draught before mentioned.

I confess,

I confess, I did not imagine that any considerable effect would very soon arise from this plan of prescription. I expected that it would give tone to the stomach; remove acidity, excite the powers of digestion, discharge the effete part by the addition of the laxatives, and gradually strengthen the habit, which seemed over delicately constituted, and thereby obviate the peculiar species of nervous atony. It happened, however, that after the first use of the medicines, she had no return of fit.

She had been under the care of an eminent physician, who had administered bark, camphor, musk, castor, and, I think, chalybeates, without relieving her.

Persons who have indulged themselves in hard-drinking, gradually lose a relish for solid food, or if the appetite is not so far vitiated, as totally to obliterate this natural propensity, it is usually in search of high seasoned and salted substances, which neither contribute to wholesome nourishment, nor to avert the increasing *dyspepsia*.

Under

Under this situation, besides regulating the diet, the following manner of giving the Quassia, has manifestly conduced to restore the tone of the stomach, and improve its digestive powers. The following pills I have sometimes added to promote these intentions.

℞ *Infusi Quassiæ*, ℥iſs.

*Beaume de vie*; ℥iij. m. fiat *Hauftus bis terve in die ſumendus*.

℞ *Pulv. Radic. Colombo*.

*Aloes Succutor. a* ℥ſs.

*Pulv. Piper Cayenn. gr. vj. m. ſiant Pillulæ xij. capt. ij. om. nocte, vel prout venter poſtulaverit*.

When it has not been convenient to procure the *Beaume de Vie*, the following may be ſubſtituted, being ſo ſimilar in ſmell, taſte, colour, and operation, as not to be eaſily diſcernible.

## BEAUME DE VIE.

℞ *Extract Glycyrrh.* ℥ss.  
*Sal Tartari,* ℥ij.  
*Alces Succotor.*  
*Gummi Myrrhæ.*  
*Croci Anglican. a* ℥j.  
*Coque ex Aq. fontan. ℔j. ad* ℥xij. *Colaturæ, et adde Tinct. Stomach. ℥iv. m.*

There are certainly frequent instances of persons of great temperance who are liable to vomiting, both of food and the secreted fluids of the stomach: I have often met with it in men liable to *hypochondriasis*, and in the female sex of very delicate habits, labouring under *Chlorosis Leucorrhæa*, or *Amenorrhæa*. In some I have observed it, when none of these circumstances have occurred.

When the infusion of *Quassia* is given in *hypochondriasis*, *dyspepsia*, and *gastrodynia*, some absorbent and laxative medicine, especially when the excreted fluid is of an acid taste, is an useful addition: when the fluid is thrown up brackish, or of a sweet taste,

taste, Tar-water is often beneficial: it may be taken early in the morning, and the Quassia about the middle of the forenoon, and some time in the afternoon, when the stomach is most empty.

In the instances accompanied with *Leucorrhœa* or *Amenorrhœa*, two grains of *flores martiales* may be added to the Quassia.

Particular attention should at the same time ever be had to the quantity of food taken into the stomach at once; it should never be overloaded with quantity, nor vitiated with variety; without attention to which circumstances, our remedies will be fruitlessly attempted.

In habitual *diarrhœas*, the Quassia is mostly an efficacious remedy, joined with the *testæ ostreorum*, or some absorbent, with or without the *tinctura thebaica*. Persons liable to this relaxed habit, are frequently for a few days costive, and then for as many, perhaps, violently purged;

to strengthen digestion, and preserve regularity in the intestinal canal, should direct the conduct of the prescriber, and few medicines answer these intentions better than the following.

℞ *Pulv. Rad. Colombo.*

—— *Ligni Quassia, ʒss.*

—— *Ipecacoanhæ, ʒss.*

*Tinct. Thebaic. q. s. fi. Pilulæ xv. capt. iij. om. nocte.*

℞ *Infusi Quassia, ʒiss.*

*Test. Ostreor. pp. ʒiss.*

*Tinct. Thebaic. gut. iij. fiat. Haustus bis terve de die sumend.*

If the *diarrhæa* arise from bilious acrimony, the same formula is no less efficacious, after using *ipécacoanhæ* as an emetic, and now and then intervening a mild laxative of ten grains of rhubarb, and as much of *sal polychrestum*.

In some stages of bilious, remittent, and putrid fevers, a *diarrhæa* supervenes, which long continued sinks the patient into irretrievable

trievable debility; or if hastily stopt by opium, or strong restringents, is succeeded by a fatal *meteorismus*, or even *sphacelus*, of the intestines. In such putrid *diarrhæas*, the laxative powder exhibited as an evacuant occasionally, and the Quassia as an antiseptic tonic, are succeeded with very salutary effects, as I have repeatedly experienced.

But with respect to the tonic and febrifuge qualities of Quassia, I by no means subscribe to the Linnæan opinion, where the author says, *me quidem judice, chinchinam longe superat*<sup>1</sup>: it is very well known, that there are certain peculiarities of the air, and of idiosyncrasies of constitution, unfavourable to the exhibition of the Peruvian bark, even in the most clear intermissions of fever, and writers have repeatedly noticed it; but this is comparatively very rare: about Midsummer 1785, I met with several instances of low remittent, and nervous fevers, wherein the

<sup>1</sup> M. Buchoz admits the same dangerous sentiment.

bark uniformly aggravated the symptoms, though given in intermissions the most favourable to its success; and wherein Quassia or snakeroot were successively substituted. In such cases I mostly observed that there was great congestion in the hepatic system, and where debility, at the same time, discouraged copious evacuation. But in putrid fevers, and in the low nervous fever, attended with symptoms of putrescency, the Peruvian bark incomparably bears the palm. When I first begun to use Quassia, about the year 1778, I had many such fevers under care, and exhibited this vegetable freely as a febrifuge, but the success I met with, discouraged my perseverance in experiments of such importance to life, whilst we are in possession of a known remedy. There is, however, a certain period in many fevers, where no intermission, sufficiently clear to exhibit the bark, may occur, whilst at the same time increasing debility may threaten the life of the patient; at such times, the Quassia, or snakeroot, singly or combined, have upheld the vital powers, and promoted a critical



tical intermission of fever ; which then, the instant exhibition of bark, has prevented the recurrence of, and thus restored the patient. But I would not hence by any means infer, that the Quassia should, in general, supersede the bark in nervous, low, remittent, and putrid fevers ; as abundant experience enables me to declare, that the former is not to be relied on in such fevers ; and which I think it my duty to do, lest a disposition to experiment may lead the practitioner to a fatal dependence, to an extent of time, when even the febrifuge powers of bark may not redeem the neglected opportunity for exhibiting it.

After introducing *dyspepsia* arising from the indulgence of drinking, I cannot well dismiss the subject, without adverting more fully to its painful influence upon the constitution, which I have observed with more anxiety, as the sufferers are often those of the more delicate part of the female sex, whose habits of intemperance are not unfrequently introduced by those who should have been the guardians of their health.

The miseries entailed by these unguarded indulgences, differ much as to their progress and violence, and even the symptoms vary so much, as to admit obvious distinctions.

The *First* I shall notice, as being generally less painful, though equally permanent, are the symptoms more especially attendant on persons who have, early in life, habituated themselves to drink freely of wine of various kinds, and from their situations in life, undergone a change of climate, as from Europe to the Indies, &c. Punch-drinkers, likewise, have been liable to similar complaints. The first appearance of disease is a slight degree of *dyspepsia*, which at length is succeeded by *gastrodynia*: the appetite becomes gradually vitiated, and after taking food, before the return of the next meal, a kind of heavy pain of the stomach, with a constriction of the muscles of the *abdomen*, come on, and with a slight effort, a sweetish, brackish, or acid fluid is thrown up, and the pain and constriction subside. For several years in this unhappy state, the patient drags on a life, rendered now and then

then more supportable, either by renewed potations, or repeated exsputations, till at length the bodily and mental powers become impaired: the object grows emaciated, the whole body shrinks; neither *anasarca* nor dropfy appear, though the countenance looks fallow; the region of the liver is not enlarged; but this *viscus* seems less than natural: the urine is not very high coloured; the *fæces* are hard and dark coloured: the stomach will take and retain food, but after receiving it, it is oppressed, and feels tightened or contracted in its dimensions; the patient expresses it, as if it were tied by a straight bandage; the same sensation affects the intestines, and the *abdomen* suffers such irregular constrictions, as are evident to the external touch, the muscles being drawn into irregular action, the surface of the belly is diversified with protuberances and cavities: sometimes the spasmodic strictures run transversely, and raise this surface like waves of the sea. The pain continues increasing to such excess, that the miserable patient is obliged to press against a  
table

table or some hard body, to mitigate his distress, till vomiting brings a respite; or he hastens this operation, by thrusting his finger into the throat; and thus relieves himself till the next reception of nourishment, when the same tragedy is repeated. The matter discharged is thin, acrid, sour, sweet, or brackish. Sometimes, instead of constipation, an occasional *diarrhœa* ensues, and mitigates the pain, whilst it subdues the constitution; and after years of misery, the victim slides into a fatal atrophy; but long before this, the powers of the mind have been debilitated, and its recollection and actions impaired.

The *Second* train of distressful symptoms which I shall relate, more generally succeed the free use of spirits, or of wines with the admixture of spirits, as Madeira; and especially where late hours and illicit amours have been superadded.

The first symptoms of complaint are, a pain and oppression of the *præcordia* after eating, or distension from fluids; this pain  
extends

extends to the clavicles and *scapulæ*; there are frequent eructations of wind, which seem to burn the throat as they ascend; these symptoms, which are usual in hepatic affections, and particularly in bilious effusions, are at first so trivial, as seldom to alarm the fears of the patient, or he slightly mentions them as symptoms of the gout, whilst he attempts to avert the present suffering, by indulging more freely in the very cause of the mischief, till repeated fillips of raw spirits, or a dilution of the poison, render existence miserable.

The appetite now fails, but an insatiable thirst continues, and if it be not supplied with an exhilarating cordial, the vital spirits instantly flag, and such horrors take place, as are dreadful even to a by-stander; the poor victim is so depressed, as to fancy a thousand imaginary evils; he expects momentarily to expire, and starts up suddenly from his seat; walks wildly about the room, breathes short, and seems to struggle for breath: if these horrors seize  
him

him in bed, when waking from slumber, he springs up like an elastic body, with a sense of suffocation, and the horrors of frightful objects around him; at the same time the pain of the *præcordia* continues and augments; the sight of wholesome plain food gives disgust, instead of appetite; drink is his cry; or if hunger is excited, it is after tasty, salt, or acrid nourishment.

At this time, if an *ascites*, or fatal jaundice, do not terminate existence; the legs shrink, are swarthy-coloured like the rest of the body, and sometimes *petechiæ* appear and disappear for many months; the extremities feel sore to the touch, and upon scratching them, exude blood: the thighs likewise shrink, but the body, and particularly about the hepatic region, enlarges, and the hardness of the liver may be frequently traced; the face is nearly copper-coloured, is emaciated, sometimes with little suppurations, which dry and turn scaly; the breath smells like rotten apples, and the *morbus niger*, or vomit-  
ings

ings of a fluid like that of coffee-grounds, snatch the patient from complicated misery.—Sometimes a *diarrhæa*, or bloody discharges, hasten the catastrophe.

The *Third* train of symptoms to be described, is not confined to age or sex, but is in general more frequently the attendant of the female sex.

The persons liable to these symptoms, have been those of delicate habits, who have endeavoured to overcome the nervous debility, by the aid of spirits: many of these have begun the use of these poisons from persuasion of their utility, rather than from the love of them: the relief, however, being temporary, to keep up their effects, frequent access is had to the same delusion, till at length what was taken by compulsion, gains attachment, and a little drop of brandy, or gin and water, become as necessary as food; the female sex, from natural delicacy, acquire this custom by slow degrees, and the poison being admitted in small doses, is slow in  
its

its operations, but not less painful in its effects.

The soberer class of tradesmen, also, who occasionally indulge in their six-penny-worths of brandy and water, gradually slide into the same unhappy habits, and entail upon their constitutions the same misery, which I shall now introduce.

The first appearance of indisposition very much resembles what has been last described; and under the deception of the gout, the fuel is heaped upon the fire, till the delusion has been too long maintained to admit of retreat: in general, at least, the attachment to the use of spirituous drinks, becomes so predominant, that neither threats nor persuasions are powerful enough to overcome it. The miserable sufferer is so infatuated, as, in spite of locks and keys, to bribe by high rewards the dependent nurse, privately to procure the fatal draught.



But the concluding symptoms are very different from either of the foregoing histories: frequently, indeed, the appetite for food vanishes, but sometimes continues voracious; and, at the same time, whilst the body is costive, and no vomiting ensues, the lower extremities grow more and more emaciated; the legs become as smooth as polished ivory, and the soles of the feet even glassy and shining, and at the same time so tender, that the weight of the finger excites shrieks and moaning; and yet I have known, that in a moment's time, heavy pressure has given no uneasiness. The legs, and the whole lower extremities, lose all power of action; wherever they are placed, there they remain till moved again by the attendant; the arms and hands acquire the same *paralysis*, and render the patients incapable of feeding themselves. Thus for years they exist, with no material alteration in the size of the body, or aspect of the countenance.

Whether they really undergo the agonies they appear to suffer, I much doubt,  
as

as at this period their minds appear idiotish: they often shriek out with a vehemence that may be heard at a considerable distance, but upon inquiring about the seat of pain, they have been vague and indecisive in their answers. When a cramp comes on the lower extremities, involuntary motions draw up the legs, and produce the most piercing shrieks: and the features of the face, altered by convulsive twitchings, excite pain in a spectator. For some months before they die, these shrieks are more incessant, and as violent as the strength will admit.

They talk freely in the intervals of mitigation, but of things that do not exist; they describe the presence of their friends, as if they saw realities, and reason tolerably clearly upon false premises.

Mostly before they die, they take less food; sometimes a *diarrhæa* succeeds, of a thin substance, and of a dark green colour; sometimes a vomiting of black matter; but most generally they gradually  
sink

sink from the accumulation of pain and debility. There is rarely any fever; and after the disease is far advanced, the *menfes* have continued. They do not, as in the preceding state, fall into dropsies, but usually become paralytic: the breath is not offensive, nor is there the same difficulty of breathing, or horror of suffocation: whether the imperceptible and gradual augmentation in the use of spirits, is the cause of this difference, I am not certain; but the difference is considerable, as must appear from their histories, which I have drawn from actual observation.

I would not, however, infer, that every spirit-drinker acquires the symptoms of disease above related, or that other diseases do not more frequently succeed this dangerous habit: hepatic affections, of various kinds, it is well known, usually result from intemperance, and dropsies often succeed; but from some circumstances in the constitution; or from the mode of indulgence in liquors; the symptoms I have described, have severally occurred, where no hydropic

VOL. I. M affections

affections have supervened. There is something in spirituous liquors, so injurious to the human frame, that too much attention cannot be paid in discouraging the use of them. Many of the unhappy victims I have attended, ascribe their sufferings to the unguarded advice of some medical practitioner, who has, under the idea of wine turning sour on the stomach, permitted a little drop of brandy and water to be substituted; seldom, indeed, a day passes without introducing me to the sick bed of some deluded object of misery; and it is from the most decided conviction of the injury, that I would guard every person from beginning with even a little drop of this fascinating poison, which once admitted, is seldom, if ever, afterwards overcome. Whenever I hear the patient plead for some substitute for beer or wine, under the supposition of their turning sour, my fears are alarmed, and my endeavours excited, to pluck the unsuspecting patient from the brink of destruction: this plea is never made, till the exhilarating influence of spirit has been experienced; and not a

moment

moment should be lost, in warning such objects of their danger.

Some, who avoid brandy, have been induced to take rum, from a vulgar opinion, that it is more oily and balsamic; the argument is erroneous, for what balsamic qualities can empyreumatic oil contain? Others, who condemn both brandy and rum, make no objection to gin; because they think it diuretic; but so far from it, that half the dropfies among the lower classes of the people originate, or, at least, are confirmed by the use of this spirit: they are all poisons, and are nearly alike deleterious.

When the effects of spirits on the constitution, have not greatly contaminated it, beyond the frequent recurrence of *dyspepsia* or *gastrodynia*; after interdicting spirits altogether, the patient should be allowed to fix upon some one species of nutriment; and, whatever it is, should be confined to it alone, and that in the smallest quantities possible, and at regular stated distances,

distances, that the preceding portion may be properly digested, before any addition be allowed: when the stomach has thus acquired more tone, either some new, or an increase of the former nutriment, may be added.

I once attended a lady, who could not retain any food on the stomach, above an hour or two. I requested her to fix upon some light nourishment that she could palate, and she mentioned milk: I then restrained her to four table-spoonfuls of it every six hours, and afterwards increased the quantity as the stomach could bear it. From this she went to broth, and thus gradually acquired such a state of the stomach, as to bear the usual food of the family; and for two years past she has enjoyed good health, with the moderate use of a glass of wine, or of beer, but not one drop of spirit.

But in some cases, where the habit of drams has been long continued, the total and sudden omission of them, has sunk the person into irretrievable debility. Here

this pernicious custom must be left off gradually. A man who usually drank twelve drams a day, being convinced of his approaching misery, took the resolution to wean himself from this poison: he always drank out of one glass, into this he daily dropped a drop of sealing-wax; by this means he had twelve drops less of spirit every day, till, at length, his glass being filled with wax, his habit was cured.

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A R T I C L E VIII.

*Cases of Hydrocephalus Internus, by* JOSEPH HOOPER, Surgeon, F.M.S.

Read May 18, 1785.

**T**HE two following Cases I have taken the liberty of proposing to your attention, not as being of a new disease, but as attended with circumstances, which, to me, at least, appeared rather uncommon.

The latter end of last summer, I attended a boy about twenty months old, who had been drooping for three or four weeks, with the symptoms usually attendant on worms, for which he was treated with various *anthelmintics*, without success. About a week before his death, his fever, which had hitherto been but slight, greatly increased, his pulse was very quick, his spirits much agitated, attended with frequent convulsions, and want of sleep, and at length he became quite delirious. The *sutura sagittalis* was not closed, and rather more spread during his illness. These symptoms would have left no doubt of the existence of water in the brain, had they not been accompanied with the singular one of contracted pupils, unaltered by the different degrees of light falling on the eyes. I say, singular, because in the descriptions of the symptoms of the *Hydrocephalus Internus*, which I have read, I think the dilatation of the pupils is one of the most general; nor had I ever remarked the contrary, in not a few which had fallen under my own notice. However, this  
proved



proved an exception to that general rule, for on opening the head, we found the ventricles filled with about half a pint of clear water.

The other is the case of a male infant, to whom I was called about six months ago, and who was then nine months old, afflicted with a dropfy of the head, which had been increafing from the age of three months, and was then enlarged to a degree beyond what I had ever before feen; though the child, in other refpects, was in perfect health. The mother faid ſhe had confulted feveral of the faculty upon the occaſion, one of whom offered to cure the child by tapping. However, having given my ſentiments of the impoſſibility of a cure, by that, or any other means, defired ſhe would let me know when the child ſhould die. Upon which event I was lately requested to come, and examine the head, which I found had gradually continued to enlarge, whilſt the body and limbs became extremely emaciated. The *futures* were ſo diſtended, and the bones

M 4 of

of the *cranium* so far separated, that more than half the scalp was without any skull, and, in short, had more the appearance of a membranous bag, filled with water, than of a human *cranium*. Imagining the water to be immediately under the *dura mater*, I made an incision a little to the left of, and parallel with, the longitudinal *sinus*; upon which a quantity of fluid, perfectly limpid, amounting to upwards of six pints, came off, and left the two spaces, usually occupied by both hemispheres of the brain, to appearance, empty. This I was, at first, not a little surpris'd at, till having enlarged the opening, and more minutely survey'd the state of things, I found that this quantity, great as it was, had been contained in the two ventricles, having by the rupture of the *septum lucidum*, a free communication with each other. This had distended the *cerebrum* to such a degree of extenuation, as to give it the appearance of a soft lining to the *dura mater*, about the eighth of an inch in thickness. Hence we may learn, how much distention the brain will admit of, and that where  
the

the subject is young, and the *sutures* yielding, the *Hydrocephalus Internus* may continue many months, before it shall put a fatal period to the existence of the devoted sufferer.

Southwark, May 18, 1785.

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A R T I C L E IX.

*Observations on some Cases of Hydrocephalus Internus, by J. C. LETTSOM, M. D. &c.*

Read June 15, 1786.

**T**H E R E are some diseases, whose symptoms are so obscure, or so similar to those of other diseases, as to prevent us from forming a certain diagnostic, till death ensues, and dissection ascertains the cause. Of this number we may include the *Hydrocephalus Internus*; for although  
this

this fatal complaint has been accurately described by late writers, yet few of the symptoms attending it, as pathognomonic, but may arise from very different causes; as pressure upon the brain, from various causes; dentition; and even from worms in the intestinal canal, according to the authority of medical writers.

The very nature and situation of this disease, when ascertained, afford so little prospect of relief from the powers of medicine, that where, from the chain of symptoms, it may reasonably be supposed to exist, if a cure ensue, we are ready to suspect fallacy in the diagnostics, rather than success from our remedies: hence it is, that in many instances, which I have considered as really the disease under our present inquiry, and recovery has resulted from medical treatment, I have relinquished a pre-conceived opinion, where the symptoms have admitted of dubiety.

There are, however, examples within my recollection, with circumstances so unequivocal,

quivocal, of the *Hydrocephalus*, that I deem them not unsuitable for public communication: some of these cases I have selected, as having more particularly engaged my attention; and I relate them with more satisfaction, as they tend to confirm, in some degree, the suggestion of an amiable and learned physician, upon the use of *mercury* in this fatal disease.

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C A S E I.

**E**. L. a child six months old, was attacked in the spring of the year 1782, with symptoms of *Hydrocephalus*; at four months of age he was inoculated for the *small-pox*, and passed favourably through the disease, and had been hitherto healthy, though a child of a fair lax habit, and light-coloured hair. The first suspicion of disease was indicated by a considerable degree of stupor, which was succeeded in a few days by convulsions in the eye-lids, lips, and muscles of the forehead, accompanied

panied with contractions of the fingers and toes; the pupils of the eyes became dilated and insensible of light; the pulse, which was at first slow, became quick and intermitting: a *strabismus*, or squinting, rendered the distorted features still more frightful; the *fontanelle* not being closed, upon pressure a fluctuation was perceptible to the touch, as if the hand had been laid on a bladder distended with water: in this situation the child had continued upwards of a week, when the following plan was pursued.

The hair upon the *fontanelle* was removed, and a blister plaster applied, and which was kept constantly discharging for the space of three months, by an ointment made of a strong infusion of *cantbarides*.

One grain of *calomel* was given daily, till two scruples had been taken.

From about the tenth day, the symptoms seemed gradually to abate, till the fortieth, when the child appeared in health. But  
although

although the fits ceased, the *strabismus* in part remains to this period, now almost four years since the first attack: after the first ceasing of the fits, the child was liable, for nearly two years, to returns of them, at intervals of two or three months, without any obvious cause; nor did they ever appear to depend upon dentition: they have not appeared during the last year; and the faculties are as brilliant as usual, at its age.

The child has a voracious appetite; but its indulgence is prevented by the strictest attention of the family; and three or four times a year, a *calomel* purgative is given to cleanse the *primæ viæ*.

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C A S E II.

**E**ARLY in the year 1775, Robert Davies, the subject of this history, was attacked with an acute rheumatism, for which he was attended by a physician, under

under whose care the disease was so far removed, as to admit of a moderate application to business; but he never recovered his pristine health; and towards the end of the year, as the severity of the cold increased, he found himself gradually more and more indisposed, with a peculiar heaviness and pain of the head, which induced him, on the 27th of January 1786, to request my attendance: he was at this time about twenty-eight years of age, of a constitution rather firm in appearance, though reduced by indisposition. He principally complained of a pain and sense of load, above the forehead, and in the ball of each eye; this sometimes extended to the nape of the neck, where the pain was compared to a stricture, or to the pressure of a cord drawing the muscles tight, like a ligature, and sometimes to a confused gnawing pain: when the uneasiness in the fore part of the head was the most considerable, vision was affected materially; sometimes he thought himself lost in a mist, and could scarcely see at all, and the confusion was often increased by the objects



appearing double; and it became in the exacerbations so great, that he was incapable of walking straight, but staggered like a person intoxicated; the pupils of the eyes were extremely dilated at all times; the whole features had the aspect of depression, loaded and gloomy with a melancholy frown; though he had no occasion of mental distress, but from corporeal pain; which, when I saw him, had afflicted him, at different intervals, for about a month; sometimes daily, sometimes at the distance of a few days; but the exacerbations did not recur at any determinate periods, nor were they preceded by rigors; but, in general, came on gradually, and augmented in violence, till overcome by agony, he sought mitigation in bed, or in some reclined position out of it. The fits were irregular in their duration, sometimes continuing a whole day, or night, sometimes both, and even longer, and subsided gradually; the pupils, nevertheless, continued in a state of extreme dilatation, without any appearance of squinting or *strabismus*, throughout the whole course  
of

of the disease, except once for about ten minutes, a few days before he died.

In the exacerbations of pain, he cried out incessantly of his head, laying his hand usually on the forehead: in these states he breathed quick, impetuous; then suddenly changing to a slow, full, moaning respiration: the breath came from him heated, and loaded with a moisture, as if in a frosty day: he mostly sweated profusely in these exacerbations, but without any respite to his sufferings: his body was obstinately costive, which strong purgatives, aided by clysters, could not always obviate.

In the intervals of ease, he enjoyed a little society, and eat heartily; but the frowning countenance was never thrown off, though the periods of mitigation continued several days, at which times he was able to sit up and converse with the family, as if exempt from disease. The longer, however, the complaints preyed upon his constitution, these intervals lessened, the painful returns became more insupportable, and

and the strength more and more exhausted, till death closed the tragedy towards the end of March 1786.

When I first visited this patient, I prescribed small doses of *calomel*, *cicuta*, and *aconitum*, which he had not taken for the space of a week, when he appeared nearly recovered; and I really told him that I should not attend again without being requested.

In the beginning of February, I was informed of the return of his disease, which now, and for some time before I first saw him, had recurred at irregular periods, with symptoms, so far resembling an intermittent, as induced me to give the Peruvian bark very freely during the intermissions of pain: the pulse was generally rather slow than quick at all times, though the exacerbations were accompanied with coldness, heat, and profuse sweating: his stomach, in general, bore the remedy very well, except when costive, and then he sometimes rejected it. The constipation

was indeed so troublesome, that strong purgatives and clysters were sometimes incapable of procuring relief, till repeated for two, and even three, days successively.

I thought he was again better by this remedy, but it was of short duration, and he grew weaker in his bodily strength; on which account I recommended a decoction of bark, acidulated with elixir of vitriol, and he ever afterwards continued to take it, from the relief which he imagined it gave him; his attachment to it became, at length, so urgent, that he was unhappy unless it was by his bedside.

Before I saw him, blisters had been applied behind the ears, but without any particular relief. About a month before he died, I ordered one sufficiently large to occupy all the fore part of the head; and for almost a week afterwards he seemed better, but the disease again recurred: however, from this partial relief, I was encouraged to try the effects of a *seton* in the neck; it gave him much uneasiness, and  
after



forehead, and sense of weight in the head, induced me to suspect some oppression on the brain; but no affection besides the *Hydrocephalus* was discovered, though great care was used in the dissection, by Surgeons Vaux and Key.

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## C A S E III.

**G**. M. of the Borough, a child about two years of age, had been indisposed about six days when I was consulted, which was on the 12th of March 1786. I was then informed, that he had been feverish for about five days, and had since that period laboured under spasmodic affections of the legs and arms, and particularly so of the toes and fingers, which were drawn inwards, continuing rigid and inflexible. I found the pulse beat 120 in a minute, and the child lying in a heavy stupid state, with a downcast forehead, and slight muscular twitchings about the face and eyes: as there were no evident marks  
of

of teething, I suspected some mischief in the head: how far I was warranted in my suspicion, the following observations, extracted from the notes I took during my visits, will in some measure ascertain.

He was ordered one grain of *calomel* twice a day. Two leeches were applied to the temples.

March 14. Pulse 120. The pupils appear to be rather larger than in their natural state.

*Repet. Mercur.*

March 15. P. 120, with some degree of hardness. He does not appear to retain vision; he lays, in general, with his eyes half open, but without squinting—has not spoken for two days past; he appears to suffer much pain; frequently draws up his arms and clinches his fists; has had many thin stools.

*Inung. Nucha cum Ung. Cærul. fort ʒj. quotidie.*

March 19. No material alteration: refuses all nourishment but porter, which he drinks of freely. To-day the pupils are more contracted, but the same stupid state continues: appears to grow weaker; and I now ordered the bark three times a day: small blisters were applied behind the ears.

March 21. The pupils are more dilated; the debility is more evident; the pulse 126. He takes porter; all medicine is intermitted; but the ointment is continued.

March 24. The appearances continued much the same till this morning, when he was taken into the air, and seemed to feel refreshment from it.

After this period the stupor gradually declined, and he by slow degrees recovered his health.



C A S E IV.

ON the second of January 1786, I visited J. Davidson, a child about four years of age, whose symptoms I shall relate from the minutes I inserted during my attendance.

About ten days before I saw him, he had symptoms of fever, with a considerable *diarrhœa*; the latter soon subsided, and the fever was inconsiderable and irregular; but for some days he has lain in a heavy stupid state; the pupils of the eyes do not appear enlarged.

He was ordered to take a grain of *calomel* every six hours, in a mucilage of *gum tragacanth*. A blister was applied to the back.

Jan. 3. The *calomel* has not proved purgative, and the patient slept last night, but was troubled frequently with convulsive motions of the arms and eyes; and tosses

the head from one side to the other on the pillow, frequently moaning, but seems to know his brother and sister. The pupils are not enlarged. The pulse is 140 in a minute.

The *calomel* was continued. The head was shaved, and a blister applied to it.

Jan. 4. Pulse 126, and regular; the symptoms continue much the same; has had three stools.

Jan. 5. P. 120, and hard; had three stools; is feverish, and throws his head about much more violently; the eyes appear dim and more heavy, but the pupils do not seem enlarged; nor has he any *strabismus*; he takes nourishment; frequently screams out, as if in great pain, without pointing to the seat of it.

The draughts were repeated, with the addition of two drops of thebaic tincture in the evening.

Jan.

Jan. 6. P. 120. Is sensible ; takes nourishment ; does not throw his arms about as heretofore ; the tongue is moist ; suddenly discharged a large quantity of water from the eyes : had two stools.

The draughts were continued.

Jan. 7. P. 112. Passed an uncommon quantity of urine, and seemed every way mending.

From this time to the 12th, he took only two grains of *calomel* a day : at this period, he left off medicine, and gradually recovered.

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C A S E V.

**F** R O M the success attending the use of *mercury*, and the application of blisters, in some of the preceding cases, I began to entertain a favourable opinion of these remedies in the *Hydrocephalus Internus* ;

nus; but the following instance, which occurred since I wrote the preceding relations, tends to invalidate the efficacy of these remedies in this disease. As it is by a series of facts faithfully delivered, that the powers of medicines can be justly appreciated, I shall give the following history from the minutes daily made at the bedside of the patient.

Elizabeth Bell, a child five years old, is the subject of the present essay. She had lately the *Pertussis*, and there are still some remains of cough, though very slight. She has occasionally had, for the last month, an head-ach, but it has neither confined her from school, nor prevented her from enjoying her usual play: for the two days past, she has complained of more troublesome head-ach: the toes and fingers are drawn inwards by spasmodic contractions: she has vomited once to-day; the pulse is 112 in a minute.

I ordered one grain of *calomel* to be taken twice a day.

April 7. Has frequent convulsive motions of the limbs ; and the contractions of the toes and fingers still continue ; sees distinctly, and the pupils of the eyes do not appear to be enlarged ; the pulse is so irregular, as to prevent its frequency from being counted : keeps one hand almost constantly upon the forehead ; and complains of pain of the head ; body is regular. Ordered a grain of *calomel* three times a day in a mucilage of *gum tragacanth*.

April 8. Has not had the convulsive motions ; moans frequently in a mournful tone, and keeps the hand upon the forehead ; sleeps sufficiently ; has not had any stool : the pupils appear in a natural state ; the pulse is very irregular, sometimes running very rapidly, and then slowly ; and these variations happen about every three minutes ; frequently picks the nose, from whence it has bled a little.

I ordered the head to be shaved ; and frequently bathed with lukewarm vinegar and water.

The

The same quantity of *calomel* was continued.

April 9. The pulse beats slower, but is still intermitting; no convulsive motions have returned; and the moaning is less frequent; but a stupor continues, which the mother observes is precisely a week since its commencement; has had a copious stool, by the aid of a clyster; vomited in the night some foul green matter, streaked with a little blood; passed an unusual quantity of urine. Continued a grain of *calomel* three times a day.

April 10. The pulse, which is weak, intermits less, but the moaning has augmented; has a frowning of the forehead, though naturally possessing the most pleasing features; continues to discharge a large proportion of urine, and had some stools; had last night a violent convulsive fit. A blister was applied upon the head, and the *calomel* was repeated.

April

April 11. Continues to pass a large quantity of urine; the pulse is regular, and beats 120 strokes in a minute.

The *calomel* was continued; and, as occasion required it, a solutive clyster was exhibited.

April 12. The pulse continues regular, but makes 140 pulsations in a minute; the patient is hot, with a flushing of the face; has had very little rest; appears sensible; passes much limpid urine, and sometimes involuntary for the first time; continues moaning, with its hand to the forehead; had a little squinting yesterday, and to-day it is more obvious; but the pupils do not appear dilated.

The *calomel* was continued, with two drops of thebaic tincture each time.

April 13. The pulse is regular, beating 118 times in a minute; has slept a good deal, and has had two offensive stools.

The *calomel* was continued, and one drop of thebaic tincture with each dose. The blister on the head discharges freely.

April 14. Squints very little to-day ; the pulse is 120 ; has had two stools ; hitherto has taken plenty of nourishment, but refuses almost every thing to-day ; the breath has an offensive smell, and there is some soreness of the mouth.

Instead of *calomel*, an infusion of Peruvian bark was substituted.

April 15. The pulse is regular, and beats 140 strokes in a minute ; has had a violent convulsive fit ; the eyes roll about wildly, without *strabismus* ; and the patient does not appear to see.

The bark was omitted, and the same quantity of *calomel* again administered.

April 16. The pulse is 150 ; the pupils do not appear enlarged, nor is there any squinting ; has had another convulsive fit ;  
sweats



sweats profusely; constantly leans the head forwards, the forehead frowning.

Seven grains of *mercurius alcalizatus* were ordered to be given three times a day.

April 18. Could not attend the child on the 17th, though the medicine was repeated. To-day the pulse beats 140 with regularity; the pupils are now dilated for the first time, without any *strabismus*; has not spoken for two days past, but to-day eagerly cried out for "*something to eat*," and took much liquid nourishment; discharges much urine; moans a little; and every now and then has convulsive motions of the arms and legs, with faint shrieks.

The medicine was continued.

April 19. Died to-day, and on the next, the head was opened in my presence, by my friend, W. Norris, Surgeon to the General-Dispensary. We found about five or six ounces of water in the ventricles of the brain, and no other appearance of disease.

It

It certainly may be doubted, whether the Cases I have related, particularly the third<sup>m</sup>, were really the disease suspected; dissections, however, evince, that the *Hydrocephalus* frequently occurs, and is very rarely cured; this may be an apology for offering the foregoing desultory observations, as the symptoms I have described, whatever may really have been their causes, are relieved by *mercury*, and blisters, more certainly, than by any other means I am acquainted with; and an encouragement to such a practice is, the safety of giving this mineral to children, who will bear twice as much of it, without *ptyalism*, as an athletic person can.

Although this disease is not restricted to any age, as I am convinced by dissections; yet it most generally prevails in children, which, probably, the greater laxity of their

<sup>m</sup> My suspicions respecting this case, were more excited on account of the particular form of the head, which is frequently observed in *Hydrocephalics*. It is usually round in its whole bulk, and comparatively broad; with a prominent or broad forehead; a flattened *apex*; and the *bregma* large.

solids

solids, and the larger proportion of fluids, in childhood, may conduce to the frequency of the disease. May not, likewise, the usual mode of nursing, contribute to the frequency of it? Those have been reputed the best nurses, who have shook and tossed the children under their care, with the greatest jactation, which, considering the tender fabrics upon whom it is performed, may produce more harm than good. The manner of children sleeping on the lap, with the head sometimes hanging down for hours, would in grown people occasion painful affections of it; and why not to infants, whose brain is more vascular?

Children, regardless of the future effects of exercise, are apt to place themselves in very improper attitudes, sometimes standing on their heads, at others, exerting themselves, who shall hang the longest over rails, with the head downwards, in which position I have often counted several on one rail; besides the violent exertions of running, leaping, &c. I once knew a parent, fond of an only child, who used to

amuse himself with letting the tender object creep down his thighs and legs, and twisting underneath, then crawl up again: this child died of the *Hydrocephalus*. Similar instances, succeeded by the same fatal disease, I could enumerate here; but these suggestions are only introduced, as cautions against exercises of children, which oblige them to hang down the head for a length of time, and which may be suspected to excite turgescence of the brain.

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### A R T I C L E <sup>175</sup> X.

*Some Account of an unusual Exfoliation of the Cranium: In a Letter to J. C. LETT-SOM, M. D. &c. from Sir THOMAS GERY CULLUM, Bart. St. Edmundsbury.*

Read May 1, 1786.

**I** HAVE enclosed you a sketch of a very large Exfoliation of the Cranium, the history of which is as follows:

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In the year 1779, a poor lad, about seven years old, in the absence of his mother, it is supposed, was taken in a fit, and fell into the fire, where he might remain, as far as can be guessed, a quarter of an hour, till his mother returned. A year elapsed before the *eschar* of the burn, he received at that time on his head, digested off, which then left the bone (as here sketched) quite bare; in about three months afterwards, the denuded bone was cast off, and one large sore, covered with granulations of flesh from the *dura mater*, then presented itself: in about six months after the Exfoliation took place, the sore was about the size of the top of a small tea-cup, and in a healing state; and the boy in perfect health, strength, and senses.

The cure of the above extraordinary case owes every thing to nature, having fallen under the care of one the most illiterate and unskilful.

The Exfoliation, you see, consists of the *whole* (both tables) of the *os parietale* on

one side, and part of the other, and a portion of the *os occipitis*. I have got a cast of the bone in plaster of Paris; neither persuasions, or money, would tempt the mother of the boy to let me have her *child's skull*.

In the autumn of 1785, I saw the lad from whence this Exfoliation was taken: very little ossification had been produced by nature towards the reparation of the injury; there is still a sore, of the size of a crown piece, from which there is a large discharge; the edges of the *os frontis*, the remaining parts of one parietal bone, and the *os occipitis*, are at too considerable a distance, for ossifications to shoot out and unite; and could nature ever repair this loss of bone, she could not do it, I think, till a *cicatrix* were formed: it is observable in compound fractures, that the bone acquires but little strength, whilst the wound continues open, or there is much discharge.

No Surgeon ever attended this boy; the mother alone dresses the sore, and you may depend



depend upon it, uses greasy unguents, not in a small quantity, which makes every thing dirty, and promotes a *fungus*, and a large discharge. I once offered my services to cure the boy, without being accepted.

January 10, 1786.

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A R T I C L E XI.

*Case of a singular Enlargement of the Heart,*  
by THOMAS OGLE, Surgeon to the MID-  
DLESEX-DISPENSARY, and F.M.S.

Read September 26, 1785.

**J**OHNN JUDD, twelve years of age, was received into the Middlesex-Dispensary in December 1783.

He complained of pain and unusual oppression about the stomach and chest; which symptom was much increased by

eating solid food. His sleep at nights was little and disturbed; his breathing difficult; he had a constant cough, without expectoration. The left cavity of the *thorax* was evidently enlarged, the ribs projecting rather forwards. This projection was most evident about the sixth, seventh, and eighth ribs; at which place, and near their greatest curvature, was a strong pulsation, extending, with an undulating motion, to the pit of the stomach: this was so strong, as to be distinctly seen, even when covered by the waistcoat.

The lad traced these complaints to a fall, which he had met with a year before. He had then lost the use of his limbs; and, though he had again recovered them, he had never been free from the pulsation at his stomach. His countenance was pale, and expressive of the greatest anxiety; he sighed frequently, and complained of his heart; he seemed conscious, that no relief was to be expected, and that his death was near at hand.

His

His pulse was weak, but neither quick nor irregular; his evacuations were good.

For the space of a month, the lad's complaints gradually increased. The pulsation extended wider, and was more distinctly seen. His cough, and difficulty of breathing, became more troublesome. He was unable to lie on the back, or right side. The painful sensation about his chest still continued; it felt, he said, as if his heart was rolling about like a great ball.

From the symptoms it was evident, that the heart, or *pericardium*, was the seat of the disease; and it was conjectured, that the latter contained water in it. This appeared more probable, from a sudden swelling of the *abdomen*. About six weeks after the lad applied to the Dispensary, and immediately before this enlargement, he had a severe fall, which evidently hastened his death. From that time he was confined to his bed; his pulse became irregular, and so small as scarcely to be felt; his belly increased rapidly; his pain was more in-

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tolerable;

tolerable; and his extremities grew cold and œdematous. In this state he remained about twenty-four hours, when he died.

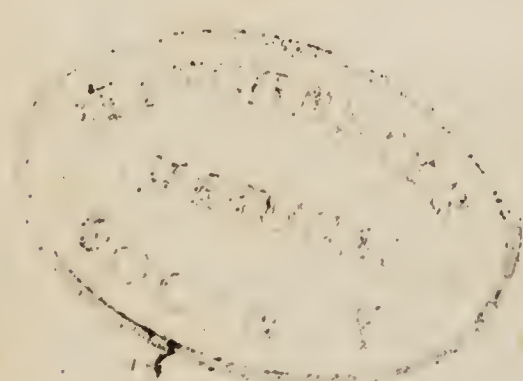
On opening the *abdomen*, it was found to contain a large quantity of watery fluid. The intestines were inflated, and seemed preternaturally enlarged. The liver was much increased in size, and of a schirrhous degree of hardness; when cut into, the knife seemed to grate, as if rubbing against sand. The gall bladder was considerably distended with bile. The spleen was, like the liver, enlarged, and remarkably hard. The other *viscera* appeared in a sound state.

In the *thorax* was contained some water, tinged with blood; the quantity, however, was not considerable. The lungs adhered, in some places, to the ribs and diaphragm, but were, in other respects, sound. They were compressed into a small compass by the *pericardium*. On removing this, together with the heart, out of the body, there were found marks of inflammation on the surface of the heart, about which  
the

the *pericardium* adhered so firmly, as to be separated by no force. The heart in this state was enlarged to three times its natural bulk, and appeared like an unformed mass of flesh. The enlargement seemed to consist entirely in the thickening of the muscular substance of the heart, as the cavities appeared of their natural dimensions, and free from disease.

These were the principal appearances on dissection,

It is evident, that the symptoms attending this disease, are sufficiently accounted for by the inflammation and immense size of the heart. It is also clear, that it was one of those unfortunate cases, where medicine can only be serviceable in alleviating symptoms, and rendering death less painful.



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ARTICLE XII.

*A fatal Case of a morbid Enlargement of the Prostate Gland, with a singular Appearance in the Bladder, &c. In a Letter to J. C. LETTSOM, M. D. &c. by ANTHONY FOTHERGILL, M. D. F. R. S. and C. M. S.*

Read May 1, 1786.

DEAR SIR,

**T**HE following pages contain the history of a remarkable Case, which my late worthy friend, Dr. Hunter, a short time before his death, expressed a wish, might be published for the good of society. If you think it suitable to your present design, it is entirely at your service.

W. C——, Esq. April 23, 1777, aged sixty-four, had for several years past, at intervals, laboured under great difficulty  
of

of urine, sometimes amounting to a suppression. These symptoms were generally exasperated by the use of acids, or riding on horseback, when the urine would suddenly appear dark-coloured, or bloody, attended with pain in the loins, and parts adjacent. At length, he could only pass it when in a *standing posture*; the urine high-coloured, in small quantity, and discharged by drops involuntarily. Great pain and distention about two inches below the navel, attended with low fever, intense thirst, parched tongue, pallid countenance, flatulency, and constipation; pulse from 89 to 96 and upwards, low, unequal, and frequently intermitting, accompanied with involuntary twitchings, anxiety, and delirium.

The introduction of the *catheter* having lately been tried in vain, he could by no entreaties be now prevailed on to undergo a repetition of that operation, though the symptoms strongly indicated a permanent obstructing cause in the urinary passage. Yet was there no apparent venereal symptom,

symptom, no stone or gravel ever voided, nor any apparent tendency to scrophulous, or glandular obstructions, to which the disease could be fairly attributed. A consultation was held with two other Physicians. Mercurials, purgatives, and diuretics proved fruitless. The case was then stated to Dr. Hunter, who immediately returned the following very satisfactory answer.

“ DEAR SIR,

“ YOUR account of Mr. C——’s deplorable case, and the means you have used for his relief, gives me a perfect confidence in your judgment and attention; and therefore my best advice must be, that your patient should be directed in every thing, rather by you, who see him, than by any Physician in England who has not that advantage. In most cases, indeed, and especially in this, it is our duty *to know as much of the nature of the complaint as possible*. You have urged, and he has declined, the proper examination. I must entreat him to yield to our anxious solicitation. No doubt there is a stone, or gravel  
vel



vel—but I suspect there is something besides, which may be easily discovered, without giving him pain: I have often seen the same sort of symptoms in elderly men, arising from an indurated and enlarged prostate. This can be certainly known by passing a finger up the *rectum*. The prostate may sometimes be found to fill up the whole cavity of the *pelvis*, and, in that case, the bladder lies altogether above the *ossa pubis*, so that it is difficult to reach it with the *catheter*, both on account of its distance, and of the angle which the *urethra* makes with the neck of the bladder. Yet a good, silver, flexible *catheter* (which might be sent from London, if your Surgeon has not one) would find the way, with very little pain; and it would give immediate ease, if it be the distended bladder (as I suspect it is) which gives the pain and distention below the navel.

“ There may, likewise, be a stone fixed in the *urethra*, which would be discovered by the *catheter*. I cannot bear the thought of his absolutely refusing a trial of what is

at

at the same time so harmless, and so likely to give him relief.

“ This is all I have to say. You are so fully possessed of the methods of soothing and palliating symptoms, that I think you want only a skilful examination. I wish your patient the blessing of ease and health, and you the comfort of having made him well. I am ever,

“ Dear Sir, &c. &c.

“ WILLIAM HUNTER.”

Agreeable to Dr. Hunter's advice, we renewed our sollicitation, but he remained determined against undergoing the use of the *catheter*, or any other operation; nor indeed could they now be urged with any prospect of success. Mild laxatives, anodynes, and demulcents, tended to mitigate his sufferings, but his strength being totally exhausted, death soon happily released him from his calamities. The next day his body was opened by an able Surgeon, who favoured me with the following particulars,

as I could by no means attend in person, being distant upwards of twenty miles from the place.

“ On opening the cavity of the *abdomen*, the bladder was found adhering to the *peritonæum* before, and to the *omentum* and intestines at its *fundus*, or upper part, which extended some way above the *umbilicus*. The intestines, likewise, adhered to the *peritonæum* at each side of the *abdomen*.

“ The bladder contained five pints of urine, which being mixed with a mucilaginous matter, gave it the appearance of whey; but after standing some time, the *mucus* separated in great quantity, and fell to the bottom of the vessel. The urine did not coagulate by heat, or leave any thing particular after evaporation, more than common urine.

“ The coats of the bladder exhibited marks of disease; the internal being partly abraded, the external coat considerably thickened, and irregularly distended; the muscular

muscular fibres having lost their usual appearance, were become white, and preternaturally enlarged, like bundles of straw, especially on the inside, near the neck of the bladder. But what was still more singular, the bladder was *divided in the middle by a membrane running across it*, which was perforated by a hole large enough to admit a little finger, so that when the upper part was emptied, it was immediately filled again by pressing the lower part next the *pubis*, which forced the water through the aperture in the *septum*. The prostate gland was enlarged to *more* than the *bulk of an hen's egg*.

“ There was no obstruction discovered in any part of the *urethra*; but the obstacle to the *catheter*, both before and after death, must have been owing to the great distention of the bladder, and enlargement of the prostate gland; both which contributed to form so acute an angle in the *urethra*, as not to accommodate the instrument.

“ The *ureters* were both enlarged to  
“ twice their natural size. No calculous  
“ concretions were found either in the  
“ bladder, *ureters*, or *pelvis* of the kidneys,  
“ nor any other morbid appearance in the  
“ abdominal *viscera*, except what has been  
“ mentioned. The contents of the *thorax*,  
“ he adds, were not examined.”

The remarks which have occurred to me from duly considering the preceding history, are chiefly as follow :

1st. The enlargement of the prostate gland, and the other morbid appearances in the bladder, together with its adhesions to the adjacent parts, denote a considerable degree of inflammation to have accompanied the first stage of the disease: and also explain the cause of the pain of the loins, and other symptoms which greatly resembled those of the nephritic kind. The inflammatory disposition which seems to have laid the foundation of the disease, probably gave rise at the same time to the formation of that *singular appearance* of a membranous

VOL. I. P *partition,*

*partition*, by producing at first a partial separation of the internal coat of the bladder, which being gradually extended by the pressure of the urine, at length formed a distinct cavity.

2d. The dilatation of the *ureters*, seems to have been a natural consequence of the urine being accumulated in them, in the last stage of the illness. For the coats of the bladder when kept in a preternatural state of distention, must compress the extremities of the *ureters* which pass obliquely between them, and of course retard the descent of the urine into the bladder.

3d. It appears that where there is no previous local affection to point out the nature of this disease, it is scarcely distinguishable from a calculous complaint, even in its advanced state, especially when the patient will not submit to the necessary examination, so properly insisted on by Dr. Hunter, and which ought never to be neglected, where there is the least doubt or suspicion.

suspicion. Whenever there is an *obstinate* obstruction of urine in aged people, attended with *extreme difficulty* of introducing the *catheter*, and an inability of discharging urine, unless in an *erect posture* of the body, it will afford a strong presumption that the disease proceeds from a considerable enlargement of the prostate, as in the preceding case.

4th. In this deplorable situation, there can be no hopes of a complete cure, without dispersing, or extirpating the morbid tumor, both which seem to be equally impracticable; nor can even temporary relief be administered without first emptying the distended bladder. Every likely means therefore to accomplish this ought to be attempted.

Might not an inverted position of the body during the operation, tend to diminish the pressure of the urine upon the diseased part? And might not this also afford the operator an opportunity of reducing the distended bladder nearer to its

natural situation, and thereby facilitate the introduction of the *catheter*?

5th. When this, and other resources fail, and where the patient has resolution to undergo a doubtful operation, it perhaps may be adviseable to puncture the bladder through the *rectum*, and thus discharge the urine, provided this can be performed without wounding the scirrous gland, which might indeed dispose it to contract a cancerous disposition.

6th. If the disease could with certainty be distinguished at the beginning, or even before the *critical period* when the tumor changes from the *inflammatory* to the *indurated* state, might not a kindly resolution be reasonably expected from a course of the saline purging waters of Scarborough, or Cheltenham, or of mild mercurials, and antimonials assisted by suitable evacuations, and a strict antiphlogistic regimen?

I am, with the greatest respect, dear sir,  
your very humble servant,

Bath,  
Mar. 26, 1786.

A. FOTHERGILL.



A R T I C L E XIII.

*An extraordinary Case of Delivery: By*  
JAMES SHAW, Surgeon, F.M.S.

Read February 15, 1786.

**E**LIZABETH, the wife of Daniel Barker, a Shoemaker, having in October 1766, spent the evening with some degree of festivity to the honour of St. Crispin their tutelar saint, though not at all to exceed the bounds of sobriety; about twelve, the company not being gone, she was obliged to be carried up to bed suddenly, perceiving a violent weight and fulness protrude through the *pudendum*, as though the greatest bulk of her child was born. Her midwife was sent for, who came to her at two o'clock, and found she had regular pains, which instead of dilating the *os uteri* rather constringed it, and very powerfully threatened to push down the

whole *uterus* and its contents with it. I was called in about six o'clock the same morning; I found the patient faint, low, and very much terrified, but the pulse not full or very quick; on examining I thought the whole *vagina* was turned outward, and left the hairy scalp of the *fœtus* in the centre of a very large tumor; being now compelled to uncover the parts, I was astonished to see the *os uteri* dilated about an inch and a half, or two inches in diameter, exceedingly tense though thick, of a deep red colour, with a view of the hairy scalp; the whole surface of the tumor of the same deep red, and very turgid; the *labia*, great part of the *nates*, and even the *mons veneris* were out of sight by this extraordinary tumor. She had had many pains, and while I sat with her she had one nearly every five minutes, when I found the parts to push still outwards and a kind of rotatory motion in the head within the *os uteri*, but not in the least to further dilate it.

I attempted

I attempted gradually to push up the head, but I found my efforts to aggravate the symptoms of faintness, and give her intolerable pain; the midwife too had tried that sufficiently. It made me exceedingly unhappy, the surface of the *os uteri* beginning to appear livid!

I told the midwife I would endeavour to see Dr. Mackenzie, and would call again as soon as convenient; on telling him the case, he pronounced that she must die, desired me to send her an opiate and see her again in the evening; but to be very cautious in handling the parts. About seven o'clock in the evening I went to see her, and found her pulse sinking, with clammy sweats; the pains as often, but not so strong. The appearance more livid with the *epithelia* in many parts abraded, where there also appeared several limpid drops of *serum* like very small drops of dew, which I attributed to the turgidity of the parts during each pain.

While I sat by ruminating in my thoughts what to do, I with difficulty passed my finger by the *anus* to the edge of the *perinæum*, which I found very strongly girtting the tumor; however, I got my finger within it, and found it still capable of further distention; I then carried the fore finger of my other hand to it, and endeavoured with them both carefully to draw the *perinæum* back; and as I did that, I thought the tumour seemed gradually to recede, and on proceeding with the gentlest means at first, and drawing my fore fingers a little from each other, and still pulling the *perinæum* back, I at length effected a complete reduction of the tumor, when it was about nine o'clock at night. I then went home and ordered her twenty drops of *thebaic* tincture with ʒss of cordial confection, first begging the midwife, a very intelligent careful woman, to sit by her with her hand to the parts, especially when her pains came on, to prevent a return of the tumor; and requested she would not attempt to dilate with her fingers the *os internum*. She after this slept two hours, when

when her pains returned, and at or near four in the morning, she was happily delivered of a fine boy, and had not one bad symptom during her lying-in.

She had had four children before this, has had two since, and is very healthy, except a slight bearing down, as she calls it, after working very hard.

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#### A R T I C L E X I V .

*An Account of two Cases of a Bronchocele, wherein the Use of burnt Sponge appeared to have a very considerable Effect: By TIMOTHY LANE, F. R. S. and Fellow of the MEDICAL SOCIETY.*

Read June 11, 1776.

**I**N the month of January 1764, a young lady, aged about seventeen, applied to me for a Bronchocele, which she had perceived

ceived growing about twelve months. The following powders and mixture were ordered.

℞ *Pulv. Milleped.* ℥j. *Cinnab. Antim.* ℥ss.  
*Mer. Alcaliz.* gr. iij. *fiat Pulvis Nocte*  
*et Mane sumendus.*

℞ *Tartar solub.* ℥ifs. *Aq. puræ,* ℥vj. *Tinct.*  
*Stomach.* ℥j. *Syr. Croci,* ℥ij. *Misce*  
*sumat Coch. j, c. sing. Pulv. superbibend.*  
*Coch. iij.*

These medicines proving too solutive, the *Tart. solub.* was omitted, and the powders were continued rather less than three weeks, without any apparent benefit; when I was informed (by whom I do not remember) that a lozenge of burnt sponge placed under the tongue at night, going to bed, and remaining till dissolved, had been of use. The informer being a person of sufficient credit, induced me to try the following lozenges.

℞ *Spong. Ust.* ℥i. *Syr. Simp.* q. s. *fiat*  
*Trech. vj.*

These

These were continued less than a month, when the tumor quite disappeared, and has not returned since, now twelve years.

A question naturally arising from the above, is, whether the previous medicines, or the lozenges, succeeded; for though the decrease of the tumor did not appear, manifestly, to have taken place, till after the use of the lozenges; yet, the former medicines might have been effectual.

After this, two persons applied to me, in which neither medicines nor lozenges seemed to succeed effectually: one a servant, who was rather better for them; but some circumstance (probably leaving her place) prevented her continuing their use.

A young lady, in a family where I was visiting, having a Bronchocele, where the tumor was on the right side of the neck only, I proposed some lozenges to put under the tongue, which she consented to. At first she found them troublesome, from the unusual sensation in  
her

her mouth, but in a short time they were no inconvenience, she going to sleep, as usual, before they were dissolved. In about a month she seemed apparently relieved, and is now well, having continued them about four months. This young lady was about fifteen years of age, and had the complaint about two years before I saw her. After using the lozenges about three weeks, she complained of head-ach; supposing it to arise from costiveness, I gave some *Infus. Sennæ*, which relieved her. She has taken no medicine since, so that we may here properly consider a real effect to have arisen from the lozenges.

Whether the same lozenges used in the day-time, would not do as well as at night, some of the gentlemen of this society may have an opportunity of inquiring.

The facts are related with simplicity, and may be new to some persons, while others, from their observations, may favour the society with a further account  
of



of the same disorder, and its method of cure; in which they will promote the intention of the writer and of the Society.

Aldersgate-Street,  
June 10, 1776.

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A R T I C L E XV.

*Case of Rheumatism, cured by Electricity:*  
By ROBERT SHERSON, F. M. S.

Read June 26, 1777.

A LADY about fifty years old, the mother of many children, of a very nervous, irritable, and somewhat scorbutic habit, subject to spasms of the stomach, and erratic pains in the limbs (which she called Gout). She was often troubled with severe head-aches, so as to be considered constitutional.

This

This lady complained to me, about three years ago, of a violent and constant acute pain in her right arm, which had held her for above a month, about the tendinous infertion of the *Deltoid* muscle; whenever she endeavoured to extend or elevate it, she suffered most exquisite torture; no inflammation or tumefaction was observed, nor was there pain from pressure. I conceived this complaint of the rheumatic kind, and had recourse to the alterative plan: small doses of *calomel*, *sulph. antim. precip.* with *opium* and *gum guaiac.* were administered at bed-time; also neutral salts in *decoct. lign. guaiac. ter in die.*

These means were pursued about a week, and the pains were supposed to be alleviated: however, some of the lady's friends seemed uneasy, because she was not immediately well; on which, an eminent physician was consulted, who directed the *extr. cicutaë*, the dose to be increased *gradatim*, till our patient took *ʒj singulis diebus.* She persevered in this course for six months, her complaints gradually becoming

ing

ing worse. From this tedious and unsuccessful trial, she became impatient; her physician having signified her disorder was the effect of a latent cancerated *humor*; she had therefore no chance but perseverance. Under these unhappy circumstances, she determined to discontinue her medicine; but I continued to visit her occasionally, at the request of her friends.— Finding she had no hopes from medicine, I expressed my desire she would try the effect of electricity; but recommended her first to take the opinion of her physician. She would not see the gentleman she had already consulted; but applied to another, equally eminent in the profession, who very much recommended the trial: at the end of the first week there were evident marks of amendment, by abatement of pain, and a tranquillity of mind, which confirmed the advantage already gained. The undertaking was as fortunate as could be wished, though the electrical means were not applied after the present improved manner, but in gentle shocks: through this method the lady was recovered in

about three weeks, from the most distressful situation imaginable, and has been free from the pain of her arm ever since. I beg leave also to remark, her general health is improved, and her head-aches are less frequent.

These circumstances, and other cases I have seen, lead me to consider, how far we ought to rely on the cases given by Dr. Storck; for De Haen's Epistle *de Cicuta* denies such happy consequences having ever happened, as are related by the Doctor.

I should be happy to see the opinion of different gentlemen, well versed in practical electricity, how far the various observations they have made thereon, seems an acquisition in Physic; for I am sorry to find some amongst my medical friends, that have great doubts as to the efficacy of electricity, in any disorder; but I am convinced I have seen it singularly beneficial in spasms and various obstructions, particularly of the *menfes*.

ARTICLE

ARTICLE XVI.

*A Case of the Stone, in the Urinary Bladder, successfully treated; by giving Water impregnated with fixed Air, by Means of Salt of Tartar, and weak Spirit of Vitriol: By Mr. JOHN HARRISON, late Surgeon at EPSOM, now of MOUNT-STREET, BERKELEY-SQUARE. Communicated by NATHANIEL HULME, M. D. &c.*

Read March 20, 1786.

**M**R. John Hobman, of Epsom, late Dantzick Merchant, was the subject of this case. He was a well-made strong man, of an excellent constitution, and before this complaint could walk ten or twelve miles a day with great ease to himself, though at the advanced age of seventy-four or five years.

He had been afflicted with calculous symptoms about two years, as nearly as I

can remember, before I was consulted; and was so fully convinced in his own mind of having a stone, that he used to express himself by saying, “ That he felt  
“ the weight of it pressing on the neck of  
“ the bladder.”

He never had a severe fit till the month of January 1779, when he was seized with a suppression of urine, to relieve which I was obliged to pass the catheter, in order to draw off his water.

The instrument struck against the stone in so remarkable a manner as to affect both the ear and the touch very singularly, and rather surprised me, notwithstanding I had been previously acquainted by him that there was certainly a stone in the bladder. Its magnitude I supposed to have been, from the sound and touch, about the size of a small pullet's egg, and rather globular. A few days afterwards I was obliged to introduce the catheter again to bring away the water, and found the stone pressing on the neck of the bladder,  
which

which receded the moment that the instrument touched it, and then a quantity of palish urine ran freely off.

From the almost continual irritation of the stone, and Mr. Hobman's advanced age, his case was by some deemed fatal. Nevertheless, having paid great attention to him, I was of a different opinion; apprehending from his native strength, that he had *stamina* equal to support him some years longer; a sufficient reason I thought to justify the trial of some lithontriptic medicine.

With this view I proposed a *lixivium* to be given, as prepared by Mr. Lane, an ingenious apothecary in Aldersgate-Street. The physician who was consulted, preferred the use of water impregnated with fixed air, by means of salt of tartar, and weak spirit of vitriol, as recommended by Dr. Hulme in a Treatise published in the year 1778, intituled, "A safe and easy Remedy, proposed for the Relief of the Stone and Gravel, the Scurvy, Gout, Q 2 " &c."

“ &c.” but with which I was not at that time acquainted.

This lithontriptic medicine was given twice a day, and after our patient had taken it about seven or eight weeks, to the best of my recollection, he was suddenly relieved one evening, by a large discharge of cretaceous, or rather stony matter in the urine, without any pain or inconvenience. It ran from him during the greater part of the night involuntarily, while he was asleep as well as when he was awake. It soaked through the bed, and sacking of the bedstead, and ran upon the floor, staining it with a whitish gray hue, or rather with the colour of freestone. The powder left behind upon the floor, and in the chamber-pot, was almost as fine as if it had been levigated. He never observed any calculous matter to be voided in his urine before the use of this medicine, and the whole of it was discharged in the space of five or six days.

From



From this time all symptoms of a stone in the bladder disappeared, and he recovered his strength much quicker than people in general do at his time of life; but was not able to walk so well afterwards as before; the fit seeming to have weakened his feet. I advised him to persevere in the use of the lithontriptic, lest some fragment of the calculus might remain, which he did for two or three months longer.

In January 1781, he complained of costiveness and piles, and that his urine did not pass so freely as before, but rather with a contracted stream. Some lenitive electuary with *sulph. præcipit.* were prescribed; and I recommended him to use the medicine of Dr. Hulme again, but could not prevail upon him. By means of the above electuary, and *ol. ricin.* he seemed to be relieved. During the year 1782, he took but very little medicine, and his complaints were generally as last mentioned.

In 1783, besides an habitual costiveness, he was frequently seized with an hæmor-

rhoidal flux while at stool, and voided at different times large quantities of blood, These were attended with a frequent *tenesmus*, and retention of urine; which induced me to think that some part of the stone remained still undissolved, and therefore I once more entreated him to begin with the lithontriptic, but in vain.

On the 28th of October 1784, his complaints becoming almost insupportable, he sent for me, and I advised the immediate use of an emollient *enema* to be thrown up twice a day, with a view to foment the parts, and empty the intestines.

October 29. He could at this time hardly pass any urine; but by throwing up an *enema*, it enabled him by dribblets to make about a pint.

October 30. By sitting over the steam of hot water, put into a close stool-pan and frequently renewed, for the space of an hour, his urine dripped slowly away, but he passed a very indifferent night.

October

October 31. This day there was almost a total suppression of urine; but he had three stools without assistance.

November 1. He informed me that he had made a little urine in the night; but that it was evacuated with the greatest difficulty. On examination I found that there was an enlargement of the prostate gland. An emollient injection was administered in the evening, and an anodyne draught was given at bed-time.

November 2. In the evening he had a total suppression of urine; and an *enema* was thrown up, which procured him three or four stools.

November 3. About four o'clock in the morning I was called to him, and on my arrival informed that he could pass no urine. As soon as a warm bath could be prepared, he was put into it, and in a few minutes after he had been immersed, he voided about a pint of water. When he came out of the bath he was put into a

warm bed, and a cardiac anodyne draught was given, which procured him four hours good sleep. When he awoke, he made more water. An emulsion of *ol. ricin.* was occasionally administered, which kept the body gently open.

November 4. A difficulty of urine continuing, I endeavoured to pass the catheter, as the frequent use of the warm bath occasioned faintness, but was prevented by a stricture in the *urethra*.

November 5. His urine came away of itself, so as to occasion no further uneasiness, a general atony now prevailed, and he was attacked with a violent *diarrhæa*.

November 6. From this day to the 12th (on which he expired) he daily grew worse, and the *diarrhæa* resisted every effort made use of to check or suppress it.

The day after his death, I was permitted to inspect the body. The urinary bladder contained

contained about a quart of water, but not the least calculous concretion was found therein. Its coats were rather thinner and softer than usual, and the innermost one had put on a dark gangrenous appearance. The neck of the bladder was much inflamed, particularly on its external part; and also the whole length of the *rectum*. The kidneys were found, and without any stone or gravel. The ureters were somewhat enlarged. In the *urethra* was found a stricture, seemingly caused by inflammation, and the pressure of the prostate gland, which was indurated and enlarged. All the other *viscera* were perfectly found, and I never saw a finer subject opened.

## ARTICLE XVII.

*A Case of Hydrops Ovarii and Ascites: By*  
WILLIAM FRENCH, Surgeon, and F. M. S.

Read November 19, 1776.

MRS. Procter, of Red-Lion-Passage, in the parish of St. George the Martyr, about the time of cessation of her menses, laboured under a variety of complaints, which, after many years continuance, terminated in a swelling of the abdomen.

She was prescribed for by many gentlemen of the faculty, without the least success.

As the tumor increased, her inclination for food also increased; and at length she became so clamorous, that she never was easy but when taking nourishment.

She

She had a strong prepossession there was something alive in her belly ; and on declaring this to gentlemen of the faculty, who occasionally visited her, their minds were diverted from the proper cause of her complaint, and their compassion excited to provide her with the necessaries of life. Nine or ten years elapsed before the least fluctuation was perceptible ; at length, however, it was clearly felt, and the poor woman consented to be tapped, as the only means of prolonging life ; but she died early in the morning of that day the operation was intended to have been performed.

Her body was opened by Mr. Langley, Surgeon, in the presence of Mr. Taylor, her Apothecary, and myself. We first drew off about seven gallons of water, by means of a trocar ; On dividing the *parietes* of the abdomen, a large substance presented, extending from the *pelvis* to the diaphragm ; this was found to be the right *ovarium*, divided into many cysts, and containing a fluid of different degrees of inspissation.

in-spissation. The abdominal *viscera* appeared no otherwise diseased, than what might reasonably be expected from the quantity of extravasated fluid. By the pressure of the enlarged *ovarium*, the natural situation and form of the stomach was altered in such manner that the *pylorus* was the most depending part of it, consequently incapable of retaining the food she received, a sufficient length of time for the purpose of digestion. A certain degree of distention in the stomach is certainly necessary to create satiety; and as, in this patient's situation, that could not possibly take place, we may naturally conceive that whatever was received into that *viscus*, passed immediately into the *duodenum*, and thence along the course of the intestines: these also having lost their assimilating power, the absorption through the lacteals must be very defective, and, perhaps, serve to explain the cause why the patient was constantly desirous of food, and extremely languid during the interval between her meals.

Having



Having found sufficient cause for the suffering and death of the patient, we pursued our dissection no farther.

The flaccid state of the integuments of the abdomen, after discharging the fluid, and the extreme thickness of the cysts of the *ovarium*, would (in the living subject) have rendered a second perforation difficult to be performed ; and, at best, nothing more could be expected than temporary relief.

N. B. This case is presented to the Medical Society for its singularity, more than for any practical inference to be drawn from it.

## ARTICLE XVIII.

*A Case of Angina Pectoris: By JOSEPH  
HOOPER, Surgeon, &c.*

Read April 10, 1785.

**A**N eminent tradesman in the neighbourhood of this city, aged about forty-five years, of stature rather short, tending to corpulency, and short-necked, who accustomed himself to spend his convivial hours rather too freely, had, for three years past, been subject to a pain in his left side; which, however, was not so considerable as to claim much attention, or induce him to seek medical assistance, till about six months before he died, when, having caught cold upon a journey, it grew more troublesome, attended with a short dry cough, for which he was let blood, and took such medicines as generally afford relief under such symptoms,

and from which, though he found some abatement of his complaints, so as to pursue his business, yet, in about a month after, the cough and pain increased to a degree beyond what he had hitherto felt, with an acute darting pain from his breast, quite through to his back, a considerable *dyspnœa*, and feverish heat at times; his pulse was hard and quick, though not full nor irregular. At this time he could not, without much difficulty, lie but on the left side; and found the easiest posture was sitting with his body inclining forward, whilst a gentle pressure was made on the side affected. Exercise, or drinking any thing hot or pungent, increased his pain and difficulty in breathing, but bleeding and gentle eccoprotics, which were frequently repeated, generally afforded some benefit; and anodynes were now and then interposed to blunt the violence of his sufferings. And, indeed, though two eminent Physicians of this city exerted their utmost for his relief, they could only procure him temporary truces, till, at length, his distress was so great that he could lie

no otherwise than on his back, bolstered high with pillows; nor could he get any rest for many nights and days previous to his death, a day or two before which we could perceive a greater fulness at the left *hypochondrium*, than at the right, which convinced us of what we had before suspected, that a tumor of some sort was formed in the chest.

The next morning, pursuant to his own request, I opened the body, in company with another Surgeon who is now abroad, in the usual manner; but upon dividing, though with the greatest precaution, the cartilages from the ribs, in order to raise the *sternum*, blood issued very copiously, from, as I then supposed, the cavity of the *thorax*; but on a further examination, I found it to be from within the *pericardium*, dilated to such a degree, as to fill entirely the left cavity of the *thorax*, pushing downwards the diaphragm, to which, as well as the *pleura* on that side, it adhered universally, except at the superior part, where, after having separated the

I *pericardium*

*pericardium* with my fingers, we perceived the left lobe of the lungs compressed quite under the clavicle, to that degree as to be no broader or thicker than the palm of one's hand, and so firm as to resemble (in cutting through its substance) a steatomatous tumor. The right cavity was likewise considerably straightened by the distention of the *pericardium*, though the lobe of that side did not appear to be unsound. As great part of the blood which had thus distended the *pericardium*, unavoidably escaped by the above-mentioned incision, we could not be so exact as to the quantity as we wished to have been, but, from the nearest computation, we agreed it could not be less than five pints. The blood appeared quite fluid, free from *coagula*, and in colour more like *venous* than *arterial*. After having emptied the *pericardium*, and wiped its internal surface clean with a sponge, we attentively searched for the source of this phænomenon, but were unable to find the least vestige of a rupture, either in the heart or any of its large or coronary vessels; so that, though we easily

VOL. I. R found

found the immediate, we could not trace the remote cause of his death. The heart appeared sound and in its natural state.

A case somewhat similar to the above is related by Dr. William Thomson, in the fourth volume of the Medical Observations and Inquiries. And, though it is with regret, we must confess, that histories of this kind promise but little towards the effectual relief of such of our fellow-creatures as may in future labour under the like irremediable affliction, yet, if they should, by throwing some light upon the subject, tend to enable practitioners to form a just knowledge of the disease, as well as a prognostic of the event, they will at least contribute to the advancement of the medical science, and the reputation of its professors. For as *Prosper Alpinus de præfagienda Vita & Morte* justly observes,

“ Juvat quin etiam maxime Medicos: In  
 “ morbis acutis exitialibusque, qui præ-  
 “ cognitam futuram ægrotantium mortem  
 “ ubi assidentibus prædixerint, mortis culpa  
 “ plane vacare solent; ægrotosque audito  
 “ prognostico

“ prognostico non medicorum culpa, sed  
“ morborum vi interemptos, affidentes ju-  
“ dicant. Quod si antea exitium non  
“ prædixerint, ipsorum aut ignorantia, aut  
“ negligentia mortem *omnes* adscribunt,  
“ interiisse que medicorum causa pro cer-  
“ to habent.”

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A R T I C L E XIX.

*Cases of Hydrophobia: Communicated by*  
JAMES JOHNSTONE, M. D. C. M. S.  
S. R. M. ED. S. *Physician to the GE-*  
*NERAL INFIRMARY of WORCESTER;*  
*Member of the PHILOSOPHICAL and*  
*LITERARY SOCIETY of MANCHESTER,*  
*and of the PHILOSOPHICAL SOCIETY of*  
*BATH: With Reflections on the Prevention*  
*and Treatment of Persons bitten by mad*  
*and hydrophobic Animals.*

Read November 21, 1785.

CASE I.

**G**EORGE POLLOCK, aged forty-  
five years, by trade a Blacksmith, was  
admitted the 5th of March, 1750, a patient

of the Royal-Infirmery at Edinburgh: about the end of November, he had been bit by a mad dog, on each side his left leg, a little above the ankle; the wounds bled freely, and were washed with common spirits immediately: the next day he was bled, and bathed the sores in salt water, and, in about thirty hours after the accident, put himself under the care of Dr. Dundas, at that time, a physician of considerable practice in Edinburgh, who ordered sixteen ounces of blood to be taken from the arm, and the following bolus, two of which were taken, each of the two succeeding days, without producing any very sensible effect.

℞ *Cinnab. nativ. Cinn. factit. aa gr. xxiv.*  
*Mosch. gr. xvi. syr. sacch. q. s. f. bolus.*

He was then ordered to take a drachm and half of the *pulvis antilyssus*, every morning in a little milk, for four mornings, to use the cold bath forty days successively,



cessively, and to dress the fores with mercurial ointment.

He omitted, however, the cold bath the last eight days, and latterly the ulcers were dressed with *unguentum basilicon*, instead of *unguentum mercuriale*, by these means the fores were kept open for a month or upwards: he had no pain from them, but the matter discharged was always thin and fanious, and at no time good *pus*. However, he made no complaint till the 3d of March, in the afternoon of which day he felt a pain and weakness about the loins, *os sacrum*, thighs, and false ribs, attended with heat, and sharp pain in making water; next day he complained of sharp pain in the abdomen, and about eight o'clock in the morning began to have that aversion and difficulty in swallowing liquids, which afterwards increased extremely, so that when admitted into the hospital, he could not attempt to drink any thing without a most dreadful effort; the attempt always occasioning his fetching deep sighs, and being affected with an universal horror, and such

violent spasms in the organs of deglutition, as almost endangered his being choked; yet, at no other time did he complain of any pain about his throat, or of heat there, and swallows bread and solid food without any difficulty; his other pains grow every hour more severe, and they are increased constantly when he endeavours to drink: he said he would willingly drink, did not something, which he cannot describe, render the thought and sight of liquids disagreeable; and an attempt to take, and swallow them an insuperable difficulty, and a violence which he cannot account for. He has not slept for forty-eight hours; his tongue is white and dry; his urine small in quantity but high coloured; regular in stools; his pulse feverish and hard, and not much altered by his attempts to swallow liquids.

Dr. Rutherford, Professor of Medicine, and at the time Clinical Lecturer, being much attached to the doctrines of Boerhaave, determined to try the antiphlogistic method in this case, and ordered the patient, who had been let blood in the morning, to  
lose

lose gradually the large quantity of sixty-six ounces more ; from this evacuation he became sick, and a little faint, and his pulse somewhat smaller and slower, though by no means in proportion to the quantity of blood he had lost. The blood was not fizy, but abounded with serum ; the *crassamentum*, of a florid, scarlet colour, and its texture loose, like the blood of hysteric women ; the Doctor also ordered his head to be shaved, and often embrocated with equal parts of vinegar and water, and a slice of lemon with sugar upon it, often to be given him ; also,

℞ *Rad. Gramin.* ℥ij. *Fruēt. Tamarind.* ℥j.  
*coque ex Aq. font. ℔iij. ad ℔ij. sub*  
*finem addendo*

*Rad. Liquorit,* ℥ss. *Colaturæ cap. unc ij.*  
*omni semihora.*

℞ *Sal. Nitri pulv.* ℥ij. *Divide in doses vj.*  
*cap. unam omni biborio in haustu de-*  
*cocti.*

℞ *Decoēt. Commun.* ℔j. *Mellis* ℥j. *Sal.*  
*Nitri* ℥ij. *m. pro Enemate omni quarta*  
*hora injiciend.*

He was ordered panada for his food.

Eight o'clock at night, the clyster brought away indurated *fæces*, in fifteen minutes after it was injected. Has taken four doses of the decoction, and some panada. His urine high, drops some sediment; the pulse beats about ninety-eight strokes in a minute; his pains, and heat in making water are lessened, but his aversion and horror of liquids are undiminished.

The professor ordered the medicines already prescribed to be continued, and to take after bathing his feet, the following draught.

℞ *Syr. Diacodii* ℥j. *repetendam intra spatium trium horarum si opus sit.*

℞ *Spir. Vitriol. dulc.* ℥ss. *cap. gutt. xxx. sæpius cum potu communi.*

Tuesday, March 6, at six o'clock in the morning. Last night, about nine o'clock, the injection was thrown in, and his feet afterwards bathed, from which a clammy sweat followed: for, the noise of the  
water

water made by his feet, made him shiver, sigh often, and look wild about him. His pulse at the time beat 115 strokes in a minute, with an unusual tremor in it. His urine, made in the night, paler: he had two clysters and two anodyne draughts, after which he slept two hours at different times; being pretty free from pain, unless when urged to drink, at which time pains in the belly, beginning at the pit of the stomach, come on, and are attended with frequent sighings, and violent convulsion. Directions are punctually observed. In giving drink, it was remarkable, that he always took a second or third draught with less reluctance than the first, and, therefore, two or three draughts were commonly given him successively.

Eleven o'clock. The *pediluvium* produced an hour's sleep, and his pulse rose: his pain in making water gone, but *Hydrophobia* increased; he cannot take any liquid, and has an extreme aversion to any thing which looks like a fluid, or in which any fluid has been contained; but, when  
his

his eyes are shut, or covered, he can still drink.

Seven o'clock at night. He complains of a stounding pain, as he calls it, in his belly and small of his back: which is most acute on moving, or sitting up, in his bed. When he drinks, which he never does without horror and convulsion, he feels a stinging pain in his stomach, but none in his mouth or throat. Immediately after drinking, he sweats about his head and breast, with vehement efforts to vomit, though nothing comes up. His pulse hard, beats 104 strokes in a minute; his tongue white and foul, fauces red, urine pale: he had a clyster which operated twice, but brought away nothing but slime; his hands cold.

Ten o'clock at night. He goes on as before directed, attempts to drink with the same reluctance, horror, and convulsive motions, with deep sighings; and after these, retchings, vomiting, increased quickness of pulse, and return of pains. He spits

Spits *saliva* with great quickness, and with aversion. If it falls on his hand, he, as quickly, wipes it off, yet does not complain that it tastes amiss. He never offers to spit upon, or molest any one. He sometimes slumbers for a few minutes, but it is interrupted by deep sighs and convulsions. His pulse, after bathing, rose to 120 strokes in a minute; though it has continued generally at 100 strokes with interruptions. He voided an ounce of turbid urine, and took panada with the usual reluctance, and a dose of *Syr. e Mecon.* after which he slept half an hour.

Wednesday, March 7. Eight o'clock in the morning. He was quite delirious betwixt six and seven, but is now pretty sensible. He makes strong efforts to drink, though now for the most part ineffectually.

Eleven o'clock forenoon. These efforts to drink always produce belchings, retchings to vomit, and pains, which begin in the lower regions of his belly, and squeeze every thing upwards towards his stomach,  
attended

attended with convulsions and deep drawn sighs. His eyes are dismally wild, red, and inflamed; talks much concerning his wife and family, with great affection; speaks in a religious strain, and says he is dying. Pulse quick, but very weak and intermitting. He has had two boluses. *℞ Mosch. pulv. ℞ss. Conf. Rosar, q. s. f. Bolus.* Continue them every hour, and, as he cannot swallow any thing, let the clysters and embrocation be used the oftener. *℞ Sal. Nitr. Sacchar. alb. aa. ꝑ. redige in pulv.* a little of this to be given frequently.

Four o'clock in the afternoon. He had a *Mosch.* bolus about one o'clock, and *Opii gr. ij.* was offered, which he could not swallow. In spite of every effort to relieve him, the symptoms of death approach, with intermitting pulse, cold sweats, cold extremities; and in attempting to drink with his usual courage, he was violently convulsed, the liquor, as in one choked, regurgitated back through his nostrils, he fetched a deep sigh, reclined his head, and expired. He never had  
 been



been furious, or in the least inclined to offer violence or mischief to any one; on the contrary, he was somewhat anxious lest he should be the occasion of it. A looking-glass was frequently held before him, but it never discomposed him in the least.

Next day his body was opened by Mr. G. Lauder, at that time a celebrated Surgeon in Edinburgh. The stomach was much contracted in its ordinary size, and contained nothing. The small guts seemed sound, only the *ileum* seemed a little inflamed, and a few livid spots were seen upon it. The sac of the *colon* was near as large as an ordinary person's head, and, besides air, contained a large quantity of fæces. It was observed, that the intestines were much out of their usual situation and order. The liver appeared a little livid; the gall-bladder much distended with bile, which tinged very considerably the adjacent parts of the *colon* and *omentum*. Nothing unusual was observed in the contents of the thorax; and the further examination

mination of the larynx and pharinx, and the opening of the *cranium*, were prevented by the Surgeon's finger being accidentally cut, which made it improper for him to proceed.

Dr. Rutherford, at this time professor of the practice of physick and clinical lecturer, long celebrated as an able practitioner, as well as teacher of medicine, in Edinburgh, attended this patient with the most anxious and humane care; and in the lecture which he gave on the case he candidly retracted an opinion which he had learned from Boerhaave, and which had directed the measures he took. He said he was convinced now, that the *Hydrophobia* is a spasmodic, and not a high inflammatory disease. That though bleeding may be useful in preventing furiousness, neither that, nor the proper antiphlogistic method, are to be depended upon, as the proper cure of the *Hydrophobia*: that in such cases, after bleeding once or twice, he would order *Sal Succini*, *Mosch*, and *Opium*, and, perhaps, blisters. He thought bathing  
and

and other prophylactics should never be neglected, but professed no great confidence in the *Pulvis Antilyssus*, which had about that time been warmly recommended by Dr. Mead, but which, I believe, has since fallen into disuse.

This case may be found recorded in the books of the Royal Infirmary at Edinburgh; but Dr. Johnstone having been an attentive observer of the whole course of the illness, gives it from his own notes taken at the time.

Worcester, October 24, 1785.

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C A S E II.

By EDWARD JOHNSTONE, M.D. *Physician to the GENERAL-HOSPITAL in BIRMINGHAM, and Fellow of the ROYAL MEDICAL SOCIETY at EDINBURGH.*

AUGUST 16, 1784, I was sent for to Charles Bullock, of West-Bromwick, a fine lively boy, aged four years, of a strong

strong vigorous habit of body. On Friday the 9th of July, he was bit on the right cheek, and just under and above the right eye, by a mad dog. The wounds were small, bled little, and soon healed, leaving only a slight mark on the cheek, and a scar under the eye. The next day he began the use of the Ormskirk medicine, which he took in the manner directed in the paper given with it, and some of the powder, mixed with a little digestive, was applied to the wounds. He seemed to enjoy his usual health and spirits till the 15th of August, except that about a fortnight † before that time, he was one afternoon very dull, and passed a restless night, but was as well as usual the next day. On the morning of the 15th he appeared very low and spiritless, had little appetite, his breath was observed to be very offensive, and he complained of a pain shooting from the part where he had been bitten, to the teeth.

† His father said, at the fall of the moon, though he did not appear to be certain of it.

He had a very restless night, and early in the morning of the 16th, Mr. Beardmore, an eminent Surgeon and Apothecary, was called to him, who immediately desired assistance.

I saw him about twelve o'clock, when he was walking about a room, in which a number of people were collected, with an appearance of great anxiety and horror, and a peculiarly fierce look; he started on my entering, and expressed great apprehensions of being sent to the salt waters, but was much composed and pleased on my assuring him he should not go there. I then desired him to drink some small beer, he immediately turned away, changed colour, expressed the greatest horror and aversion, and was seized with a catching of his breath, and convulsive motions of the muscles about the throat<sup>n</sup>; but upon its being removed, soon recovered his usual composure, and without difficulty eat some bread and butter. A basin of water was

<sup>n</sup> The same symptoms were likewise brought on by his being exposed to a stream of air.

afterwards brought in, without his perceiving it at first ; but as soon as he cast his eye that way, he shewed great uneasiness, and upon putting his hands into it, was immediately seized with universal tremor and convulsive motions of the muscles about the throat, attended by a kind of sobbing half respiration, and such an inexpressible anxiety and gloomy horror of countenance, such a fierce scowling look of the eyes, as no language can give an adequate idea of, but which if once seen can never afterwards be mistaken.

The disorder being too clearly ascertained, I ordered him to be put into a warm bath, which was done suddenly, but universal convulsions immediately took place, attended with an appearance of suffocation, which lasted some seconds ; his breathing gradually returned, with a noise similar to that uttered during each cough in the chincough, or in the croup, and he at the same time dejected a considerable quantity of viscid frothy matter. Being fully persuaded of the mischief of this practice, I directed

directed a bolus composed of *Tart. Emetic.*  
*Op. pur. aa. gr. ss. Mosch. gr. vj.* to be  
given immediately, and to be repeated  
every hour; and the following injection to  
be administered every three hours.

℞ *Asæfætid. ℥ss. solve in Aq. puleg. ℥vj.*  
*Tinctur. Thebaic. ℥ij. Muc. Gum. Ara-*  
*bic. ℥ij. M.*

℞ *Mistur. præcedent. ℥ij. Juscul. ovin.*  
*℥iv. M. Fiat. Enema.*

*Unguent. Mercur. fort.* to be rubbed into  
the lower part of the face near the wound,  
round the neck, and other parts of the  
body, as often and in as large quantity as  
possible.

In the evening he seemed much better,  
and on being asked to take some tea, with  
great resolution, though with difficulty,  
swallowed a spoonful, which immediately  
brought on the same symptoms as before.  
I saw him by six o'clock of the morning  
on the 17th; he had passed a very rest-  
less night, the recumbent posture always

bringing on the paroxysms of the disorder. He had only taken two boluses, but the glysters had been given regularly and staid up; and a very considerable quantity of mercurial ointment had been rubbed in. His pulse was much weaker than before, and very fluttering and variable. Upon endeavouring to walk he reeled considerably, and was almost constantly endeavouring to spit out the frothy viscid *saliva*, which seemed very troublesome to him°. Upon being desired to eat some bread and butter, he took it into his mouth, and immediately spit it out and seemed to be in great agony. I directed four ounces of the mixture with *Afafætid.* and *Tinct. Thebaic.* to be injected as before, and half a grain of crude opium to be given every half hour, if it could be got down; a blister to be applied to the nape of the neck, and the mercurial ointment to be used as before. He only took two doses of the opium.

° It is remarkable that he was anxious lest the *saliva* should fall upon those about him, and frequently desired them to get out of his way, when going to spit.

About



About eleven o'clock he was seized with violent convulsions, particularly about the muscles of the throat, but affecting most of the other muscles of the body, during which, he snatched at those who were near him, and made a noise like a person suffocating: this fit lasted near half an hour, and afterwards he was perfectly exhausted for some time, and fell into a cold clammy sweat. These convulsive fits, alternating with fainting ones, continued, with very short intervals, till four o'clock in the afternoon, when he expired.

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*Reflections on the Prevention and Treatment of Persons bitten by mad and hydrophobic Animals: By JAMES JOHNSTONE, M. D. &c. &c. &c. &c.*

I. **I** B E G leave to add some reflections to these cases. The first case forms a kind of epoch in the treatment of the *Hydrophobia*, which is now universally acknowledged and treated as a convulsive disease, not without some hope of success,

if we may credit Sauvage, and other French writers of reputation; also, the case treated successfully by Dr. Nugent, and one or two more related in the medical transactions of the college.

2. *Hydrophobia*, or an aversion and horror to liquids, is its true definition. A rabies with a mischievous desire of biting (*See defin. Linn.*) is in man, I believe, seldom unusual, much less a constant symptom in this disease. This aversion or horror is produced in the mind by the action of the poison on the nerves, which occasions spasms in the throat, remarkably aggravated by every attempt to swallow liquids in particular, and accompanied with various spasmodic pains about the *præcordia*, which are excited and in every part increased by the appearance, sound, and touch of any fluid. It is then a spasmodic *angina*, and the aversion to swallow may in part be an aversion to pain: but other *anginas* are painful without this horror; I therefore conclude, that in the *Hydrophobia* it partakes of delirium.

. 3. The

3. The attempting to conquer this aversion to the swallowing of liquids, produces dreadful, and, finally, fatal spasms; in the first instance in the pharynx, perhaps from the salival liquors being peculiarly tainted with the poison; also the *œsophagus* and stomach, and all the parts in the abdomen furnished with nerves from the splanchnic nerves, and from that great centre of nervous sympathy and action, the great semi-lunar ganglion, called by some *cerebrum abdominale*; which convulsions, in their continuance and progress, disturb the natural and vital functions, and finally arrest the motion of the heart.

4. During the *Hydrophobia*, the salival liquors, and those perhaps which lubricate the *œsophagus* and *primæ viæ*, being strongly impregnated with this fatal poison; may not the abhorrence of fluids which characterizes the disease, and which makes the swallowing of them so dreadful, be owing to the baneful stimulus of venomous *saliva* on the nervous and irritable surface of the *fauces* and *primæ viæ*?

And are not these spasms, efforts, however ineffectual, of irritability, and the principle of life to throw off this poison? It is certain that antimony and many vegetable poisons are deleterious and fatal, as well as the poison of the viper and mad dog, though not discernible by taste.

5. Respecting the treatment of this poison, and such as are unfortunately likely to suffer by it: I apprehend the surest preventive, is (after wiping off and washing it away as much as can be done) to cut away, or scarify the bitten part immediately, and to destroy it by caustic or actual cautery. (See here the method of M. Le Roux. Appendix.) This is to be done as early as possible, and beyond the depth and extent of the bite. If this be done immediately, and no particle of the venomous *saliva* be left in the wound, the patient by this operation, and by suppuration kept up for two months, by digestive ointments, armed with *red præcipitate*, will be in perfect security †.

† The misfortune of M. R——y, shews this external treatment, even when early performed, by a very able Surgeon, does not give absolute security, and that other means of prevention deserve attention.

At

At whatever time afterwards medical assistance is called for, the same local treatment is to be enjoined: and it is not to be omitted, even when symptoms of *Hydrophobia* are threatened, or appear, as the history of the disease shews, that the spasms which affect the throat always arise from the bitten part,

But this prophylaxis, though never to be neglected, cannot be supposed, and, in experience has not been found, to give the same constant security, which it affords when done instantly after the bite. In such circumstances, the prophylactics which have been found most useful in preventing the progress and virulent effects of this poison, on the blood and nervous system, must be had recourse to.

6. Mercury has been found, in extensive experience, to be a very effectual preventive of *Hydrophobia*, and, in some instances, has assisted considerably in curing it: in the discreet application of this antidote, both externally and internally, and in  
adding

adding thereto the antispasmodic and tonics, Peruvian bark, Valerian root, Mosch. and opium, the physician will probably give security to his patient, in most instances, if not at in all.

The usual course which this poison takes, indicates the application of mercury to the bitten part, by applying it there, and by rubbing it around it; and also to the *fauces*, where it will mix with the *saliva* and *mucus* in the pharynx, *oesophagus*, and *primæ viæ*, and obviate the tendency of the poison in its most destructive course and period.

But the quantity of these mercurial administrations must never be so great, as to excite salivation, or considerably weaken or disturb the body.

In an adult, half a drachm of strong ointment, charged with camphire, should be applied to and rubbed near the wound daily.

And

And two grains of calomel ought to be rubbed every evening within the mouth, enjoining the patient to swallow his spittle for some time afterwards: in this way, it will mix with the *saliva*, and pass through the whole course of the *primæ viæ*, and, while it keeps the body open, will, in a small quantity, mix with the lymph and blood; and without disturbance or loss of strength will meet and correct the poison, if it enters the habit.

In very young patients, and delicate ones, the quantity may be diminished, or in stronger ones increased.

After a fortnight, the calomel should be intermitted, and a cathartic given, and an opiate in the evening, after the cathartic.

In ten days time the calomel should be resumed for another fortnight, followed with a purge and opiate, and intermitted once more for ten or twelve days, after which it may be again used a fortnight in the same manner, and then, if no symptoms

toms appear, the use of mercury may be laid aside, and the patient's safety presumed upon.

If the patient's rest be disturbed, or any dejection, hurry, or melancholy appears, he ought to use while this course is going on, Mosch. opium, assafœtida, and a drachm of an electuary of *P. Cort. Peruv. P. R. Valerian. aa. p. æ.* twice in the day, as occasions require.

If any tendency to *Hydrophobia* appears, the dose of calomel, or quantity of mercurial unction, should be continued and greatly increased.

Emetics of Turbith mineral have been found of great use in preventing *Hydrophobia*, and certainly ought to be repeatedly given, with opiates afterwards, to allay the hurry of nerves, if any of the forerunning symptoms of *Hydrophobia* appear.

Emetics,



Emetics, even of milder operation, as well as the Turbith, must be highly useful, by evacuating the *saliva* and slime, if at all tainted, from the throat and stomach.

Hurry of nerves, arising from the remedies or the disease, require great attention, and must be removed by Mosch. and opium. To dispel anxious fear, and to support hope and cheerfulness, are indispensibly necessary in preventing *Hydrophobia*.

These are the means of prevention and cure I shall pursue when occasions offer; they will not always succeed, but I know no better, and none so much supported by experience and authority, or so closely connected with the real phœnomena of the disease. In every disease, the best founded methods are sometimes unsuccessful: but to this, above all others, the introductory aphorism of Hippocrates has the justest application; *Occasio Præceps, &c.*

## APPENDIX.

I PROPOSE to give here a short view of the methods recommended in the ingenious papers published in the Second Part of the History and Memoirs of the Royal Society of Medicine at Paris, 1783, on the subject of Canine Madness.

The following is the method recommended by M. Le Roux. Having discovered the direction and full dimensions of the part bitten, by the mad animal, the wound must be dilated with a bistoury round its whole circumference, and a cross, star-like, to make the surface larger than the bottom of the wound. The tendons and larger vessels are to be avoided as much as possible in making these incisions. The wound is to be allowed to bleed freely, and to be washed with soap-water, or, the part is to be dipped in a bath of it, and then to be dried with lint, and covered till the next day. After removing the first dressing, a skewer of wood dipped in deliquescent

quescent butter of antimony, is to be made to touch every part of the wound, particularly the bottom and edges thereof, and even the surrounding skin. Every part touched with this caustic becomes immediately white, and burnt to a greater depth, even of some lines. A blistering plaster is then applied over the wound, and widely beyond it, and this finishes the second dressing. M. Le Roux does not apply the liquid butter of antimony the first dressing, because the blood would dilute and præcipitate the caustic into a kind of powder of algaroth, which is not caustic. He prefers the potential caustic to the actual cautery, because it gives less terror and pain, and burns more precisely to the desired depth, and the eschars are sooner separated. He has only twice met with wounds in parts dangerous to be burnt, yet he repented afterwards his tenderness, as both the patients died hydrophobic: when so serious a malady is to be feared, sacrifices must be made, and he will not avoid them in future. The blisters are cut and dressed the next day, and fresh

butter applied to the wound, till the eschar falls off, which happens in a week: after this, the wound is kept open in abundant suppuration, by putting in several peas, or gentian root, of a size proportioned to that of the wound. As the flesh springs up, it is to be burnt again with the butter of antimony, and fresh blisters are again and again applied; for the wound must not be allowed to heal till after forty days. By this method alone he secures his patients, and gives no other internal remedy, except a few drops of *Spir. Vol. Alcalin.* and not that always.

M. Baudot is persuaded that the effects of the bite, however extensive they may become, proceed from action of the poison on the part originally bitten only. After cleansing and washing the part with salt water, he applies a blistering plaster, which covers the wound, and extends considerably beyond it: he afterwards rubs mercurial ointment, with the addition of camphor, very plentifully all around the bitten part, and over it; to these he adds

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bathings

bathings and frictions with warm oil; this treatment is continued fifteen or twenty days, by which means only, he believes the mercury destroys the *virus* fixed on the nerves in the wounded part, and, that the oil in relaxing these parts, assists in hindering the ulterior propagation of those spasms, which would otherwise have extended their action to the salivary glands, and have excited *Hydrophobia*. A very great number of attested cases are produced in support of the efficacy of this preventive method. If he be called to such as have not been early treated in this manner, and who are threatened by symptoms of *Hydrophobia*, he orders scarifications, in addition to the former method, with bleeding; nitre in apozems; opium, with other antispasmodics. His success was very considerable in every stage of the disease, the actual *Hydrophobia* excepted, which proved always irresistibly fatal.

M. Bouteille, in a very methodical and well-written Essay, agrees nearly in approving the same mild local treatment as

M. Baudot, by ablutions and blisters ; yet recommends also scarifications and cautery when strictly necessary. He is also high in the commendation of mercurial ointment, rubbed in daily near the wound, and applied to it ; which, in his opinion, both draws out the poison from the wound, and corrects it (61.) and, at the same time, eases the spasmodic pains arising from the virulence of the poison : but thinks a mercurial salivation both ineffectual and pernicious. If the wound be cicatrized, when symptoms of *Hydrophobia* appear, he, in that emergency, recommends the application of caustic, or actual cautery, to the part, to open an external passage to the poison, which he presumes to be still acting there.

The mercurial method of preventing *Hydrophobia*, which had been censured as uncertain, and in some cases hurtful, by M. Le Roux, is very warmly adopted and recommended by Mess. Baudot and Bouteille, though on different principles ; and so to shun exciting salivation, which had been a mode in France, after M. Sauvage had

had published his ingenious *Dissertation sur la Rage*.

This mercurial method is the only one depended upon and recommended in the *Memoir of M. Bonel, de la Blagereffe*, who trusts entirely to mercurial frictions, and to laxative mercurial pills, to be continued for about three weeks; and occasionally to be purged off by an increased dose of the pills, so that salivation may be obviated: he applies to the wound mercurial ointment only. He treated five hundred patients in this method, without a single miscarriage; and believes the same medicines in double or triple doses, with the addition of *Mosch.* and other antispasmodics, to be an effectual cure in the *Hydrophobia* itself: of which he has no history to produce, as he had constantly succeeded by his preventive method.

M. Mathieu, maitre en Chirurgie, in Perigorde, after bleeding and purging, depends altogether on copious mercurial frictions, to excite salivation, unless the

mercury occasions some other evacuation which will supply its place. He says, the *Hydrophobia* yields, as it were, by enchantment when the salivation appears; and it must be kept up more or less, according to the degree of the disease and strength of the patient.

Many instances have been produced in the course of these Memoirs, in which individuals were seized with, and carried off by, *Hydrophobia*, notwithstanding mercury had been very early and amply used, even to salivation: be it so; but this does not invalidate other respectable testimonies, that in a prodigious number of instances *Hydrophobia* had been prevented, and in others cured by it: hear the respectable Sauvage, who concludes a masterly work in the following words, “ apres bien de  
“ recherches, I’ ignore que ce remede ait  
“ encore manqué, étant, meme appliqué  
“ quand la Rage etoit de clarée:” How few infallible remedies can we boast of in other diseases: shall we then quit this single anchor, because it has failed as  
others



others have done before, though it is granted to have succeeded sometimes.

D. Metzlar, a German physician, in a very elegant and learned Latin Dissertation, the last published in this volume, on the prevention and cure of *Hydrophobia*, concludes thus, “ Haud aliud in terribili  
“ hoc morbo, habetur remedium quam  
“ mediante ferro instituta Inustio.”

To this opinion, the Royal Society of Medicine seem indirectly to have added their respectable authority, by crowning the Memoir of M. Le Roux, with their first prize; their second being shared betwixt Mess. Baudot and Bouteille, for their ingenious Memoirs, and by their positive declaration, that the external treatment, which consists in destroying the part into which the *virus* is infused, is indispensable, and the most important, without which all the other proceedings are uncertain; and, that among these last, such as disorder the animal œconomy, or strongly

affect the nerves, expose the patient to more or less danger. (*Hist. de la Med.* p. 2.)

Happy will it be, if this indecision respecting internal remedies, excite an early and cautious care of the unfortunate objects of these Memoirs, and also, make the practitioners of the healing art more successful in their future applications, and, in the mean time, diligent in the use of the best means already discovered.

Worcester, December 24, 1785.

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## ARTICLE XX.

*General Remarks and Cautions respecting  
some Cases in Surgery: By JONATHAN  
WATHEN, Esq. Surgeon, and Fellow of  
the MEDICAL SOCIETY.*

Read March 11, 1771.

**I**T has been frequently remarked, that what are denominated capital cases, and operations, are too apt to engross our attention, to the neglect of those of an inferior class; which, nevertheless, by their number

number

number and frequency, become of great, if not of equal importance to the former; since there is hardly any one case, however trivial it may seem, to which not only the patient's welfare, but our own reputation, may fall a sacrifice. I remember an instance of this kind, where, for want of due attention, an excellent surgeon and able anatomist treated a dislocated shoulder as a strain. A surgeon in the neighbourhood, greatly inferior to the former in point of real abilities, was privately consulted, a fortnight after the accident: he declared the *arm was out*, and immediately restored it to its place. The first mentioned surgeon was thereby obliged to quit his situation, for one at a great distance, where, by more attention to the *minima*, as well as the *majora*, he acquired, and justly deserved, the greatest reputation in his profession.

The number and variety of such kind of cases are indeed almost infinite, and require not only an extensive, but a particular and discriminating knowledge and attention, without which, we cannot form their just

*diagnosis, prognosis, or method of cure.* The first of these ought to be made as early as we can, for our own direction; nor must we here solely depend on precedents or prior observations, since cases arise every day which we have neither seen or read of, yet nevertheless admit of a clear and certain exposition.—Mrs. S——, near Aldgate, had for some time an obstinate ulcer on the inside of her left leg. I perceived a white tough slough at the bottom of the sore—a swelling about the size of a finger extended upwards, from the ulcer to the knee—and below it to the heel, with a redness of the skin, and an extreme sensibility upon touching or moving the leg. On laying hold of the aforementioned slough with the forceps, its upper attachment was felt at the knee, its lower at the heel. This appeared to me then, and now is, for ought I know to the contrary, an unprecedented, at least an unregistered case; nevertheless, the locality, continuity, and sensation at the heel and knee, afforded a certain *diagnosis*, that the *musculus plantaris pedis* was the subject of  
the

the inflammation : and the sloughy appearance a proof of the partial if not total destruction of its texture. A separation took place, and I extracted the whole of that long thin muscle, which is now in my possession, though greatly altered and mutilated. The wound healed firmly afterwards, without any sensible inconvenience to the patient.

I need scarcely observe, that a tolerable knowledge in physiology, and pathology, are antecedently necessary ; as well as a quick discernment and sagacity, in order to form an early and just *diagnosis*.

Miss S—— had the misfortune to hurt her elbow by a violent fall, and that joint was greatly distorted ; but swelled so speedily as not to admit of an accurate examination. All proper means were used for reducing the swelling, but so much time elapsed before it subsided, that the distortion, and partial dislocation, now apparent, were so fixed, as to render reduction as imprudent to attempt, as impossible to effect.

effect. This case was doubly fatal; the young lady's arm remains deformed, useless, and daily wastes away, with never-ceasing pain: and the surgeon who attended it from the first is, (however unjustly) the constant subject of censure wherever the patient appears, or her misfortune is the subject of conversation. It is pretty certain that every proper method was used, and nothing omitted, that was the least essential to her recovery. Nevertheless, for want of forming a just *diagnosis* at the first, and also divulging a cautious and early *prognosis* of the event, which might easily have been ascertained, the surgeon has greatly suffered in his reputation; nor will the patient or her friends ever believe the case to have been well understood, or properly treated.

The tendons and their *thecæ*, are liable to various injuries—a puncture, a bruise, a strain, &c. produce primary symptoms very different from each other. Some, as the locked jaw, &c. are of a dangerous nature, and ought cautiously to be predicted, as well as their subsequent effects;

effects; which effects, notwithstanding the difference of the cause, are in general very similar: viz. a contraction of the flexor or flexors of the members to which the tendon, &c. pertain. In order to explain my meaning, let us suppose one or more tendons of the *extensores digitorum*, or their *thecæ*, to be injured: the permanent effects of this injury will be a contraction of the flexors their antagonists. Suppose again, the flexors to be hurt in like manner, the result will still be a contraction of the fingers, unless prevented by a proper treatment. These effects, which frequently follow considerable injuries of the muscles, as well as of their tendons, are seldom perceived till some considerable time after the primary symptoms are abated, and the case relinquished. The afore-mentioned contraction proceeds by very slow degrees, till at length the fingers or toes become close shut, or the knee or elbow contracted into an acute angle. The reason why the effects in both instances are thus similar, is obviously owing to the greater strength and power which the flexors have over the  
*extensores*

*extensors* in general ; so that whenever the former are injured, or the latter weakened, the contracting power of the stronger is always increased in proportion to the disparity of those powers. In fine, it may be concluded from the structure of the articulations, as well as from the muscles, that the *extensors*, especially those of the extremities, do little more than reinstate the member, after it has been acted upon by its flexors.

Mrs. —, housekeeper to Mr. P—, bruised the palm of her hand with a pestil in pounding spices ; when the swelling and pain subsided, a little knot was perceived to remain : this was looked upon as of no consequence, and the surgeon quitted the patient as well. Some time afterwards, the ring finger began to grow crooked, and in the space of a few years, has contracted itself close in the palm : the other three fingers are now much bent, and threaten the shutting up of the whole hand. At the place afore-mentioned, the skin, tendons, and their *thecæ*, are firmly united,



united, and are seen to move together in the little remaining motions of contraction: in a word, her right hand is now altogether useless, and does dishonour to the art we profess; both which might have been prevented by an early *diagnosis*, and a long continued counteraction of their propensity to contraction.

We meet with many disorders properly surgical, which admit only of a palliative cure, and others that are in their own nature absolutely incurable. Here the *prognosis*, though a painful and mortifying task, becomes as necessary to be predicted, as in other more agreeable and fortunate cases. But this *prognosis* which results from the *diagnosis*, as an inference from a certain axiom, and which we are obliged in almost every instance not only to form to ourselves, but to communicate to the patient or his friends, requires the greatest caution and prudence. If we foresee the disease will turn out fatal, a limb remain deformed, or a part continue useless, we are under the necessity of making a suitable prediction; but if this be  
done

done suddenly or abruptly, we give a shock, which will rebound upon ourselves. If it be not clearly expressed, we are liable to have our words mistaken or perverted; and if not delivered to a proper person, in whom we may confide and trust, as our substantial evidence; either of the aforesaid events will at length be reflected on the carelessness or incapacity of the surgeon.

The constricted *Oesophagus*, a disorder which of late years occurs, I believe more frequently than formerly, is one of this class. It is absolutely incurable, except in an early state, and before an ulcer commences; or, in other words, whilst the contraction of the tube is yet simple, with no other thickness or solidity, than what arises from its texture being comprised in a less space than before. I have been consulted in at least forty cases of this kind within the last twenty years, and whatever be the cause, whether the swallowing hot, scalding, or spirituous liquors, from accident or habit, which I think not improbable: its seat is nine times out of ten in that part of the canal  
where

where it adheres to the back of the *thyroid cartilage*. In this stage a daily introduction of the bougie, the size of which should be gradually increased, and frequently swallowing pills, and at last boluses, of butter and boiled fat, will by degrees dilate the tube in that part. I lately cured a case in this state of the disease, in which Mr. Else was concerned with me. There are some now living, who have been well several years, from the same mode of treatment. I have examined several, who died in consequence of this simple state of the disorder without the least ulceration, the tube being so entirely closed as not to admit the smallest probe; but when the part ulcerates, its cylindrical form is perverted, and *sacculi* are formed, &c. death must inevitably follow. The ulcer in some instances erodes the *thyroid* and *cricoid* cartilages or the *aspera arteria*, or else it penetrates laterally through the coats of the *gula*, through which the food and drink attempted to be swallowed make their way, and suddenly put an end to the patient's misery. I have opened several where these effects,

with some others, were truly apparent, and have a drawing of one with a large hole in the side of the *Oesophagus*, through which the food escaped into the thorax. I was concerned about a year since, with Dr. Hunter, in a remarkable case of this kind, which I believe he will publish in the next volume of *Medical Observations*.

There is another mortal disease which I do not find described in any writings that have occurred in my reading. It is an ulcer in the ventricles of the larynx, accompanied with a remarkable hoarseness, and perpetual irritation at the top of the windpipe, which excites a cough: nothing abates this hoarseness, or cough; there is no pain, or soreness in the lungs; it commences in some who are otherwise in perfect health, and continues some years before it brings them to extremities. The cough in time expels real *pus*, which increases more and more; the patient becomes hectic, and dies. The Rev. Mr. Skinner, Mr. Draper, Mr. Phipps, with several others, have fallen victims to this disease within these last five years.

years. I have now a patient with Dr. Smith, who is not likely to live long, and whom I hope his friends will permit me to examine after death: I should think myself happy in a permission, which could not be obtained in any of the above-mentioned instances: I am, however, already convinced of the reality and locality of this fatal disease. In such unfortunate and miserable cases, the *prognosis* is the surgeon's only security; it is his entrenchment against the secret assassin, or the open enemies of his reputation.

Strictures of the *urethra* and other tubular parts, as they are frequently the subject of our attention and employment, demand a suitable *prognosis*. These most commonly occupy the membranous part of the *urethra*, or arise from a swelling and inflammation of the prostate gland; and though they are seated in the posterior part of that tube, admit of a palliative, and sometimes a lasting cure, by the bougie. But there are others anterior to these, in situation still more fatal in their consequences,

sequences, if not well attended to, and at the best admit only of a very disagreeable, as well as palliative cure. I mean obstructions anterior to the bulb, and where the *corpus spongiosum urethræ* is affected. These never admit of a perfect cure; and if the bougie is not constantly used, the part, however distended, will close in a short space of time; they must therefore never be left off during life. I have been called to several with a total suppression of urine from this cause, the *urethra* being closed up, so that the smallest probe could not be passed; and have relieved them by opening the *urethra* above the stricture. This opening also demands the perpetual and constant use of the bougie, which would otherwise be liable to close up entirely. Were it necessary, I could give the history of several cases in persons now living, otherwise well in health, in confirmation of this assertion.

Another cause of obstruction, is stones lodged in the *urethra*; their general seat is about an inch above the *frænum*, and sometimes cause an entire suppression of urine.

urine. I should not have mentioned this disorder, so obvious one would think to the most cursory observer, were it not that the puncture of the bladder was lately performed for a suppression, when the only cause was a stone seated in this part, the extraction of which by incision, or cutting the *urethra* above the obstruction, would have effectually relieved the patient, who died in consequence of the aforesaid puncture. About three weeks since, a young man came with a total suppression of urine, from a rough mulberry stone lodged in the part above-mentioned: the *corpus spongiosum urethræ* and *glans penis* were so much swelled as not to admit the probe into the *urethra*; but the stone was ascertained by the finger sufficiently to authorise cutting upon it, by which means it was extracted, though not without great difficulty, owing to its rough jagged surfaces. It may be here remarked, that the instrument invented by Dr. Hales, can never be used with success for stones of this kind; but I have tried it with success once or twice where they were smooth and equal.

I shall close these Observations with a case which has frequently occurred to my notice, of which, however, I have never yet met with any true account in chirurgical writers. It concerns the abductor and extensor *minor pollicis*, chiefly of the right hand; it is generally produced by that kind of fighting called boxing, though it sometimes happens from other causes.— A man who had been long ill of a fever, took a trowel in his hand to scoop out a small parcel of soft soap from a tub; he felt a pain and kind of a crack on the inside of his fore arm, the part swelled a little, and he became unable to use his thumb, or indeed his hand, without great pain. When he came to me, which was about ten days afterwards, I found the muscles afore-mentioned, which run obliquely over the radius, elevated above their proper situs; they sensibly grated when the thumb was extended or abducted. I concluded, as I had before done, that these muscles were in part torn from their origin, and that the grating sensation was occasioned by their loose fibres rubbing over the bone; I  
ordered,



ordered, as usual, the thumb to be kept in a state of extension, and bound down the muscles. This process was continued for a fortnight, which I have ever found long enough for their adhesion, and he is now well. Whatever motion extends these muscles beyond their natural capacity of elongation, will produce the same effect, for which the above method will always be found an effectual remedy.

What enables us to form a just *diagnosis* renders us capable of giving a right *prognosis*; whilst both are equally necessary to make us honourable, as well as successful, in our profession.

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 A R T I C L E XXI.

*A Case of a Head-Ach attended with uncommon Symptoms: By THOMAS HENRY, F. R. S. C. M. S. Member of the AMERICAN PHILOSOPHICAL SOCIETY, held at PHILADELPHIA, and Secretary to the LITERARY and PHILOSOPHICAL SOCIETY of MANCHESTER.*

Read May 10, 1779.

**T**HE methods of which Nature sometimes makes use to relieve herself from any noxious matter, and to deposit it out of the road of the circulation, are so very inexplicable, that we are by no means able to follow her in her operations, nor to discover by what secret powers she expels the enemy from her quarters; it is however curious, and may not be totally useless, to trace her steps, as far as our limited faculties will permit, and to observe the efforts she makes; as these observations may at least teach us that *she* may successfully exert herself, where art proves insufficient.

As the following case is an uncommon instance

stance of such exertion, I presume to submit it to the inspection of the Medical Society; and I hope I shall not be deemed prolix, in relating some previous circumstances, which may lead to the better understanding of *that* which is the more immediate subject of this paper.

Mr. Nathan Sandford, of Burnage, near Manchester, of a thin habit of body, subject to an habitual cough from his infancy, and to glandular tumors of his neck, which were dispersed without suppuration, had, in other respects, enjoyed a tolerable share of health, till the month of February 1759. He was then about twenty-four years of age, and, having ridden late at night on a journey, he had the misfortune to lie in a damp bed at Fenny-Stratford. Towards morning he fell into a profuse sweat, and in that situation imprudently got up, and pursued his journey, without changing his linen. In a few hours he became extremely hoarse, and, as the day advanced, a severe fever and *peripneumony* seized him. With difficulty he ar-

rived at Thame in Oxfordshire; where, having received every medical assistance, which the skill of that excellent physician, the late Dr. Lewis, of Oxford, could afford him, a critical eruption, of the erysipelatous kind, in both legs, attended with considerable swelling, removed his fever and dyspnæa; and as soon as his strength was sufficiently restored, he returned home, and recovered his usual state of health.

In November following, having occasion to travel into the same country again, he was attacked one day with a violent vomiting, which was succeeded by an erysipelatous tumor of his left cheek, the progress of which was most quick and alarming. He arrived that evening at his old lodgings at Thame; and an apothecary, after bleeding and other proper evacuations, ordered fomentations to the part, which, though applied so hot that the nurse could not bear to wring out the flannels without lapping them in a cloth, excited not the least sensation in the patient. The disease now occupied his whole face and head, and  
a gangrene

a gangrene was apprehended. Dr. Lewis was again consulted, and directed more blood to be taken away; and so very urgent were the symptoms, that, in the space of twenty-four hours, he lost forty-eight ounces of blood. An alteration, which was made in the fomentation, occasioned some degree of feeling; the swelling gradually subsided, and in about three weeks he came into Lancashire, where, exactly at six weeks distance from the day the erysipelas first appeared, he had a second, though milder attack of it, and a third, still more gentle, at the very same period of time from the second.

The parotid and submaxillary glands now grew enlarged and painful, and, at last, suppurated in April 1761. That summer he was sent to bathe in, and drink, the seawater: the ulcers healed, and his health was so much improved, that he married before the conclusion of that season. For several successive years, a cough, loss of appetite, and other consumptive symptoms, visited him, with increased force, each spring;

spring; yet they generally yielded in some degree, to phlebotomy, nitrous medicines, elixir of vitriol, &c. and were always succeeded, as the weather grew warmer, by a scorbutic eruption and swelling of his legs, which were looked for impatiently, as a favourable omen of the departure of his other complaints.

In April 1770, his usual train of symptoms made their appearance; but nature now seemed to have forgot to afford her accustomed aid. His cough was more severe than in former springs; he complained of great soreness and stricture of his breast, which being attended with hectic heats and considerable loss of strength, threatened a fatal termination. Though he had formerly lived freely, the smallest quantity of any fermented or spirituous liquor now intoxicated and inflamed him. Venæsection, a perpetual blister, demulcents, and his usual medicines were tried in vain; when, in the beginning of June, having been persuaded by one of his neighbours to drink a small draught of ale, a sudden

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hemorrhage

hæmorrhage proceeded from the nose, which had continued for some hours before I saw him. Blood was taken from his arm, and the discharge from his nostrils restrained by passing tents up them dipped in the *lixivium martis* a little diluted. Though his blood was covered with a buff coat, yet as the texture underneath was loose, he took freely of a decoction of Peruvian bark and tincture of roses, to each dose of which ten or twelve drops of *lixivium martis* were added, care being taken to keep his body sufficiently open. The bleeding returned again next day but one, and, though not very profuse, continued with little intermission twenty-three hours; but was at last stopped by the same methods. He was greatly reduced by the loss of so much blood; yet his cough abated, the foreness and tightness of his breast in a great measure left him, and he passed the autumn and winter, though in a very valetudinary state, yet free from any immediately alarming symptoms.

His consumptive complaints returned  
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in the spring of the ensuing year, with redoubled violence, before he had totally recovered from the shock he had received the preceding summer. On my urging him to call in further advice, he consented to consult Dr. Kay, a judicious and very worthy physician of this town, by whose skilful treatment of him he obtained some relief. But tired, and imagining every thing to be in vain, he determined to give himself a truce from all medicines. In a few weeks he recovered a better state of health than could have been expected; but he came on the 20th of July to inform me of an uncommon pain in his head, which attacked him every night as he lay down in bed, and sometimes infested him in the day, at irregular hours. The description he gave me of it was as follows:

At its first coming on, it fixed in so small a space that he could cover it with the end of his finger. The seat of it was in the lower part of the *coronal suture*, about an inch above the *os sphenoides*; and he shewed me a vacuity or chasm, about an  
inch



inch long and one-sixth of an inch broad, in the course of the *future*, which he seemed certain was not pre-existent to his head-ach; as he judged it impossible it could have escaped his notice, having always shaved himself. While the pain, which was excessively acute and lancinating, remained here, the part was puffed up like an inflated bladder, for about the size of an half-crown piece, and the temporal artery appeared tense, like a distended cord. From hence it removed to the *processus condyloides*, and, while it remained there, occasioned a convulsive motion of the lower jaw; it then changed its situation to an inch and half below the angle of that bone, and after some duration in that point he became suddenly and totally easy. He had laboured under these complaints during three weeks.

On the 31st of July he called on me again, and gave me the following account: That his breath had had an unusually disagreeable and earthy smell, which commenced some days after the pain in his  
head

head first begun, and, that as he was sitting in his own house, the day after his former visit to me, without any previous fit of coughing or retching, he was suddenly in danger of suffocation by something falling into the *Oesophagus*, where it stuck. With considerable efforts, he spat up a solid angular substance, above the size of the end of his thumb, consisting of a hard brown and white matter, the latter of which on being pressed fell into a dry powder. The whole was covered with a greenish *mucus*, and resembled exactly in smell the *fætor* which had affected his breath for several preceding days, and which now immediately ceased. He had felt no pain the day before this happened, nor had it returned since that time. On my examining the seeming deficiency in the *future*, he complained of intolerable uneasiness from the pressure of my finger, which he said seemed to affect the internal part of his head. I was much disappointed that he had not reserved the above substance for my inspection.

On the 8th of August, he had a slight return of the pain in his head, which lasted about two minutes; he then perceived something to fall into his throat, which he soon discharged, and proved to be similar to what he had before parted with, but in smaller quantity, and broken into several fragments. His pain instantly ceased, but a numbness continued in the side of his head and face, for several hours, both after this and the preceding evacuation. I have examined this matter with a good microscope; the white part appeared to be *calcareous*, the brown to be *mucus* hardened and adhering to the other. The smell was like that of bones, which have been long buried in the earth, on their being exposed to the air. The white matter strongly fermented with spirit of vitriol, but the brown occasioned no effervescence with the acid. The vacuity in the *cranium* was much diminished; when I saw him two days after this event; and he could then bear me to press upon the integuments, without suffering any consequent pain.

From this time he had no further return of his pain, during many months; and he acquired such a degree of strength as to be able to attend to the business of his farm, and even to ride thirty miles a day on horseback: and had I not been witness to the many vicissitudes of his constitution, I should have entertained hopes of the re-establishment of his health. But in January 1772, his cough again became worse; convulsive spasms sometimes attacked his head and neck; his stomach rejected almost every kind of food; and, often, the only liquor which it would retain, was rum, unmixed with water: he also complained of a sense of contraction in that organ.

After having lingered in this miserable situation till the beginning of April 1773, death at last put a period to his sufferings. He had always expressed to me a desire of having his body opened, after his decease; but, from some cause or other, I received no intimation of his death, till the evening preceding his funeral.

During

During his last illness, he had a slight return of his head-ach, and again spat up a substance, similar to that I have before described.

Several difficulties occur in attempting to account for the above singular appearances. In the first place, it may be asked, was there a translation of matter from the lungs to the brain, or its *meninges*; and supposing that to be the case, would it not have produced more alarming symptoms? Of what nature was the substance he evacuated, and where could it have lodged, previous to its discharge? He had no sense of uneasiness, or obstruction in the *frontal sinuses*; nor about the nose nor *fauces*. Whence arose the vacuity in the *sutura coronalis*? Is it probable that there had been a solution of the bone from some acriminous matter, which had been gradually absorbed, or immediately carried through the *sphenoidal sinus* to the *nasal*, and so deposited in the *cellular membrane* behind the *velum palati*? Or was it formed without any disease in the *cranium* or its

contents; and did the head-ach arise from the irritation of this extraneous body wherever situated, antecedent to its falling into the *Oesophagus*? And in this case, might not the violence of the pain occasion a separation of the *suture*, so as to produce the chasm I have mentioned, without any loss of substance?

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## A R T I C L E XXII.

*Case of Angina Peētoris: By EDWARD JOHNSTONE, M.D. Fellow of the ROYAL MEDICAL SOCIETY of EDINBURGH, and Physician to the GENERAL HOSPITAL at BIRMINGHAM. Communicated by Dr. LETTSOM.*

Read, October 2, 1786.

**J** SIMKINS, aged fifty, of a robust habit of body, who had in the former part of his life been in a situation much superior to his present one of an Iron-Caster, and lived very irregularly, came to me, May 26, 1785. He complained  
of

of sharp pain exactly under the middle of the *sternum* upon quick motion, and especially on going up hill, which gradually extended internally through the breast, on each side down the arms to the wrists (where he had a sensation similar to that occasioned by an electrical shock, or as if it was breaking) and so out at the ends of his fingers, attended with violent palpitation of the heart and difficult respiration. Paroxysms of this kind occurred frequently in the course of a day, and lasted from a quarter of an hour to an hour, and sometimes an hour and a half, and then left him free from complaint, except weakness and tremor of his hands. He had been affected about two months, at first perceiving only slight palpitation of the heart and difficulty of respiration on going up hill; but from that time the paroxysms gradually increased to their present state: body in general regular, and water in usual quantity; pulse, except during the paroxysms, natural. I sent him to the hospital near this town, and ordered the following medicines.

X 2

R *Assiæfatid.*

℞ *Affiefætid.* ℞ij.  
*Camphor,* ℞j  
*Extract. cicut.* ℞jss  
*Syr. Balsam. q. s. f. pil. xxiv.*  
*Cap. iv. bis in die.*                      *Full Diet.*

May 29. The paroxysms have been less frequent since he came into the house, but he hath used little exercise.

On beginning to dose, he frequently starts up, from a sense of rising in his throat and palpitation of the heart, especially after taking a full meal.—His legs begin to swell at the ankle towards the evening, but his urine is in proper quantity.

June 3. The paroxysms now last only ten minutes.

June 14. Fits have gradually got slighter, and last for a shorter time; hath not had one since the 11th.

June 17. Walked upwards of six miles yesterday,



yesterday, and felt only a very slight return of his complaint.

June 25. Had a very short paroxysm last night, which is the only one he hath felt for some time, notwithstanding he hath walked out every day.—Made out-patient.

He came about three weeks afterwards and informed me that he had had some slight returns of his disorder, and that his legs continued to swell at night. I ordered *Fol. Digital. Purpur. siccat gr. unum*, to be added to the evening-dose of his pills; and by the use of this for a few days the swelling entirely subsided, and he continued so free from complaint as to be able to return to his business.

Birmingham,  
Aug. 28, 1786.

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 ARTICLE XXIII.

*Of the Efficacy of the Hyoscyamus, or Henbane, in certain Cases of Insanity: By A. FOTHERGILL, M. D. F. R. S. &c. of BATH. Communicated to Dr. LETTSOM.*

Read October 2, 1786.

**A** GREEABLE to your request, I now send for your perusal, some account of the effects of the *Hyoscyamus*, which I observed during a few trials of it several years ago, and which were minuted down at the time they occurred.

John Wills, aged fifty-three, of a corpulent habit, and swarthy complexion, destined to a sedentary occupation, having met with misfortunes, devoted himself to grief and solitude. His mind being filled with gloomy and distressful apprehensions concerning a future state; he fancied himself haunted by ghosts and spectres, and considered himself as an object of divine vengeance.

He

He became pensive, timorous, and suspicious, sometimes fullen, and morose, threatening violence to himself and others; till, at length, the disease having terminated in a settled, and confirmed melancholy, confinement became absolutely necessary. At the lunar periods, the symptoms generally increased, but not constantly. During his lucid intervals, he would sometimes converse rationally, complaining of a severe cramp about the region of the stomach, attended with obstinate watching, inquietude, flatulency, and constipation. None of his ancestors had been known to be affected with insanity.

Being not easily moved by medicines, I ordered him a strong emetic of antimonial wine to be taken in the evening, followed by a brisk cathartic of soluble tartar the next morning, both which operated very freely. These were succeeded by an antimonial diaphoretic combined with camphire and opium, laxatives being occasionally interposed. Venesection also in the *saphæna* was performed a little before the

full moon. By this method the pain of his stomach was relieved, but the maniacal affection remained unabated, and continued to resist the most approved remedies. I resolved, however, to try other powerful medicines of the narcotic class, and therefore had recourse to the Henbane<sup>q</sup>.

The plant being in full vigour, a quantity of the expressed juice was exposed, in a flat earthen vessel, to the solar rays. The sun being very powerful, having just entered the summer solstice, soon evaporated the aqueous parts, and reduced the remainder to the consistence of an extract, suitable to the form of pills<sup>r</sup>.

<sup>q</sup> *Hyoscyamus niger foliis amplexicaulibus, sinuatis, floribus sessilibus. Linnæi Spec. Plant. 257.*

<sup>r</sup> In like manner, I have repeatedly prepared the Extract of Hemlock, and cannot help considering it as a considerable improvement in the process, which is equally applicable to other inspissated juices. It not only avoids all danger of Empyreuma, but also yields an extract of superior activity. Whether the extract thus prepared imbibes some new property, or acquires some additional virtue from the sun-beams, must be left to future observation.

I ordered

I ordered a pill composed of five grains of this extract to be administered morning and evening, which agreed well, but produced no sensible effect, except that of a mild diuretic. The week following it was directed to be increased gradually to fifteen grains a day, with a suitable dose of aloetic pills interposed occasionally to prevent costiveness. The extract continued to operate as a diuretic; his nights became more composed; he no longer started on hearing the door opened, or attempted to conceal himself when a stranger approached. It was increased daily till he reached thirty grains a day, when it began to occasion a slight giddiness, and propensity to sleep, but the symptoms of melancholy abated: he rested better, and began to converse with more composure. The extract was further increased; but when he arrived at forty grains a day, the giddiness and soporific disposition considerably increased, and denoted an over-dose, which obliged me to descend to thirty grains a day, which he bore without inconvenience, and all the symptoms became more favourable. His timidity, and apprehensions of evil spirits, forsook

forsook him, and his countenance began to assume a more cheerful and serene aspect. After taking the extract about six weeks, he appeared to be perfectly restored; however, it was continued a fortnight longer, when he returned to his business, and afterwards assisted in the harvest, and I had some time after, the satisfaction to hear that he continued to enjoy the *mens sana in corpore sano*, without any symptom of relapse.

Having from this unexpected success, conceived a very favourable idea of the virtues of Henbane, I afterwards gave it in a case of the *puerperal* mania, and with similar advantage. The maniacal symptoms were wont to come on soon after delivery, but yielded in a few weeks to this medicine, and that repeatedly after two succeeding deliveries. The extract ought to be prepared fresh every season, according to the process already mentioned, and carefully preserved in a close vessel, otherwise it soon loses its efficacy. And it is necessary to observe, that where these precautions have been neglected, it has since  
entirely

entirely failed in certain maniacal affections, though given in full doses. Whether this was owing wholly to the inefficacy of the remedy, or the disease being hereditary (a circumstance too often industriously concealed even from the physician) I will not presume to determine; but I am free to acknowledge that I have never yet been so fortunate as to see a single instance of a *real hereditary* mania ever perfectly cured by this, or any other medicine.

Bath, Sept. 26, 1786.

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A R T I C L E XXIV.

*The Case of a Burn, and another of Stones in the Kidnies: By STEPHEN LOWDELL, Surgeon, and F. M. S.*

Read April 18, 1780.

C A S E I.

*Of a Burn; Exemplifying the great Utility of Cold Applications.*

A LADY, who was alone in another room, happened to set her head-dress on fire, she came running for assistance  
into

into the room where I was, I tore off the head-dress as fast as I could with my naked hand, and thereby burnt it to such a degree, as to be extremely painful. Some oil being brought, I began to bathe my hand with it, and every time I applied it afresh I found it give me immediate relief; but this relief was but momentary, which I attributed to the oil's getting warm by the extreme heat of my hand, I therefore plunged my hand into the pot which contained the oil, and found the burning heat instantly abate, and continued easy for much longer time than when the hand was only anointed with it. When the heat began again to increase, I imputed it to the oil, which was in contact with the hand, being grown warm, and therefore moved my hand to find some colder part of the oil, and this answered my expectation; for I found the hand kept tolerably easy while the oil remained cold: but at length, as the whole of the oil by this means began to lose its coolness, I found my hand began to be more troublesomely hot.—I was now fully convinced that the benefit I received arose wholly from the coldness of the remedy;



medy ; I therefore ordered about two ounces of extract of saturn, about half a pint or more of oil, and a sufficient quantity of oatmeal, to make a poultice, to be mixed together in a wash-hand basin. While this was preparing, the burning heat of my hand began to increase apace, and was at length almost intolerable. As soon as this cold poultice was ready, I buried my hand in it, and the pain almost instantly ceased ; I kept my hand still (unmoved) some little time, and then found the burning heat beginning again ; I therefore moved it to a fresh place, and found fresh relief, and whenever I found the burning beginning to increase, I moved it afresh, and always found the same relief ; I continued so to do a full hour or more, at the end of which time finding I could keep my hand still a considerable time without any uneasy sense of burning, I wrapt it up in a quantity of the same poultice and went to bed : I soon fell asleep, slept all night without any sense of pain, and when I awoke in the morning was perfectly easy. Upon taking off the poultice, I found two small  
vesications

vesications on the side of one of my fingers ; but having no foreness, and being rather filiquous than turgid, I did not open them. Being perfectly easy when the poultice had been off some time, I applied nothing either to the hand or finger, and went abroad with only my glove on it, and never after felt the least uneasiness in either ; what little lymph was in the vesications was spontaneously absorbed, and disappeared within two days.

Burns and Scalds are some of those kind of accidents in which an early application of the remedy is of the utmost importance : an instant application may prevent the worst of consequences ; half an hour, or less time lost in some cases of this kind, may render the best remedies of little or no use.—I cannot therefore conclude this case without earnestly recommending the most speedy applications, and that whatever cold remedies are used in these cases, they should be so often renewed as to be kept always cold to the affected part till the burning heat ceases.

CASE II.

*Of Stones in the Kidnies.*

ELIZABETH F——, spinster, was a long time afflicted with a complaint which seemed confined to the urinary bladder; she had much pain there, and voided a turbid urine, which was supposed to be owing to a purulent or mucous matter mixed with the urine; and these complaints were attributed to an ulcer from a stone in the bladder. She was searched several different times, and by different surgeons, for satisfaction in this point, but no stone was ever discovered. She was under my care several months, and afterwards was a considerable time in Guy's Hospital, but never found any relief. She died at the age of twenty-six, and I was permitted to open the dead body, in order to search for the disease. There was no stone in the bladder, no ulcer, nor any visible disease of that viscus. I then examined the kidnies, and found in each a very large stone, branched

branched out into a very irregular shape; these stones were both of nearly the same shape and size, and weighed about one ounce each, Troy weight. They possessed, and wholly filled, or, perhaps, may justly be said to have more than filled the *infundibulum* and whole *pelvis* of the kidneys: the part indeed which occupied the *infundibulum* was perhaps not larger than the natural capacity of that cavity, but the part which occupied the *pelvis* extended into the *sinuses* of the *pelvis* and tubular substance of the kidneys, and distended them to a size far beyond their natural capacities; by this means the stones were so incarcerated in the kidneys as to render it impossible to extract them without dividing the kidneys through their whole length. In the *pelvis* of the right kidney was also found a quantity of a purulent kind of matter; but upon a careful examination I could not find any ulceration, abrasion, sinus, or loss of substance. In the left kidney there was none of this kind of matter, and the whole surface of the *pelvis* and substance of the kidney appeared

peared found as the right. The stone found in the left kidney I gave to that most ingenious anatomist Mr. J. Else, surgeon of St. Thomas's Hospital, lately deceased; the other I have the pleasure to be able to shew to you, but not in the perfection I could wish, for having been in careless or rude hands, that which was at first one complete stone, is now broken into several fragments, and perhaps some part lost.

The above patient never made any complaint that could induce me to suspect the disease lay in the kidneys, or indeed that there was any disease there. Her pain was always confined to the lower part of the abdomen. The matter that was found in the right kidney was traceable to the bladder, and therefore I think the kidney must be supposed to be the fountain which supplied it; but as there was no ulceration in the kidney, this matter could not be properly called purulent, but only that kind of matter which is secreted by glandular parts when

they are in a diseased state: instances of which we have in other glandular parts.

From this case we must see, that if this case had been known to have been stones in the kidneys, lithotomy could have given no relief, how safely and dexterously soever the operator might have cut his way to the seat of the disease.

#### A R T I C L E XXV.

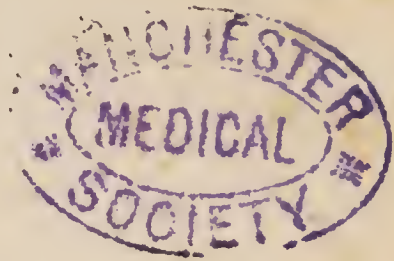
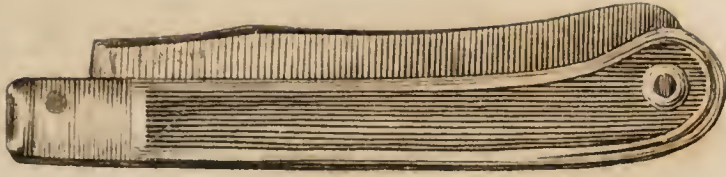
*Case of a young Lady who swallowed a Knife, unattended with any disagreeable Consequences: By WILLIAM WHEELER, Apothecary to the MAGDALEN-HOSPITAL, and F.M.S. (Plate III. fig. I.)*

Read December 30, 1776.

**A** YOUNG lady, about nine years of age, being at play with a small knife in her mouth, accidentally swallowed it.

The knife, when clasped, measured in length more than two inches, and in breadth above half an inch, and yet passed

*Fig. 1.*



*Fig. 2.*



*Fig. 3.*







the *Oesophagus* almost insensibly ; so much so, that the attendants were doubtful of its being swallowed, till they had made every search for it to no purpose.

Her friends being much alarmed, I was sent for immediately, and found my young patient entirely free from pain, or apprehension.

Though her situation appeared to me to be attended with some danger, I endeavoured to alleviate the anxiety of her friends, and recommending all possible attention to be used in search of the knife, prescribed a cooling regimen, with the use of laxative oleaginous medicines. In other respects, trusting the expulsion to nature.

This method produced two stools daily, and yet three days elapsed without any discovery being made ; but on the morning of the fourth day, the knife was voided by stool, with as little pain as it had been swallowed : the young lady continued perfectly

fectly easy, as well during the passage of the knife, as afterwards.

Soon after the above, I was informed of a school-boy having swallowed a small brass padlock ; ashamed of the circumstance, he did not mention it till some time after the accident, and in this interval it was probably voided by stool. On inquiry, he has since assured me, that neither pain, or any other inconvenience attended the swallowing it, but from that time to the present he has enjoyed a perfect state of health.

The above circumstances shew the possibility, at least, of very irregular bodies, and even of metallic compositions, passing the intestinal canal without producing any disagreeable effects.

But if these cases, because they have terminated happily, should seem trivial in the relation, let me beg the indulgence of the Society.

It will scarcely be imagined, I mean to  
5 claim

claim any merit in removing the cause of complaint, in the case which came under my care ; but reflecting on the figure of the substance swallowed, the obstructions it was likely to meet with in the stomach and course of the intestines, and the tender age of the patient, I confess to have suffered much anxiety for her safety.

From this circumstance, should a similar accident happen in my future practice, it would greatly diminish the apprehensions I should otherwise be liable to, knowing the possibility of so happy a conclusion. And the hopes of communicating to others, what I am persuaded may be of use to myself, have induced me to lay these facts before the Society.

Basinghall-Street,  
Dec. 3, 1776.

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A R T I C L E XXVI.

*Case of a Spasmodic Affection of the Eyes :  
Extracted from a Letter to J. C. LETT-  
SOM, M. D. &c. By BENJAMIN SAY,  
Practitioner of Medicine in PHILADEL-  
PHIA.*

Read October 2, 1786.

**O**N the 11th of May, 1784, at nine o'clock *A. M.* William Scotten, a man of about twenty-eight years of age, made application to me on account of an extraordinary spasmodic affection of the muscles of his eyes ; he wore a piece of green silk over the left eye, and as long as that remained, so long he was apparently well, and could see with his right eye very distinctly ; but as soon as he removed the covering from the left eye, he was seized with a spasmodic or convulsive motion of both eyes, insomuch that the pupils were preternaturally turned upwards, and inwards, being entirely hid from the sight  
of

of the observer, at which time he was perfectly blind; but as soon as the left eye was covered, the spasm ceased, the eyes resumed their natural places, and he could again distinctly see. This alternate effect of blindness and sight, I could cause to take place as often as I pleased, by uncovering and covering the affected eye, which I did many times. I tried many ways in order to discover whether there was not some deception; but found, after repeated experiments, that there was something remarkable in this disorder: I queried with him a good deal concerning the complaint, he informed me that about twelve years before, he was seized with a very strong epileptic fit, which lasted four hours, it then went off, and he was not troubled with any thing similar for about four years afterwards, when it seized him again, and continued upon him with different symptoms, at intervals, for several years; sometimes he would violently clap his hands, and strike at any thing near him, continuing during these paroxysms in convulsive motions; at length

(he informed me) about two months before his application to me, this general spasmodic affection became local, attacking his eyes only. After examining the disorder attentively, I was induced to believe that the seat of the complaint was in the *levator palpebræ superioris* of the left eye, and that the affection of the right, took place sympathetically from that, for I found by covering the right eye only, that the spasm still continued; I therefore concluded that if I were right in this opinion of the case, that by applying something sedative to the part principally affected, it would prove at least palliative, and indeed would be the criterion, by which I should ascertain, whether in my conjectures I was right or wrong. The remedy I made use of was the liquid laudanum, which I applied externally upon the left upper eyelid; I rubbed it well in for the space of three or four minutes, keeping his eye shut during the operation; when to my, and his great astonishment and satisfaction, the spasmodic affection of his eyes effectually ceased. He sat with me for half an hour

hour with the disordered eye uncovered, without experiencing the least disadvantage, and as I had several patients to visit that morning, I requested him to call in the evening to inform me how he had gone through the day; he called accordingly, and acquainted me that he remained quite free from all complaints, and believed that he was perfectly cured. He lives at a distance from this place, came purposely to consult me, and if he had experienced any return of this complaint I certainly should have been informed of it.

This case appears to be an extraordinary and uncommon one, and as such I do myself the honour of communicating it to you.

## ARTICLE XXVII.

*Of a Disease, succeeding the Transplanting of Teeth: By J. C. LETTSOM, M.D. &c.*

Read Aug. 2, 1786.

ON the 23d of August, 1785, I first visited J. Y——, Esq. from whom I learned, that about two months before, he had had two of the central incisores removed, and about a week afterwards, the right exterior incisor, which were replaced by a celebrated dentist from two young women, who were supposed, by an eminent surgeon, to be perfectly healthy, after having made the most minute scrutiny to ascertain the fact.

For the space of six weeks after the first operation, no inconvenience resulted; but after this period, a painful sensation between the two first transplanted teeth came on; the patient, however, endured it for a week before he made application to  
the



the surgeon, who recommended him to take Peruvian bark and laudanum freely, which he continued to do for the space of another week, when I was consulted.

When the painful sensation I have mentioned, first excited the attention of the patient, he recollected that he had been out later than usual, on the preceding evening, and imagining he had taken cold, he ascribed the present symptoms to this cause, not having at this time any other motive of suspicion; and the transplanted teeth had previously acquired nearly a natural firmness.

During the use of bark and laudanum, for the week prior to my attendance, the pain continued; and an ulceration had taken place in the gums of the interior surface of the two first transplanted teeth, and gradually extended to the root of the right incisor.

I have already observed, that I visited this gentleman eight weeks after the two  
central

central incisores had been replaced: the day preceding my attendance, he had felt a slight soreness and swelling of the glands of the neck and throat, which were painful on pressure, but no ulceration was perceptible in those parts.

I found an ulceration interiorly, extending about half an inch from the teeth, on the surface of the roof of the mouth; and longitudinally, the extent of the three teeth; the ulceration had an irregular jagged loose appearance, with livid, sphacelated interstices. The external gums were also, but much less ulcerated, and of a more clean, and less gangrenous aspect; but the whole together was such as would have given me the suspicion of a venereal disease in any other situation. The teeth were become loose, and particularly one of the central incisores; the external one was by much the most firm.

In other respects the gentleman was in a tolerable state of health, of chaste morals, and careful in his mode of living. He  
had

had very lately before the operation, arrived from the West-Indies, and had not yet acquired the European vigour of health, though not in any state of disease. Since the first sensation of pain, he complained of feverish heat, and underwent restless nights.

At my first visit I ordered him to take a grain and an half of opium, and two grains of calomel, at bed time ; a draught every four hours, containing a drachm of bark, in powder, and a drachm and an half of Huxham's tincture of bark ; and to sprinkle the ulcerations with a powder of two grains of calomel, and ten of olibanum.

On the 25th, besides the dentist, we had in consultation three other eminent surgeons ; when it was concluded to omit mercurials, and to give every four hours a powder, containing a drachm and an half of Peruvian bark, with ten drops of Thebaic tincture, in a saline mixture.

Since

Since the 23d, there was very little alteration in the symptoms, which, however, were in no respect aggravated.

Aug. 26. The ulcerations continue much the same; the pulse is regular; an efflorescence for the first time appears on the skin: the same quantity of Peruvian bark was continued, with twelve drops of Thebaic tincture in each dose.

Aug. 27. The ulcerations much as before, at least there is no appearance of amendment. The remedies were continued.

Aug. 28. The bark was with difficulty retained on the stomach; it was however continued, and four ounces of a decoction of sarsaparilla ordered to be taken after each powder.

The efflorescence on the skin is almost general; of an obscure red colour, resembling a syphilitick eruption in every respect, so far as I could ascertain.

The

The ulceration of the gums do not diminish: a lotion of one drachm of caustic alkali in half a pint of water, with half an ounce of gum arabic, was directed to be frequently applied to the ulcerations.

Sept. 2. The ulcerations have not increased, but rather diminished; the eruption on the skin is rather paler; an ulceration of the tonsils is now perceptible; the patient expresses relief from the use of the lotion; the teeth are very loose.

Sept. 8. The ulcerations of the gums are more extended, jagged, and sphacelated; the strength of the patient is greatly reduced; he complains of head-ach and want of rest, with feverish heat in the evening, and profuse sweats in the morning. One eye is very much inflamed.

He was ordered to take a quarter of a grain of corrosive sublimate twice a day, and to apply to the ulcerations a solution of three grains of sublimate in half a pint of water.

Sept.

Sept. 10. The ulcerations increase; the teeth are ready to drop out of the sockets, particularly the central incisors; the sublimate excites great uneasiness in the stomach, and is therefore omitted; both tonsils are become alarmingly ulcerated.

The patient expresses great dislike to the use of mercurials, but is persuaded to rub upon the legs one drachm of the strong mercurial ointment daily, and to drink one pint of a decoction of sarsaparilla.

Sept. 12. The complaints are not augmented; but if any alteration is perceptible, it is on the favourable side. The ointment and sarsaparilla are continued.

Sept. 19. There is scarcely any efflorescence of the skin remaining; the ulcerations of the gums and tonsils are greatly diminished: the *ophthalmia* is also lessened, though there is some inflammation in the other eye.

Sept.

Sept. 22. The ulcerations and the *ophthalmia* are nearly well; but as the ointment has not produced any ptyalism, it is continued, and the *sarsaparilla* likewise. The teeth have acquired a tolerable degree of firmness.

Sept. 26. The ulcerations are perfectly healed, and every other symptom of indisposition has vanished; the teeth have acquired a greater firmness in the sockets, and the remedies were allowed to be suspended.

There is so much similarity in ulcerations, that it is not easy by the most accurate language to convey a distinct and clear idea of the different kinds of them, varying as they do, according to their various causes, to the degrees of virulence, length of time in which they have continued, state of the body in which they occur, and other contingencies. Nevertheless, ulcers depending upon syphilis, however difficult of descriptive elucidation, are in general pretty readily ascertained

from their peculiar aspect, by persons long conversant with medical practice; and from all the observations I have been able to make, I did not hesitate, at the time of attendance, in giving my opinion, that the disease I have related, was the *lues venerea* communicated by the transplanted teeth, which the appearances in the ulcers of the gums, the eruption on the skin, the peculiar *ophthalmia*, the ulcerations in the tonsils, and the whole progress of the treatment and cure, appeared to justify.

Under this persuasion, as the mercurials were suspended as soon as the ulcers healed, and before the disease was probably totally eradicated, I intimated this suspicion at the time, to the patient; whose strength, however, was so far reduced, as authorised us to interdict mercury at present, especially as he then proposed to take the tour of the Southern parts of Europe. I recommended him therefore to procure mercurial ointment, prepared without turpentine, and in case of the recurrence of  
the.



the disease, to have immediate recourse to this remedy.

By the time he arrived at Genoa, which was on the 29th of December, about eight weeks after the suspension of the mercurial ointment, the disease again appeared, with ulcerations of the gums, resembling, as far as the patient could judge, the former attack, though in a less degree, owing probably to the immediate application of mercurial ointment to the throat, which in less than a week stopped the disease; after which he used it very sparingly, and concluded his medical regimen with taking a decoction of sarsaparilla; and he has since continued free from disease to the present time, May 1786, when I procured his assistance in drawing up the preceding relation.

Whilst I admit the resemblance of this disease to the *lues venerea*, I cannot be insensible of the weight of some general objections, published by a gentleman, whose

great discernment is universally admired<sup>\*</sup>; but as I have related the appearances and progress of the disease, the treatment and cure of it, from notes daily taken, my opinion cannot alter the facts, with which the author I have alluded to was acquainted, and of which the reader may decide upon for himself.

I have remarked, that two teeth, the central incisors, were inserted a week before the external incisor; and the disease throughout its whole progress, seemed to originate from the two former; both of which were very loose, one indeed was ready to drop out of the *alveolus* upon the slightest touch, while the external incisor preserved throughout a degree of firmness that never afforded any alarm, and the ulceration which extended to it was less foul: I suspect, therefore, that the person from whom the other two were extracted, conveyed the *lues*: had the disease originated from

<sup>\*</sup> See Hunter's Treatise on the Venereal Disease, p. 379, 391, 397.

the patient, the ulceration would have been less partial.

With respect to the length of the time, from the application of the cause to the appearance of the disease, I see no well-grounded argument against the supposition I have admitted; as that the syphilitic infection has lain so long dormant, and afterwards exerted its virulence, I have no doubt. Few diseases afford more anomalous symptoms than the venereal, and not one symptom occurred in the present case but what must have been seen in others repeatedly; the colour of the eruption, its accession, duration, and recession; the ulcerations of the tonsils; the *ophthalmia*; and every other circumstance, appeared to me consentaneous to other instances in the *lues*.

It cannot be refuted, that with the utmost precaution, the scion tooth is still a living tooth, has the principle of life so far preserved, as to unite with the vessel of the new *alveolus*; and, consequently, if it

retains a disease with the living principle, it may also convey this disease to a body, of which it becomes a living member ; but perhaps from the hardness of its texture, and its slow union with the parts to which it is thus nearly allied, it may be longer in conveying the poison which it carried from its original seat ; and this may remove a doubt which has been raised respecting the lapse of time between the insertion of the tooth and the appearance of the disease.

We never have had any instance recorded of such a disease succeeding the insertion of dead, or of ivory teeth ; a dead tooth, whether losing its living principle, in its original seat, without removal, or a dead one, inserted into the *alveolus* of another person, acquires a colour and appearance totally different from a living tooth, whether an original or a transplanted tooth. The argument therefore of soaking and cleansing the tooth, constitutes no proof against the probability of communicating the disease, as long as the tooth retains the living principle, capable of forming an union  
with

with the parts into which it has been inserted, by a specific medium of circulation, such as exists in the natural state; unless it be contended that the teeth are incapable of retaining the venereal disease, which, however, cannot be argued by any analogy, for the disease seems to be particularly determined to some of the hard bones of the body, as the *tibia*, *cranium*, &c. and sometimes remains latent for years, possessing at the same time the genuine syphilitic powers; but supposing the teeth incapable of retaining and communicating the disease, still the nerves and fleshy parts about them may do it effectually.

That this disease should succeed the transplanting of teeth, conveys no censure upon the dentist who performed the operation, as every precaution to obviate such an incident was adopted: the persons from whom the teeth were extracted, were minutely examined by an eminent surgeon, and the transplanted ones were soaked in lukewarm water for about an hour

before they were inserted into the *alveoli* of the gentleman.

It is certain, however, that instances have occurred with other operators wherein such precautions have not been taken, perhaps from an opinion that the more quickly the transition was made, from extracting to inserting a scion tooth, the greater was the probability of the transplanted tooth fixing into the *alveolus* '. Dr. Hamilton, of Ipswich, to whom I had communicated the foregoing case, has favoured me with an account of two unfortunate cases that fell victims to this practice, which I shall annex.

From what I can collect, in an extensive inquiry into the practice of transplanting teeth, about one in every twenty have had the disease, and of these about one

' " It will be hardly necessary to mention that the  
" sooner the scion is put into its place the better, as  
" delay will perpetually lose the power upon which the  
" union of the two parts depends."

Hunter on the Teeth, v. ii. p. 102.

fourth

fourth have died. It is true, that in some of these fatal cases, mercury had been used, but it has been in such only, where the patient had been debilitated to an extreme degree, and never where it had been exhibited early, or whilst a good share of strength remained, so far as I know: every person acquainted with practice, very well knows, that in some instances of the *lues* in the common way, the application of mercury will not cure; and, indeed, where the cortex and other tonics have afforded more benefit; but such instances are comparatively rare, and form no proof against the general efficacy of mercury in the *lues*.

As the species of disease I have described, has not been noticed in this kingdom above ten years, owing probably to the novelty of transplanting living teeth, I have given my opinion in the foregoing pages with more hesitation; for had it not been for the circumstances attending other patients, who have had similar ulcerations of the gums after the operation, I should not have entertained any doubt of the syphilitic nature of the present case.

The eminent writer, whose authority I have already noticed, has related several examples, which lead one to doubt the real existence of the *lues* in this peculiar disease of the gums.

Professor Kuhn, of Philadelphia, whose amiable character is universally esteemed, and whose authority is inferior to none, has lately favoured me with the following case of ulceration of the gums succeeding the transplanting of teeth, which happened in Philadelphia.

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“ S I R,

“ I HAVE until this time delayed to acknowledge the favour of your letter, from an expectation which I entertained, of being able to furnish you with several cases, similar in their consequences, to that of Mr. J. Y——; but after the most diligent inquiry, those cases, of which I had heard various accounts, proved to be entirely



irely local, and indeed confined to the jaw-bone. One case which I attended was in many respects similar to Mr. Y——'s, and of this the following history will determine your opinion.

“ A married lady, in this city, had two teeth inserted into the upper jaw by Mr. Le Mayeur, a celebrated dentist; these succeeded extremely well. After some time a third was likewise inserted; but this was never perfectly fixed or firm, though for six weeks she felt no kind of inconvenience. She then began to complain of a stricture about the fauces, and some symptoms of a fore throat; with a slight ulceration of the tonsils, which she attributed to cold, and for which she lost about eight ounces of blood from the arm. This not affording her any relief, my attendance was desired: I found the glands in the neck considerably swelled and hard, the gum about the last inserted tooth livid, with a loss of substance, and the tooth itself much looser than it had been for some time; a slight fever accompanied the symptoms, attended  
with

with a loss of appetite, and some degree of nausea ; after some days, eruptions appeared over the whole body, and particularly on the arms, and in the palms of the hands, covered with furfuracious scales, which were soon renewed if removed by design or accident. There was no room for even suspecting that syphilis could have been the source of any of the symptoms, and I therefore concluded that the irritation from the last inserted tooth had occasioned the various symptoms of the disorder. The gum was repeatedly scarified, external remedies were applied to the swelling in the neck, to prevent an abscess, which there was much reason to apprehend, and small doses of neutral salts were administered to moderate or relieve the fever. But though her complaints did not grow worse under this treatment, I had, after two months attendance, the mortification to find them no better, and therefore advised the removal of the tooth, as the only method that appeared to me effectual to relieve the complaints. This, after some hesitation, was  
complied

complied with ; the gum in a few days healed and became perfectly sound ; the swelling in the neck abated by degrees ; the eruptions vanished, but so slowly, that it was several months before they disappeared entirely. She took a few doses of bark daily for about a week, to restore tone and vigour to the system, which had been very much impaired by anxiety and distress of mind as well as by the disease."

Philadelphia,  
May 5, 1786.

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Under authorities of such acknowledged reputation, there certainly remains a difficulty in deciding upon the nature of the disease. We know by experience, that mixing two companies of people together, will occasion a disease that did not apparently exist in either. Dr. Blane repeatedly remarked that fevers prevailed upon mixing the crews of one ship to make up the complement of another, which would not in all probability have occurred to either had they

they been kept distinct. In the winter vacation of the year 1785, I attended many children, who left school in apparent health, who were attacked with a low nervous fever some time after coming home to their friends, where I could not deduce the indisposition from any indulgence or irregularity in the families. This was not peculiar to the children of one school, but happened to those of different schools; and was indeed so general as to be distinguished by some physicians by the name of school fever.

I have often known instances of dentists having drawn through mistake a sound tooth instead of the decayed, which upon being instantly replaced into the socket has become again firm and permanent; but in no instance whatever has this disease been produced; if therefore the disease be not syphilitic, may it not depend upon bringing together the principles of two different constitutions, one of which may possess a pre-disposition to morbid affection?

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Were it necessary, analogy might favour this theory, from the influence of various infectious diseases; but as we have not had sufficient experience respecting the true nature and cause of the disease arising from transplanting teeth, any deductions from this practice must, at present, be unsatisfactory. It is however a pleasure to know, that whatever be its cause, mercury appears capable of effecting its cure.

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*Letter from Dr. HAMILTON, of IPSWICH,  
to Dr. LETTSOM.*

“ I DO not find, on inquiry, the disease occasioned by transplanting teeth from one person to another, so new, nor altogether so uncommon, as I at first supposed; and the perusal of your last favour convinces me, that it seems more from our inattention and the want of observation, than from its non-existence, that it has, till lately, escaped the notice of medical men. I am now furnished with a case, which happened more than ten years ago,

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ago, to corroborate, in part at least, this assertion.

Talking on the subject with a gentleman of this place, since the publication of the third volume of the College Transactions, wherein Sir William Watson has related a case, and which seems to have been the first noticed, he assures me, that a similar complaint was experienced by a young lady of his acquaintance, which arose precisely from the same cause.—It was as follows :

A white, and an apparently sound tooth, was taken from the jaw of a seemingly healthy person, and immediately transplanted into the jaw of the lady. Soon after which she began to complain of pain, grew daily worse, ulcers appeared in the gum where it was inserted; these spread, sunk deeper, communicated to her upper and under jaw, fauces, and tonsils; discharged a fœtid ichor, and rapidly continued their ravages, till in no long time after, not only the roof of her mouth, but both upper and under lips  
were

were consumed; her teeth also fell out, for the *alveoli* became carious, and she appeared a spectacle shocking to behold: she lived some considerable time, however, before death put a period to her miseries.

“ We are told of the great care taken by the dentists to obtain teeth from sound persons; how the strictest inquiry is made relative to this, before they proceed to the extraction of the tooth; and how, that even when they are fully satisfied on this point, they do not stop here, but proceed further: they soak it well in warm water, and they carefully wipe it clean and dry, before they insert it into the destined jaw.

“ I doubt not, but this may be, for the most part, strictly true; and that the generality of dentists scrupulously and conscientiously adhere to this plan, I mean such as have a character which they wish to maintain; but it is feared, there may be exceptions, and that there have been those who paid less regard to this necessary precaution.

“ The gentleman who favours me with the relation of this case, says, he knows instances where the tooth has been taken warm from the one jaw, and the next moment inserted into that wherein it was destined to remain, without any such precautions as these being observed.

“ But the fatality that has attended Sir William Watson’s patient, with the fatality of this I have related, and the brink of death on which your own stood, who, I trust by this time, is removed from all danger, will, it is to be hoped, operate so forcibly on the practitioners in this branch, that no possible precaution will hereafter be neglected, that can obviate such evil tendency.

“ I would not, from these cases, entirely condemn the practice of transplanting teeth ; I am authorised from another correspondent of observation, to assert, that it has been attended with utility. That at the end of five years from the operation, the transplanted tooth neither showed signs of decay, nor did pain, or any other evil tendency,



tendency, to create an alarm, during this period, ever succeed.

“ Notwithstanding this, it may be perhaps as safe, not to run the risque for every trifling blemish in this part of the human fabric. A little black speck, of no importance even to beauty, or a tooth not standing altogether so exactly in a row with its fellows, should by no means tempt any one to hazard its removal for another, though more beautiful to the eye, which may in a short time be the cause of disease and pain, if not death.

“ That it is the syphilis, or confirmed pox, which most frequently takes place from this operation, there appears to me some reason to conclude; and this is strengthened as well from the frequency of venereal taints in both sexes, as from considering what sort of persons they are, who, for the sake of a bribe, submit in this way to the loss of their teeth: their ways of life, and other circumstances, give room for suspicion on this head.

“ In the case related by Sir William Watson, it yielded to nothing but mercury ” ; the ulcers, after the use of this mineral, soon began to look better ; but a proper quantity could not be administered, for the patient’s strength was too far exhausted before the trial was made.

“ Daily experience proves, that in the advanced stages of syphilis, mercury does not always succeed ; every part of the system may be so weakened by the disease, that the operation of this medicine cannot be born ; before a proper quantity be thrown in, some symptoms may be induced, which will oblige the physician to desist from its further use.

“ But the person from whom the tooth was extracted, as related by Sir William Watson, had no appearance, either on the pudendum, or tonsils, of this affection : an

• Mercury, we grant, cures other diseases besides the *lues* : we do not, therefore, insist on this as an argument, we must look further ; this will neither prove for, nor against, the disease being syphilis.

eminent

eminent surgeon had made the examination. We may, however, be allowed to remark, how difficult it is, absolutely to determine against the presence of this infection; and this will appear more strong when it is considered, how small the quantity is that can communicate the taint, or how far the system may be charged with it at the time, though not obvious to our senses<sup>w</sup>.

“ Though I am inclined to doubt, whether blood is at any time, of itself, capable of communicating either this or some other infectious diseases, at least till

<sup>w</sup> A surgeon of character in this town, lately told me of a case of syphilis, where not the least appearance, either of it on the private parts, or any other part of the body, shewed itself for upwards of six years. About this time the patient, then a bachelor, contracted the venereal disease—was cured to all appearance—afterwards married, and his wife bore children to him; neither she, nor they were ever affected: an ulcer now appeared, and he was perfectly cured by mercury. He solemnly protested, he never had connection with any woman but his wife, since his marriage. This proves how long it may remain dormant in the habit, and at length break forth with all its virulence.

more satisfactory proofs appear from accurate experiment; yet it might prove the medium to convey the poison, which it is not beyond probability to suppose. It might be received from some small ulcer undetected about the root of the tooth, at the time of extraction. But the tooth was well washed and wiped, and consequently all the poison removed: this is a difficult matter to determine. If a small ulcer be allowed, the remains of which was not carefully cut, or scraped away, the unsound part might even after all this precaution retain enough of the vitiated ichor to inoculate the person into whose jaw it was inserted.

“ The syphilis attacks not only the soft parts, but the bones, and most commonly those of the closest and hardest texture: both Sir William Watson's patient, and the patient mentioned here, had the bones consumed. I insist not, however, on this mode of reasoning, but throw out these hints as probable conjecture; yet the conclusions,

clusions, as inferred from the premises, would seem not to be altogether unnatural."

" P. S. I have within this hour been informed of another case of transplanted teeth followed by death. It happened more than seven years ago, which is a further proof that Sir William Watson's case is not the first of the kind. A respectable clergyman assures me of the fact; the subject likewise a lady, and the operator, a dentist that lived in Bond-Street, London; he also tells me, that little care was formerly taken by the dentists, and that he knows the common practice was, to insert the tooth into the destined jaw, warm from the jaw whence it was extracted. The opinion was, that the blood assisted in fastening the tooth both more speedily, and more securely. He does not at this distance of time recollect whether the tonsils and palate were affected; but he can never forget the shocking appearance of the poor sufferer. The practice, it seems, has been to obtain fine white teeth, without paying much regard to the person from whom

they took them. Little chimney-sweep boys became more frequently than others, the victims from whom teeth might be obtained for a small trifle, sometimes a shilling, or, at most, half a crown: no wonder, if disease was the result of such promiscuous and inattentive proceedings.

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## ARTICLE XXVIII.

*Remarkable Effects of Cantbarides in Paralytic Affections: In a Letter to the*  
 MEDICAL SOCIETY of LONDON: By  
 J. VAUGHAN, M.D. C. M. S. and Phy-  
 sician to the LEICESTER-INFIRMARY.

Read October 16, 1786.

**P**ARALYTIC cases come so often under the notice of the physician, and so frequently prove superior to his skill, that, I trust, any remedy which promises to be of use in so dreadful a malady will be received both with candour and thankfulness

ness by the medical world. It is true, that our knowledge of the nervous system, and of the means by which it performs its respective functions, is at present very imperfect, and reduces our practice very frequently to a kind of creditable empiricism; yet facts will always have their weight, and will serve as useful guides to us when a case occurs similar to that which I shall make the subject of this paper; and which I select as the most important of very many, which have come under my cognizance, when the same means have been employed. The remedy I am about to speak of made a noise, as we very well know, some years ago, and the gentleman, who ventured to employ it, subjected himself to censure. A more enlightened philosophy has, in the present day, removed many of our prejudices, and made way for the introduction of various articles into the *Materia Medica*, heretofore accounted deleterious, and not applicable to any good purpose. Of this number was *cantbarides* given as an internal medicine; but, I trust, it will appear from what

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I am going to relate, that *cantbarides* may be exhibited in substance, not only with safety, but with advantage; without any further remark, then, I hasten to my narrative.

A lusty and healthy young man, aged twenty-one years, being violently heated, threw himself on the ground, and fell fast asleep. He was found, after some hours, utterly incapable of voluntary motion, senseless, with great coldness of the limbs and surface of the body; he was deprived of the power of speech, and his water flowed involuntarily. In this state his friends applied to an apothecary for assistance, who bled him, gave him a purge, and placed a blister upon his back. I found him with a very considerable degree of stupor, a frequent unequal respiration, and a pulse slow and feeble.

March 28. As he had had no stool for some days, a warm stimulating clyster with *tinct. sac.* and *tinct. jalap.* was immediately administered. The whole head was covered with a blister, as was also the  
*sacrum,*



*sacrum*, and a volatile liniment with more than the usual quantity of *spt. sal. ammoniac, cum calce vivâ*, was applied to the region of the *pubis*, to the spine of the back, and to the lower limbs. A bolus consisting of a scruple of volatile salt, as much of the *elect. cardiac. p. e.* with a grain of *cantharides* in powder was ordered to be taken once in six hours, which was to be washed down with a strong infusion of valerian, horse-radish, mustard-seed, and *canella alba*. This plan was continued for three successive days, without its producing any visible effect.

On the 31st of March, the volatile salt and the cordial electuary were each increased to the quantity of half a drachm, and the grain of *cantharides* was added to it as heretofore; but instead of once in six hours, the bolus was ordered to be repeated every three hours, with the infusion as before directed.

On the 4th of April, not having gained any material advantage, his clyster being  
first

first repeated, ten grains more of the volatile salt, making in the whole " two scruples, and a second grain of *cantbarides* were added to each bolus, which was to be repeated every three or four hours until some manifest effect was produced. This method he pursued until the 6th of April; in the evening of that day he became very restless, was able to toss himself about,

" I doubt not but two scruples of volatile salt will be considered by most people as a large dose of that medicine; but on the authority of Van Swieten, who speaks favourably of it in paralytic cases, I some years since began with giving a patient, who laboured under Paralysis, first of all, a drachm in half a pint of water gruel fasting; this producing no effect, two drachms were given, then three, and, at last, half an ounce in the same quantity of gruel. This dose was continued for three weeks, without producing either good or evil, and the patient made no complaint of it but that it heated the fauces, and warmed the stomach for a short time. In this state, having continued the volatile salt in such doses and for so long a time, I ordered some blood to be drawn from the arm, with a view to determine what effect it had produced on that fluid. The blood was of a more florid colour than usual, but its texture not in the least broken; on the contrary, I thought, after standing many hours, that it yielded less serum than common, and the crassamentum was rather firmer than ordinary.

and

and though not to articulate any words, yet he made a great noise expressive of much pain, frequently applying his hand to the region of the *pubis*, as though it was the part more particularly aggrieved; but he was still incapable of giving any account of himself. The blister was now removed from the head, and the part washed clean; a poultice of bread and milk with some oil was applied to the blistered part of the *sacrum*, and his medicines were omitted. In the place of which, he was now directed to drink freely of barley-water, well loaded with gum arabic. In three days time all these painful symptoms were entirely removed, he was become quite sensible, could retain his water, and the following day could stand when supported by two people; but his countenance betrayed strong marks of the injury the brain had sustained, and bespoke a degree of fatuity.

On the 9th of April, he was directed to take once in eight hours a bolus, with a scruple of gum guaicum, as much volatile  
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tile salt, and one grain of *cantbarides*, drinking with it the infusion of valerian, &c. A seton was made in his neck, and stimulating plasters were applied to the soles of his feet. He continued in this method until the 21<sup>st</sup> of April, mending every day. He felt no inconvenience from the *cantbarides* taken in this quantity; he slept well, eat his food with an appetite, and his bowels did their office with regularity. His intellectual faculties were however much impaired; he had forgotten how to walk; when he attempted it, it was with the awkwardness of an infant; and he had even his letters to learn again. Every thing which had passed since his first seizure had not left the least impression upon the common sensory; and there will in all probability be a space of time, of the duration of six weeks, which will remain a blank in his life. In proportion, however, as he gained his strength, his mental faculties were restored; he could now walk with a stick, but his limbs were very feeble, and he still continued to drag them after him; he had also little or no use of his left hand and

arm. Notwithstanding this, it was very observable that he gained something every day; by the 4th of May he was able to walk tolerably well, but the weakness in the left hand and arm still continued, though not in near so great a degree. He was now ordered an aromatic electuary with steel, with a warm decoction of bark, to which was joined the daily use of the cold bath. By bathing and these remedies, he received speedily the most essential advantages; for by the 12th of May nothing remained of his disease, except a trifling weakness in his left hand, the entire use of which he soon after recovered, and had no longer occasion for any medical assistance.

I have thus, Gentlemen, laid before your Society, and through your means the Public, an account of the effects of *cantharides* given internally, and, in this instance, with singular advantage. The case was a deplorable one, and the action of the remedy somewhat alarming. I have since the occurrence of the above case, been

been in the habit of giving *cantbarides* in paralytic cases with various degrees of success, and sometimes with none at all; but I generally begin with half a grain for a dose, and it seldom happens that a patient will bear more than two grains in twenty-four hours; whenever any inconvenience arises from its stimulating too much, a suspension of its use for a day or two, and allowing the free use of milk and water as a diluent, soon removes the troublesome symptoms. In a case where there was an incontinence of urine from a paralysis of the *sphincter vesicæ*, I gave it, in conjunction with the bark, to the amount of nine grains in the twenty-four hours, but without any good effect, or, indeed, any effect at all. I trust, however, that I have said enough to shew, that *cantbarides* affords us a remedy which may be employed with safety, and that its failing sometimes to do, what we want from it, only reduces it to a level with some of the most celebrated and powerful articles of the *Materia Medica*.

Dr. VAUGHAN'S *further Remarks, in a  
Letter to Dr. LETTSOM.*

“ YOU will readily allow, I dare say, that instances of what we call the Sea-Scurvy, occur but seldom on shore, and especially in the interior parts of our island; yet in the course of five and twenty years, I have seen four, the last of which occurred very lately: in this instance, blood issued from the gums and fauces constantly, of a black sooty colour; the body was covered with *petechiæ* and *vibices*, and on the third day, a pain in the loins made me suspect that the same disease would shew itself in the kidney: this it actually did in the course of the night. What came from the kidneys and bladder, during the night, in quantity about three half pints, was perfect *cruor*, which did not separate into *crassamentum* and *serum*, but resembled soot diffused in water, more than any thing else. Bark and alum given with the utmost freedom; the mineral acids, fixed air, all taken in large quantities, with a nourishing antiseptic diet,

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made no impression upon this disease; but three pints of juice fresh expressed from oranges and lemons, taken in twenty-four hours, brought on an amazing change, and in four days put an entire stop to the disease; and the patient continues perfectly well.

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### A R T I C L E XXIX.

*Of an Injury in the Hand, successfully removed: By THOMAS POLE, Surgeon. Communicated by J. C. LETTSOM, M. D. &c. See Plate III. fig. 2, page 322.*

Read September 20, 1786.

**M**ARY ANN TUDOR, late of London, but now of the Crown Inn, Reading, when about ten years of age, was playing with an ivory bodkin, and accidentally thrust it into the palm of her right hand, in which incident the instrument brake at the eye, about six-eighths of an inch in length; and was buried under the integuments about the flexor tendons. She applied to a surgeon of the  
town



town for assistance, who, either not informed of the particulars of the extraneous body being there, or else not capable of discovering it, attempted to heal the wound superficially; but the patient finding an acute pain in the part, and a frequent weeping of matter from a small sinus, and that the arm at times became very painful and swollen up to the axilla, so as to oblige her to cut the sleeve open to undress herself, she came to London for further assistance, where she was seen by several surgeons of eminence, who probably did not suspect the cause of the disease, and she returned to Reading without relief; at which place she was under the care of different surgeons, but with no better success.

In the autumn of 1786, being at Reading on account of an operation on a patient there, this young woman was introduced to me for my advice. I was unwilling to suppose, that all the judicious practitioners whose opinions she had procured, had overlooked the probability of

the body remaining in the part; naturally supposing their own ideas, from the history of the case, would have suggested the necessity of an operation to extract it; and considering the years which elapsed since the accident, I, indeed, was ready to conclude it impossible, to have remained so long in the part, and could scarcely admit the idea which the other symptoms of the case afterwards obliged me to entertain; as the lancinating pain, frequent swelling, and inflammation, and the continual weeping of the ulcer; but finding no symptoms of scrophula, however improbable it might at first have appeared, that a portion of the bodkin, remaining in the part, excited the disease, I concluded it to be so; and upon opening the hand, the operation confirmed the propriety of the determination; and I extracted the piece as before mentioned, unaltered in its colour, or appearance in any respect; and the wound was perfectly healed in about a week, to the grateful satisfaction of the patient and family; for the hand and arm had been, in a great measure, useless for the space of *fifteen* years.

A R T I C L E XXX.

*Case of a Biliary Calculus: By J. C. LETTSOM, M. D. &c. See Plate III. fig. 2, page 322.*

Read September 4, 1786.

**M**AJOR B———D, of Jamaica, had laboured for many years under a severe pain about the region of the præcordia. After twelve years thus grievously suffering, he came purposely to Europe to seek for relief. Between the tropics this disease had been called the gout; and probably under the same persuasion, the physicians he consulted in London, recommended him to try the Bath water; he acquiesced, and after a sufficient trial he returned to London, with an increase of his sufferings; he had, however, intervals of ease, occasionally, for the space of a week or ten days: it was in one of these periods that I accidentally met with him at

the house of one of his trans-atlantic country-women ; and as persons who have suffered much, are apt to communicate their feelings, he hinted to me some of his miseries. I casually suggested an opinion, that instead of the gout, he might labour under gall-stones. After this I saw him no more till about three weeks afterwards, when he sent for me to Islington ; he was there under the attendance of my judicious friend Hole, of Islington, an eminent surgeon, who had endeavoured to mitigate his pain by laudanum. The Major was at this time tormented with dreadful spasms, which the warm bath, and three hundred drops of Thebaic tincture, scarcely calmed. This opiate he took daily, as it gave some respite to a most distracted frame ; at the same time, castor oil, though often vomited, was frequently repeated to promote stools ; and for the same intentions, purgative and anodyne clysters were administered, as the spasms, or the constipation indicated. After four days struggling, with the aid of opium, against the rack, he discharged by the rectum,

rectum, a firm hard calculus, under the following circumstances :

Length, Two inches and a quarter.

Circumference, Three inches and a quarter.

Weight, One ounce, two drachms, and twenty-three grains.

I did not cut into the calculus, as the Major was desirous of preserving it entire. It had the external appearance of a brown flint stone, though of less ponderosity in proportion to its magnitude.

After this calculus was discharged, the patient continued for some days under violent spasmodic affections, for which laudanum was still freely continued, as, doubtless, the stone in its exit must have injured the tender parts through which it had its egress : at length, ease was procured, and health gradually restored ; and the Major happily returned to his family, which he left, consisting of twelve children and an associate still more dear.

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 A R T I C L E XXXI.

*Case of Angina Pectoris, from an unexpected Disease in the Heart: By JAMES JOHNSTONE, M. D. C. M. S. &c.*

Read December 17, 1786,

**T**HE Reverend Gregory P—y, prebend of Worcester, &c. somewhat under the middle size, with a short neck, and inclined to corpulence, of a cheerful and social temper, had enjoyed very good health till after his sixtieth year; it was some time after this, that the extracting the chrystalline humour, which became cataractous and opaque in both eyes, was performed by Baron Wenzel, so as to secure him the sight of one eye to the last. He found the sensation during the operation like an uneasy tickling, rather than pain, properly so called, and went through it with spirit.

He

He consulted me in the summer of 1783, for a pain in his stomach, which seeming to be only flatulent, and to arise from indigestion, easily yielded to draughts of the warm stomachic kind, with *tinctura sacra*; returns of such uneasy feelings in the stomach were not unusual nor unfrequent after this, but always yielded to the use of these draughts. He had, at this time, a pulse remarkably slow, though very regular, which made me intimate to his family, considering his make and age, the propriety of precautions, if any thing like giddiness or pain in the head should appear to threaten apoplexy. Nothing, however, of this kind happened, and no appearance or symptom suggested his having the *Angina Pectoris* till after his return from a visit to London.

In June last, he complained of shortness in breathing, with pain in his chest and across to his arms, on walking, especially up any ascent; and, of such complaints he had frequent returns in the months of June and July, notwithstanding bleeding,  
a brisk

a brisk cathartic or two, and some other medicines were ordered, besides the repetition of the stomachic draught, of which he had a good opinion from the relief he had received from it; and now, I plainly saw he was affected with a disease which has proved so constantly fatal, and expected sooner or later, to hear of the sad event.

Just before he left Worcester, he had a short and slight fit of gout, which seemed to relieve him, and gave me some encouraging hope; indeed, he remained free from this complaint till he had been in Wales; but a short time afterwards, the fatal symptoms returned more than once previous to the attack which suddenly ended in death.

That evening, the 2d of August last, he seemed cheerful and well; but after being some time in bed, he complained he was very ill, and sat upright in it; but after his *tinctura sacra* draught, he seemed easier,



easier, and Mrs. P—y heard no more complaint till some time afterwards.

Early in the morning of the 3d of August she was roused by the noise of his expiring groan: in fact he was dead in an instant, and I believe had entered the seventy-first year of his age.

His body being opened the 4th of August, by Mr. Gunter, Surgeon, in Brecon, the following is a very sensible account of what he observed, which I give in his own words.

“ S I R,

“ AT the desire of Mrs. P—y, I beg leave to inform you of the appearances attending the dissection of the late Mr. P—y. The intestines were in a natural state, but much inflated with wind; stomach covered with a very black mucus, quite empty, very much discoloured, in many places black, particularly about the *pylorus*; the blood vessels over it very much distended; the liver indurated in every  
part,

part, but mostly so about its edges; the heart very putrid, admitting my fingers passing through it with very little pressure, it was quite empty, and the vessels going to and from it perfectly sound, and no ossification; the lungs sound, not even an adhesion; the *pancreas* somewhat hardened; kidneys very much diseased, hardened in every part; the *pelvis* with difficulty distinguished, it was covered very much with fat highly tinged with bile—these are the whole appearances.

W. GUNTER."

Brecon,

Oct. 2, 1785.

This dissection shews another almost unsuspected cause of sudden death. This gentleman laboured under; first, the complaints of indigestion, a flatulent pain with which he had been long troubled before any symptoms of *Angina Pectoris* were heard of; to such complaints the disordered stomach, the discoloured *pylorus*, inflated intestines, and even hardened liver

liver (he had no icteric colour) have an obvious and close connection.

Second. The symptoms of *Angina Pectoris*, which troubled our patient in the last three months of his life, plainly arose from, and were symptoms of, defect of power in the heart. From what causes, or cause, the putridity or disposition to mortification which seized this vital muscle arose, may not be very clear; but that such a state must render it unfit for its office of carrying on the circulation of the blood, or, in other words, of supporting life, must be evident.

The heart being insensible, even its diseases are attended with no proper sense of pain, peculiarly felt in this part; a thousand experiments, as well as accidents and cases, have established this fact; but that peculiar sensation of weight and agony, with difficult breathing, and pains extending to the arms, and pectoral muscles, on attempting to move: in short, a sense of failing life, when the heart, from any disease

ease

ease affecting its mechanism, and disturbing its motions, is hindered in distributing or propelling the blood, through the pulmonary artery and lungs into the left ventricle of the heart, and from thence into the aorta and the whole body, seems to be the symptoms of danger in this organ. It is in this state so immediately threatening to life, in this convulsive, agonizing struggle for existence, that the cardiac nerves, derived from the thoracic ganglions of the great sympathetic nerves, are stimulated in an extraordinary manner indeed, and that all the wide-extended connections of the sympathetic nerves, particularly those in the chest and superior extremities, are irritated thereby into painful spasms, such as are felt in the *Angina Pectoris*, though least of all felt in the organ from whence they originate, the heart itself.

I think it quite unnecessary here to shew from approved anatomical works, that the cardiac nerves have the origin and connections here taken for granted. I suppose my readers neither to be ignorant nor cap-

tious: my learned friend the late Dr. Wall, reasons in the same manner. See *Med. Trans.* Vol. III. also, *Lancisi de motu cordis & aneurismatibus*, *Vieussens neurographia*, and the tables of Walther on the *Visceral nerves*.

But inteneration of the heart from putridity sometimes has been the occasioning cause of sudden death, by rendering the ventricles of the heart liable to rupture: of this accident our late Sovereign George II. died at an advanced age; and in a Memoire, by M. Morand, in the *Memoires de l'Academie des Sciences de l'an 1732*, concerning remarkable accidents in the organs which carry on the circulation of the blood, he mentions the case of the Duchess of Brunswick, who died of a rupture of the right ventricle of the heart, in 1730; and that of a person of condition, examined by himself, who died the same year of a rupture of the left ventricle of the heart; and he adds  
“ Pour expliquer comment, dans les deux  
“ cas qui j'ai rapportés les ventricules du  
“ cœur

“ cœur ont pu s’ouvrir fans cause exteri-  
 “ eure, il faut remarquer que dans le pre-  
 “ mier, il y avoit une erosion aux fibres  
 “ charnues du ventricule droit, qui sem-  
 “ bloient avoir été ulcerées & creusées  
 “ peu à peu jufqu’ au trou qui ouvroit le  
 “ ventricule ; et que dans le fecond, le  
 “ chair du cœur étoit devenu molle au  
 “ point qu’ en quelque endroit qu’ on pre-  
 “ sentat le bout d’un fonde, fans l’appuyer  
 “ elle entroit & traversoit le cœur par  
 “ le fimple poids, de l’instrument qui n’est  
 “ pas confiderable.

“ Donc la rupture de cet organe fera  
 “ raifonnablement attribuée a l’amolliffè-  
 “ ment de fes fibres ou a un ulcere qui en  
 “ aura ufé l’épaiffeur. Ou trouve plusieurs  
 “ exemples de l’ulcere, dans le Recueil de  
 “ Bonetus, mais un feul de la Moleffe.”

The enlarged bulk and weight of the  
 fubftance of the heart is fometimes fud-  
 denly fatal as well as its rupture : fuch  
 a cafe is quoted by Lancifi, from the Chi-  
 rurg. Observ. of P. Marchetti. The pa-  
 tient

tient seems to have laboured under the symptoms of the *Angina Pectoris*, as they are exactly and eloquently described by Dr. Heberden. The heart was found three times its natural size, and the pericardium adhered in many places to the pleura, and even to the diaphragm, so as to weigh it down, and occasion a fulness in the hypochondria.

A corpulent gentleman, aged seventy, who had been for some time troubled with asthma and pain in his chest, and died suddenly, being opened, ossifications were found in the aorta and the basis of the heart; its bulk and weight increased by an unusual quantity of fat; such also seemed to be the cause of the sudden death of C. B—; for the heart and abdomen seemed covered with more fat than Mr. Causer, a skilful Surgeon, who opened the body, had ever seen.

Besides these causes of *Angina Pectoris*, ossifications of the valves of the heart, polypose concretions in its ventricles, extending far into the great vessels; water,  
VOL. I. C c blood,

blood, and purulent matter in the pericardium, mediastinum, or cavity of the thorax, have produced it: and the same sudden termination of life will often be brought about by causes acting on the living nerves, which leave no morbid appearance in the vital organs distinguishable after death by dissection.

Aneurisms, ruptures, and other fatal diseases of the heart, are often caused by fear, sudden passion, oppressive anxiety, and other vehement emotions of the mind often indulged. I recollect several persons who had the *Angina Pectoris*, and who died suddenly, to have been of this kind of disposition. The government of passion is therefore to be considered as necessary to prevent this catastrophe, as well as to secure general ease and health. Far be it from me to wish to banish from the breast its most engaging feelings, and to plant instead the unfeeling torpor which insulates individuals, and makes them unaffected and indifferent to the interests, the woe, or happiness of mankind. Such was not my  
deceased



deceased friend. I only wish to regulate and temper this amiable warmth of soul, and to keep in view a fact, that the heart is an involuntary organ. Volition has no power over it, and unimpassioned thought does not affect it; but the frequent repetition and long indulgence in vehement and uneasy passions, have often created the most fatal diseases in this part.

This survey of some of the causes of *Angina Pectoris* shews why it is so generally an incurable and mortal disease, and yet points out the expediency of attempting a cure in some cases and circumstances; and, in all cases, the duty of attempting to put off the fatal hour, by prudent methods of prevention and palliation, by sobriety and regularity of life and diet, guarding against excesses of every kind, which may create indigestion or too much distend the stomach, especially at bed time; for in a decumbent posture the pressure of a stomach over-filled, as well as its uneasy irritated state, must create very dangerous obstacles to the circulation of the blood,

when any disease in the heart renders it already too unequal to its office; obviating fulness of the blood vessels by seasonable evacuations, and by keeping the secretions open; avoiding hurry, and excessive accelerated motion, by hard exercise; yet supporting the strength and spirits by being much in the open air and on horseback, and much too in the society of cheerful and easy companions.

Worcester,  
Dec. 1, 1785.

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## A R T I C L E XXXII.

*Of the Scarlatina Anginosa, as it appeared in London in the Year 1786: By JAMES SIMS, M. D. PRESIDENT of the MEDICAL SOCIETY of LONDON, &c.*

Read January 8th and 29th, 1787.

**T**HE *Scarlatina Anginosa* having been epidemic in London and its vicinity during the last half of the year 1786, and having been attended with considerable mortality,

mortality, especially amongst children, a concise description of it may not be unworthy the attention of the public. After having said that it occasioned great mortality, it must appear surprising that only nineteen deaths are put down to the account of sore throat in the bill of mortality for the whole year; but it is to be noticed that in the same bill seven hundred and ninety-three deaths are placed under the head of measles, which is a greater number in proportion to the whole deaths than ever happened in one year. It is further to be remarked, that the measles were not perhaps in London during the whole year; at least I imagine they could not be very common, since I did not see a single instance of them, although I saw above two thousand patients in that time in my private practice, and in that of the General-Dispensary, which differs from that of hospitals in shewing us disorders as they occur in the houses of individuals. The resemblance between the scarlet eruption in this fever and that of the measles

may easily account for the mistake of unscientific searchers, since perhaps even Morton himself confounds them in his description of Spurious Measles, which from his account of the *Angina* attending them, seem to be no other than the disease of which we are now treating.

Another observation occurring from the bills of mortality, is that the article of fever, comprehending scarlet and spotted fever, is vastly increased above what it has been, any year for a dozen preceding ones. Under this head therefore a large number of the deaths by this disease are probably included.

To give some adequate idea of the virulence of this malady, I shall only mention that whatever house it found a footing in, it never left until it had visited every young person, and most of those advanced in life; so that many families lost two children, some more, and I have reason to suppose, that many grown persons fell victims to it, who were supposed to die of  
common

common fevers; which circumstance shall be more particularly noticed in the sequel.

The summer of 1783, was the warmest that had been felt for a series of years, and was attended by an uncommon quantity of thunder, at least in the vicinity of London. Two most remarkable meteors likewise appeared, of which descriptions may be seen in the Philosophical Transactions: this was succeeded by two of the frostiest winters that had been known since the year 1740. The spring, and beginning of the summer which succeeded the last of these, namely, that of 1785, was exceedingly dry, so as to occasion in most countries a great scarcity of grafs: since that time the weather has been very wet and rainy, few fair days occurring even in the summer or autumn of 1786. How far this series of weather operated in propagating the disease we are treating of, shall be the subject of future consideration.

The first case that I saw of this disorder

was in the month of March 1786, when there was snow lying on the ground. It attacked a young gentleman in the neighbourhood of Camberwell, and confined him to his bed about twelve days, after which he recovered slowly his former state of health. The scarlet efflorescence was considerable, and his throat was much inflamed, and threw off some sloughs. Though it appeared most of the inflammatory nature, yet it betrayed its malignity by infecting a female relation who came to attend him; but as she was carried home as soon as the inflammation became considerable, and as I met with no more cases of it for several weeks, it made no great impression on my mind.

In the month of May, I attended a young lady at a boarding-school in Hampstead, who had a sore throat, but no scarlet eruption; the inflammation almost disappeared and returned alternately for the space of several weeks, and had so little of a putrid or malignant appearance, that when the most serious consequences followed

lowed it afterwards, I did not at first ascribe the effects to her.

By this spark, however, a violent flame was apparently kindled; for, all at once, in the month of June, several young ladies in the same school were affected, and the infection made such progress, that in a short time above twenty were seized with the disease in a violent degree, besides many more who had it lightly. At that time it prevailed in a smaller degree in some other villages about London, but did not make any considerable progress in the Capital until the month of August, from which time until the end of the year, it increased to a very great degree; so that in the General-Dispensary, and in private practice, I have seen above three hundred cases of it.

The disease being most prevalent among children and young persons, I shall first delineate its appearance in them, and principally under the mode of treatment hereafter to be described; for under a different mode



MORIS of the

On the other hand, I have not a doubt that the appearances would have differed. This is a circumstance too frequently mistaken by authors, who describe as universal, those symptoms which only occur when a complaint is managed in their particular manner; by which means those who see it when treated differently, are often led to deny its being the same, and many needless varieties, if not species, and even genera of diseases are created.

The first symptom which usually pointed out to the family the access of the disorder was a great sickness of the stomach, with a very copious bilious vomiting; yet, though this was the first thing that alarmed bystanders, I have reason to say with almost certainty, that it was preceded by other symptoms. In many families where some have been confined with the disease, I have had an opportunity of observing the first, and most minute approach of it in others, and there always found that the first marks of its approach were a paleness and dejection of countenance; and if the fauces

1

were



were inspected, the under edge of the *velum pendulum palati*, was considerably redder than natural. The pulse at this time was rather disturbed, and flurried than feverish; in some the uvula was more inflamed, and the tonsils a little swelled, so as to give a slight degree of pain in swallowing; this pain and inflammation, however, varied on different days, so as to give frequently hopes of the disorder going entirely off; and I have reason to think that it often did go off under a treatment hereafter to be mentioned, without ever gaining greater ground. In very many, however, after remaining in this uncertain variable state for several days, the sickness and vomiting came on suddenly, and the disease was completely formed.

Immediately after the vomiting, or at least the next morning, a considerable redness of the face appeared, the eyes likewise were somewhat inflamed, but not watery as in the measles; the pulse at this time was considerably quicker and fuller than ordinary. On inspecting the throat,  
a tumor

a tumor of the tonsils was now very evident, attended with a florid redness, which spread over the whole *velum pendulum*, *uvula*, tongue, and that part of the palate adjoining the *velum*. Most complained of a slight pain in deglutition, and a few, of a considerable pain obviously from the greatness of the tumor, which in them was very large.

The redness which had shewn itself in the face, soon began to spread over the rest of the body, and particularly the arms, so that in the space of twenty-four hours it was become pretty universal. In many it was spread very evenly, in which case it was simply of a red colour; but in others, especially where the fever was somewhat higher, it appeared in large blotches, of a scarlet, or fiery red colour, which were raised above the skin, or rather the place where they were, was elevated and swelled. These blotches usually disappeared in the parts where they were first seen, in a day or two; afterwards appearing in another, and so on for many days; nay, I have known

known them continue thus above a fortnight, and in a very few instances, after all the symptoms were abated, and the disorder apparently almost gone off, I have seen a fresh crop of them with a reiteration of the former complaints.

By the third day of the disease the redness was at its height, scarcely admitting of any increase afterwards. This was by no means the case with the *Angina*, for soon after the first redness appeared on the tongue and fauces, a prodigious secretion, of a tough, whitish mucus, from these parts took place, which speedily overspread them, covering them with a thick tenacious slough. This phlegm might be expected to raise a constant cough and endeavour to spit it out; but that was by no means the case, as very few patients seemed to be incommoded thereby, or have much desire to get rid of it.

About the fourth day, whilst the efflorescence usually continued the same, or was even begun to decline, the complaints about the throat were on the increase.

The most frequent appearance was a great swelling of the tonsils, which looked very red and inflamed, but not ulcerated, as did also the adjacent parts. There were however in many cases considerable ulcers to be seen on the tonsils and *velum pendulum*, particularly where it hangs from the bones, spreading sometimes along these bones for a little way.

I should have mentioned that these ulcers were often to be seen, in a small degree, on the third day; nay, I have seen them in two or three bad cases on the second morning; and there was I believe an appearance often preceding them from whence they might to a certainty be prognosticated. This was a somewhat raised, circumscribed, deep purple appearance of the parts, which did not look like sound flesh, but had that puffy look which we see in what is commonly called proud flesh. The ulcers were covered with an ash coloured slough, which sometimes assumed a livid or blackish colour; this change I at first ascribed to greater malignity, and expected  
a fatal

a fatal event; but not finding this conjecture verified in the event, I came to disregard this appearance.

On the fifth day, usually, all the appearances about the mouth and throat were at the height; the swelling of the tonsils was now greatest; the ulcers, if there were any, largest and darkest coloured, and the difficulty of swallowing most observable; their voice likewise was manifestly altered, being often snuffling through the nose: this alteration I first ascribed to the same cause as in a common cold, and expected it to be exactly in proportion to the size of the swellings about the tonsils. This expectation was also verified in many who had great swellings there; the alteration beginning on the second or third day, increasing as the tumors rose, and lessening as they declined, and went away. Yet a number of the worst cases shewed this not to be exactly the matter of fact; in them the voice being notably altered, although there either had been no apparent swelling there, or at least what little there had been was totally gone, and the parts had assumed a tolerably healthy look.

look. The quantity of phlegm and viscid matter with which their mouths were now filled, especially infants and relaxed women, was almost inconceivable, and they were no sooner freed from it than it was re-produced in as great quantity as before; so that clearing their throats and mouths of it, was an endless, and apparently a needless trouble, as it did not accumulate by being let alone, nor did the patient seem to feel any inconvenience from it, as they always shewed a great reluctance to the having it meddled with.

This phlegm was mostly only remarkable for its extreme tenacity; sometimes, however, it was about the height of the disease, and afterwards, mixed with blood. I have likewise seen in bad cases, lumps as large as walnuts spit up, or rather dragged out of the mouth, of a firm consistence, and reddish, looking exactly like the coagulable lymph of the blood mixed with some of the red particles. These lumps seemed to come both from the *trachea* and *œsophagus*, as in all the cases where I saw them, there

there was both a difficulty of breathing and also of swallowing, which latter in some went so far as totally to hinder them from taking any solid food, the pain and straitening of the passage being lower than the *pharynx*.

I shall now mention some other symptoms which accompanied it from the first. As inspecting the fauces, to see the various changes from day to day, led me often to depress the tongue, I could not but observe, that all from the very beginning complained of that depression giving them great pain, much more indeed than I had ever observed in common quinsies, though attended with vastly greater swelling and inflammation. Children marked their reluctance in the most striking manner by their cries and struggles; indeed all, even to the eldest, shewed great aversion to the having their mouths or fauces at all meddled with. This pain and reluctance continued several days after the disorder had been at the height, as did also the inability to take

solid food, mentioned in a former paragraph.

As soon as the phlegm appeared very copiously in the fauces, a discharge of matter took place from the nose in many; this resembled in colour what came from the mouth, but was much thinner and less tenacious. The nose in these was evidently sore, and they complained of great pain in having it even gently wiped; the under part of it and the upper lip were often swelled, red, and excoriated by this discharge, which continued mostly several days after the disorder began to decline.

It may appear to many, that this is a very imperfect account of so considerable an epidemic, which raged so universally; but this opinion will cease on reading the following list of symptoms which did not appear. And first, there was no great degree of fever attendant upon the disorder; the pulse was at the first strong, but as the disorder advanced it lost in strength what it gained in quickness, and at the  
height



height was indeed very quick, but neither remarkable for its strength nor weakness; and that being over, it fell quickly, often in twenty-four hours, to its natural standard. The heat of the skin was mostly not considerable; it was greatest when the efflorescence was at the height, and declined with that; or if it failed to do so, the disorder never went off in a kindly manner. There was scarcely ever any degree of thirst, so that many, especially children, could not be prevailed on to drink enough to keep their throats in seemingly proper plight for deglutition; or even those more advanced never took drink except when put in mind of it. Another remarkable circumstance as to their drink was, that when asked what they chose, they almost universally, even to the children who lisped their words, mentioned wine or porter. They had mostly no appetite, yet on being pressed to it could get down any liquid food without great disrelish; and some shewed a desire for strong and relishing dishes; they were almost never either costive or purged; their breathing, except in a few bad cases, was never diffi-

cult or laborious; their breath was never fœtid, or particularly offensive; they all slept well, in general much more than natural, not excepting those who died of it: it must be remarked, however, that this catalogue of favourable symptoms is only to be referred to those cases that were treated in the mode hereafter to be mentioned, as it was evident enough that those who were treated differently had abundance of malignant symptoms.

On the sixth day usually, in some a little later, the disorder began to decline; the efflorescence had by this time in most persons completely disappeared; the swellings of the tonsils gradually began to subside; the phlegm was becoming less tenacious, and separated with ease from the fauces, as did the sloughs from the ulcers, leaving them, in part raw, but of a clear healthy red, which in a day or two was the situation of all within the mouth; the pulse quickly came to its natural standard. About this time many had some laxative motions, passing a similar mucous matter to that discharged from  
the

the mouth and nose; these, however, did not weaken the patient, and after a gentle dose of rhubarb they entirely ceased. The appetite returned, but not to that degree of voraciousness that I have often seen after feverish complaints; so that by the eighth or ninth day health seemed to be restored, except that a considerable degree of weakness remained for a time in those advanced in life who had been severely afflicted with the disorder. As soon as the amendment was very evident, the inclination for porter and wine entirely ceased, and many children who had before drank it greedily, could not be brought to taste a drop.

This was the course run by the disorder in the summer: as the harvest however advanced, there was some variation observable in it; a frequent short hicking cough took place in many; they did not bring up any matter with it, nor did each fit last beyond one or two short expectorations, but these were repeated several times in a minute; many who had no appearance of pituita, and but the slightest possible

appearance of *Angina*, had this cough more troublesome than those who had much of either. Another circumstance at this time of the year, I mean in November and December, was, that a few days after the apparent change of the disorder, a swelling attacked the face, but more frequently the extremities, attended with most excruciating pain. This swelling was neither red, puffy, nor œdematous, and did not depend upon the previous mode of treatment, as it occurred in those who had been treated in the most different manners. Some first complained of a violent tooth-ach; after two or three days they often complained of an equally violent pain in the back, the first one gradually subsiding. In a day or two more, or even sooner, the pain attacked their elbows, wrists, and hands, which were usually the last parts attacked; these pains in some patients were only in the hands and arms. The last difference I shall mention in this disease, was a swelling of the parotid glands; I mention this here, because the first case where I saw this swelling in

in any degree, occurred after the middle of September. This swelling was sometimes apparent in the beginning of the complaint, at other times it came on about the fifth day with great pain, protracting the disease; and in many it came after the efflorescence had entirely disappeared, bringing it in some degree, and all the feverish symptoms, back with it. Though this swelling was attended with great pain, I did not see one case of its suppurating, any more than I did of the tonsils inwardly undergoing the same process, although I have heard this mentioned by some practitioners; but I am inclinable to think, we only differed about the meaning of the term, for I have seen cases where the tonsils, after being greatly swelled, have pretty rapidly subsided, whilst the persons have spit up disagreeable phlegm more copiously and freely; and if they mean this by suppuration, there is no difference between us. I would not, however, call this a suppuration, because what was spit up had no appearance of *pus*, as in *Anginas* that I have seen really suppurate; nor could the formation of  
matter

matter be at all seen in the part, as I have perceived in other quinsies; I therefore think this was only a resolution of the inflammation, wherein the parts being relaxed, a more copious secretion, and freer excretion took place.

I should mention here, that, both in the cases attended with the pains already mentioned, and those with the parotids, the pulse was more violent and inflammatory than in any other cases I have seen.

There was one symptom which I saw in several cases follow the crisis of this disease, and which deserves to be particularly noticed. This was a most inconceivable degree of languor, which attacked the patient in an instant when all disorder seemed almost gone; it was without pain or uneasiness, nay, I may say, without dejection of spirits, for, although I have known some take a solemn leave of their families, yet it was with the utmost tranquillity, and, on being assured by me on my arrival that it was unattended with  
danger,

danger, they have continued for several hours whilst it lasted, conversing with those about them in the most placid cheerful manner. A Watch-Maker gave me the best description of this, by telling me that he felt as if all his inward works were going instantly to stop, his main-spring of life being entirely run down. I am inclinable to think, that this feeling is connected with the *Angina*, from having myself suffered it after one of the attacks of that disorder, which for many years I was subject to. As there were no other symptoms but the mere languor, I found proper encouragement given to the patients themselves, and some gentle cordials prescribed, in order to satisfy them and the bye-standers, who were always more alarmed than the sufferer, together with a little *time*, a medicine that cures oftener than we are willing to acknowledge, always got the better of it.

As I have gone through the manner in which it terminated favourably, I shall now proceed to the way in which it ended fatally.

On

On the fourth or fifth day, in some even sooner, a great desipientia began to appear; this never rose to delirium, but appeared like fatuity, their eyes having a silly vacant stare, and their words scarcely having any meaning. I mention this symptom first, as being the most striking and constant one, and very different from that wandering on awaking from sleep, or rather when in a state between sleeping and waking, which many had in the more favourable species of the disease, and which often accompanies other fevers; their pulse became at the same time very quick, unequal, and weak, and in many was not to be perceived; their extremities lost their feverish heat, though far from cold; and their whole skin, instead of the scarlet, assumed a very remarkable appearance, which resembled nothing so much as that of a dead body which has been kept several days, or as if a mixture of blood and water were universally diffused under it and could be seen through it; the skin at the same time felt entirely flaccid, but without any perspiration, and though not so cold, yet like that  
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of a corpse; they had little purging, but whatever they passed in that way was mostly without their knowledge, as was their urinary discharge; they seemed to have some difficulty in swallowing, at least they were exceedingly averse to make any attempt for that purpose; their breath, though far from laborious in general, yet was sometimes for a few minutes very unequal and seemingly difficult; but I have seen this inequality, though not to so high a degree, in some that recovered: a few of these had their throats loaded with an enormous quantity of viscid phlegm, which raised a rattling kind of cough, without any attempt to spit it up; but far the greater number had lost most of the morbid appearances in their throat; so that from an inspection of that alone, a person would have been inclined to pronounce them out of danger. This stage lasted but a short time, the patients mostly dying in twenty-four or thirty-six hours after it began. Though I was called to many in it, (the friends never having been alarmed until the extreme weakness and faintness attend-  
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ing it roused them from their security,) and tried a variety of the most powerful medicines, particularly cordials, blisters, and even James's powder and antimonials; I did not find any of the smallest service, and saw only one person who recovered from it: this was a woman, in whom the change appeared very late, so that it was the fourteenth day of the disease when I first saw her. In her the pulse was not to be felt, and she was totally insensible, although she had been drinking two bottles of white wine a day for several days: As I thought the case almost desperate, on considering all the symptoms, which were those of the last stage before described, I resolved to try what leaving off wine and substituting porter in its stead might do, finding that to be the liquor she was most accustomed to; though scarcely able to articulate any words, she testified as well as she could great pleasure in the change, and drank greedily three or four quarts a day. From this moment she began to amend, yet she was reduced so low that, although it is several months since, she has not yet recovered any tolerable share of strength or health.

health. The way in which this disease terminated fatally, at a later period, I shall take notice of hereafter.

I have hitherto mentioned the sore throat and scarlet eruption as always occurring together in this disease, but the fact is, several patients had the *Angina* without any apparent eruption, whilst on the other hand, others had the eruption without any soreness of the throat; the former happened almost entirely to those beyond the age of puberty, whilst the latter was as much confined to the more youthful. In one child the scarlet fever appeared without any *Angina*, and having finished its course, left the patient seemingly in perfect health; but in a few days a fever returned without any eruption, but with a very considerable degree of sore throat, and much pain and swelling of the tonsils and parotids, which likewise ran its course as if the former symptoms had never appeared. These anomalous cases happened more frequently towards the close of the year, when the varieties before mentioned likewise took place.

Whilst

Whilst this disorder reigned among the young, and attacked some of the middle-aged, a fever, similar in many respects, was common among persons more advanced in life, which likewise attacked some of the middle-aged who had been debilitated by previous disease, long courses of weakening medicines, or finally, and more especially, by long anxiety and vexation of mind, which last is in this town a most frequent, though unsuspected cause of fatal fevers; so much so, that I am convinced that many hundreds annually are carried off here by rapid fevers caused by disappointment alone, and have likewise observed that a reputed putrid fever is the most general exit of all those who are unsuccessful in life, I mean in this town, for in the country the case is very different. This fever was exceedingly mortal, several medical men, as I have reason to believe, falling sacrifices to it. About the manner of its seizure I can say nothing from my own knowledge, having not seen one person early in it. It was usually about the seventh or eighth day of the disease when  
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I first saw them, at which time they were in a state exactly resembling what I have described as the close of the scarlet fever. They were desipient, insensible, with a pulse scarcely to be felt, and not to be counted, and all had petechiæ; the skin of their extremities had likewise that corpse-like appearance already mentioned. On inquiry, I found that their malady had given no alarm to their friends until that moment, being usually ascribed to lowness of spirits, and many of them had not been entirely confined to their bed until within a day or two; none of them had any scarlet efflorescence, and on asking whether they had any sore throat, it was uniformly denied; yet, on a more minute investigation, I found that they all had complained of a very slight one, which, as perhaps they never mentioned it but once, made no impression on the bye-standers, nor would it ever have been thought of afterwards but for the extreme exactness of my inquiries. On inspecting their fauces, I found their teeth surrounded with a dark furring, no mucus in their throat, their tongue dryish,

dryish, but not remarkably foul, and in all a slightly inflamed line along the under part of the *velum pendulum* and *uvula*, exactly like what I have already described in some cases of the former fever. These patients in a day or two all sunk to rest, as I may call it, dying without a struggle, or almost a groan, the strongest cordials not seeming to produce the smallest effect, and blisters in many not even raising the skin in the smallest degree. Whether this fever was the same as that before described, varied only by the age and circumstances of the patient, or was similar to those described by Sydenham, occurring at the same time with a particular epidemic disorder, as the *febris variolosa*, which prevailed at the time the small-pox were epidemic, I cannot absolutely determine: from seeing, in two instances, the *Anginous* fever, apparently raised in a family by an elderly person who had this last described fever; and also in a few instances from meeting with the latter, where the young part of the family had gone through the former species of fever, I should be

led to suppose them only varieties of the same disease; but on the other hand, these coincidences were so rare as to leave the matter still in doubt. Without attempting to propose any conjectures on this head, I shall proceed to describe the method of cure of the first species of fever already described, and which I call the *Scarlatina Anginosa*, premising, that but two persons died out of above two hundred in whom it was used; both of which cases shall be mentioned hereafter.

I had been myself, every winter for many years, liable to one or more attacks of the inflammatory *Angina*, for which I had used many methods of cure in vain, the disorder running its regular course in spite of all my efforts; and to shew that these were not feeble ones, I shall only mention that I once had about forty ounces of blood taken from my arm in the space of eight hours, without its seeming in the least to shorten the complaint. At last, about ten years ago, I resolved to try what the vitriolic acid would do in the case; I therefore, on the next attack, sent

for two ounces of the oil of vitriol, and mixing part of it with water, I made as strong a gargle as my throat would possibly bear; I continued five hours incessantly gargling with this, until I had used many quarts of water, and also the greatest part of the acid: that I might give the gargle the greater efficacy, I, from time to time, swallowed as much of it as I found my stomach would receive. The design I had of swallowing part of it was my reason for choosing this acid, as I knew the stomach would bear a much greater quantity of it than any other astringent we are acquainted with, and believe we cannot apply a gargle sufficiently to the diseased part without letting some of it pass into the *œsophagus*. So intent was I in the prosecution of my scheme, that I believe I would have persisted until I had used the whole of the acid, had I not been constrained to leave off by excessive faintness and fatigue; when I had done, the inflammation had entirely subsided, and my throat felt quite parched and shrivelled; from that time I have not been once attacked by the disease.

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My success in this case led me to prescribe the same acid in all other cases of *Angina* where I was consulted, nor have I had as yet reason to repent its exhibition. In this course of practice, however, I soon came to rely more upon its inward exhibition than upon its use as a gargle; in the present epidemic therefore, I naturally had recourse to a remedy so often tried and found successful; my common prescription was two ounces of tincture of roses, a drachm of syrup of lemons, and spirit of vitriol twenty drops, or as much as could be added to the tincture without making it too highly acid for the particular patient it was prescribed for. This draught was ordered to be taken by an adult every hour and half, or every hour, and even oftener, according to the exigence of the case; and even children from two to three years old have swallowed much above two hundred drops of the acid in twenty-four hours.

As I had always seen the greatest advantage in putrid or malignant diseases from

the use of gentle laxatives, and have ever found rhubarb most consonant to the bowels of a Londoner, I began in the very first instance with ordering it: my common prescription consisted of equal parts of rhubarb and sal polychrest, of which mixture as much was taken as procured about two motions a day. Having already said that the patients in this disease were not at all inclinable to costiveness, the exhibition of laxatives may seem to some unnecessary; but I must remark, that in most putrid fevers the case is the same, yet their use seems ever attended with singular advantage, and besides, there was frequently a nausea and considerable vomiting attending the beginning of the disease we are now treating of. I should perhaps have mentioned first, that wherever this nausea took place, I always ordered a gentle emetic of ipecacuanha wine to be taken instantly, which ever gave considerable relief; this remedy, however, was scarcely ever given but in that particular circumstance, and cannot therefore be enumerated among those commonly used, as it was but a few cases to  
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which I was called in time to prescribe it.

Upon the above recited draughts and powders I soon found reason to have such complete reliance, that in many cases I never once varied them, and even where I did make an alteration in them, it was such as contained their most efficacious parts. Thus, as the disease proceeded, I sometimes ordered a strong decoction of the bark to be substituted for the tincture of roses, and to this, if the pulse were very weak, I added some cordial confection and stomachic tincture, still however retaining as much of the spirit of vitriol as I thought convenient, and persisting in the use of the eccoprotic powder.

During this whole course, I ordered the patient to eat moderately of any food that the stomach seemed to relish, not excepting broth or flesh, and to drink a little wine mixed with water if they felt at all low, or porter or ale if they seemed more agreeable to their palate, which was often the case. I have said a *little* wine, because a

large proportion of the sufferers being very young, did not seem to require any ; and I have frequently observed in putrid cases a large quantity of wine do great mischief, where half a pint would have been highly serviceable. In all these cases we should ever keep in mind that our intention in ordering it should be to raise the strength, and that nothing debilitates so much as too large a quantity of it. which is extremely visible in a person who is intoxicated.

Having proceeded in this manner during the rise and height of the disease, I found it necessary to change my plan as soon as the height was passed. This was a point of the treatment as needful to be known and exactly attended to as any other in the malady ; for as soon as the pulse about the sixth day began to fall to the natural standard, if the cordial medicines and regimen were persisted in, or increased with a view to keep up the sinking pulse, many vexatious or even dangerous consequences ensued ; a new fever, often more violent than  
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the first, was raised, a great swelling and inflammation of the tonsils or parotids with acute pain came on, and the scarlet eruption re-appeared as copiously as before.

In adapting ourselves to this change seemed one of the niceties in the treatment of the disorder; but as the change of appearances have been already pointed out, I shall not recapitulate it; suffice it to say, that as soon as the change began, I always subtracted somewhat from the wine and cordials, and quickly prohibited them entirely, diminishing at the same time the spirit of vitriol, which seemed now unnecessary, and giving the rhubarb in smaller quantity, and relying during the period of amendment upon gentle nourishing diet and broths, as the only medicines, except where some particular symptom seemed to require attention.

I have as yet said nothing of gargles, liniments, and blisters; the truth is, I place very little confidence in them, not but that I have tried them repeatedly. At

first I always ordered a gargle to be used of tincture of roses with some spirit of vitriol, or acid of sea-salt. I afterwards tried a solution of alum, vinegar, and other astringents; I have likewise ordered milder ones, as sage, or balm-tea, or barley-water, but cannot say that I have found much benefit from any of them; on the contrary, when there were many ulcers and sloughs in the throat, I think I have seen them of disservice if much used. The only gargle that I think I have seen any service from, is brandy with a little water, or frequently without any mixture whatever; but even this could be used in general only seldom: a very frequent use of it, or any wash, or indeed any constant exercise of the parts, as in expuition, seeming to be prejudicial. Washes thrown into the throat by a syringe seemed to have no better effect. As to the fumes of hot liquids drawn in with the breath, I can say little, having only in two cases ordered the vapour of vinegar and water to be used, but with no apparent benefit; though I have prescribed it with great advantage in other cases of quinsy affecting the breathing.

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I have used several outward applications to the throat, and can say but little in their favour. Volatile liniments and blisters I have ordered very often to the part, without perceiving any other amendment than happened from the change of the disorder if it was about that period, and suspect the praises I have heard of them have been owing to their being so timed as nearly to hit that period; I have besides mostly found the neck a very inconvenient, and in ladies a totally improper, place for a blister; so that when on account of a greater degree of delirium attended with much fever and swelling about the fauces, I have been induced to order a blister, I at the last preferred applying one between the shoulders, and in these circumstances have often perceived notable advantage from it. When there has been a great swelling of the parotids externally with considerable pain, a poultice of bread, milk, and oil, applied to them, has given considerable relief; but in other cases I never prescribed nor saw it applied: of  
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cupping I can say nothing, having never used it.

Of bleeding, much need not be said. That many cases would have borne it I have not a doubt, from the whole complexion of the fever attending on them, and therefore I know that it was many times prescribed without doing mischief; but it does not follow from thence that it was requisite, or did good. In my own practice, I began early almost totally to neglect it, from an observation that the cases where the pulse was strongest, and heat and fever highest, were not those attended with the most danger, and never afterwards had recourse to it but in violent peripneumonic symptoms, which indeed were very rarely blended with the disease; I am also certain that I have seen many cases become fatal entirely from an abuse of bleeding, so that it was much safer to prohibit it universally, than to be at all free in prescribing it; this remark, however, is only intended to fetter the young and unskilful practitioner. A second bleeding I believe  
always



always did mischief: the same remark will hold good as to scarification and the application of leeches. My aversion to bleeding in general first took its origin from finding that the application of only two leeches, which I myself had ordered, brought a patient into great danger, who, I had no reason otherwise to suppose would have been so: taught, therefore, by my own mistake, I was afterwards cautious in ordering any thing of the kind (I would say to an extreme) had I in one instance found reason to alter my sentiments.

Strong purgatives seemed at least as objectionable as bleeding; and whenever the gentle laxatives already recommended had a considerable effect, I found it necessary immediately to put a stop to it by opiates, as whatever exhausted the patient was carefully to be avoided, and Londoners, though requiring eccoprotics as much as any people whatever, bear strong purgatives beyond all comparison the worst. The same may be said of sudorifics, for though a gentle perspiration did good, and usually

usually attended the turn of the disease, yet great sweats were almost ever pernicious.

With respect to exposure to air, I found this disorder, when the efflorescence was considerable, to agree perfectly with the measles, it being absolutely requisite to confine the patient to his bed, and to keep the room moderately warm with fire; in this case the drink was allowed to be a little warmed, which I found was most pleasing to the patient's palate; but where the efflorescence was less, these precautions were unnecessary, nor were they desired by the patient. It is to be understood from hence, that the exposure to cool air did not seem at all to depend on the state of the *Angina*; for where there was little of the scarlet eruption and the patients were low, I have found them evidently relieved by being taken out of bed, and having the air of the room cooled.

A strict attention to the passions and  
affections

affections of the mind was exceedingly requisite in all, but particularly in those beyond the age of puberty. With them I constantly began by giving the most solemn assurances of safety, relating how many instances of the disease I had seen, and that the method they should prosecute had never once failed of success. And here let me mention, that the chit-chat at a patient's bedside is too often neglected and contemned by young practitioners, who think it beneath a man of science; yet I will venture to affirm, that it is often of as much importance as all the medicines that can be administered, and that there is no old steady practitioner who has not saved many patients by it. The friendly attention of the physician is frequently most shewn in these apparently trifling things, which add inconceivably to the comfort of the patients and those about them. As I am exceedingly and anxiously earnest in inculcating these minute attentions, let me add a reason, that to a liberal mind will have no weight, which is that they will ever increase a physician's practice

practice and emolument; they will salve over every instance of bad success, and even his grossest blunders, should he be so unfortunate as to make any; whilst the contrary conduct leaves him open to every arrow of malevolence, every misrepresentation of envy; his good success will be ascribed to chance, or the trifling nature of the disease by even the patient himself, whilst even those fatal cases that were out of the reach of medicine before he saw them, will be universally ascribed to his inattention or unskilfulness. Let me add to all, that to this perhaps alone we are to ascribe the influence which apothecaries have where they attend, being the confidential friends of the family; and even to it has been owing the sole celebrity of many physicians, who have arrived at the summit of their profession, with abilities and science that would have scarcely entitled them to the meanest place in it: the liberal physician should therefore practice it, because thereby he may do good to others; the illiberal and selfish will naturally

rally adhere to it, because it serves himself.

Besides what I have mentioned as to assuring the patient's mind, if they were of such an age as to be operated on by fears, the minds of the attendants and all who came nigh them were to be rendered easy, as patients often suspect what is said to themselves, and with scrutinizing looks and questions endeavour to sift out the physician's real opinion from others; the guarding therefore against this, without injury to his character for ability and prescience, requires considerable address. As the objects around us operate more upon our imaginations during illness than in health, when we have so many avocations to employ them, great care was taken that nothing but those persons and things were brought in view that were perfectly agreeable to the patient. As to this matter, I am sorry to say the moderns fall vastly behind the ancient physicians, who studied and gave directions for every, the most minute, circumstance of this kind. I will

only particularize one apparently trifling circumstance. The figures, either painted or stamped, so universally in our bed-curtains, have, I am convinced, cost thousands of patients their lives: no sooner is a person's head affected in a fever, than these begin to confuse his mind, and in a short time numberless wild fancies are raised by them, until complete delirium is excited; or, if it existed independent of them, it is raised thereby to absolute fury. Some physicians see little of this delirium, their common visits being so short as scarcely to allow the patient, before they leave him, to fall back into his usual wanderings after he is roused from them to sense or reflection by the presence of a stranger, and his attention being drawn to a point by the being asked a number of questions. The bed clothes and curtains therefore of patients in fevers should be absolutely free from all images or impressions whatever, as should the constant furniture of the room in which they lie; this, however, is not meant to preclude shewing them agreeable pictures,  
or

or such objects at intervals as will be agreeable to them.

After giving this account of the method pursued most successfully in this disease, I shall now mention the only instances in which I knew it to fail. The first case was of a young lady, above sixteen years of age, who was so obstinate, that from the very first she would scarcely ever obey any one direction that was given to her; nay, she carried this so far as to boast to her school-fellows that she would not; she had address and cunning enough to secrete most of her medicines, and to persuade her attendants that she had taken them; and, on the fifth day, fell a victim to her own mistaken opinion rather than the insufficiency of the method. The other case however was very different, and I shall mention it more particularly, because in it I committed two deviations from my own plan, of both of which I had much reason to repent. A candid acknowledgement of errors will not increase a person's present reputation, but a physician should only study the good of

his profession, which I am convinced would be more served by every practitioner's relating his faults, than by all the successful cases that are daily puffed off to the world.

In the beginning of October I was requested to visit a family afflicted with this disorder, who lived in a close, damp situation. Besides others, who had it in a milder manner, the eldest daughter was in the last stage of it, and died the next morning. The second daughter, a child about two years old, had taken the disease two days before, but did not appear to me in a very alarming way; her throat it is true was ulcerated considerably, and her tonsils much swelled; the efflorescence was at the height, and her pulse was full and strong, though quick. I put her upon the plan already laid down, and have the utmost reason to think every direction I gave was implicitly obeyed. On the fourth day the scarlet colour of the skin began to disappear, and on the fifth, sixth, and seventh, several of the usual symptoms of amendment began to appear; the mouth

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looked



looked less foul, but the swelling of the tonsils did not subside sufficiently, and the pulse did not come down near its natural standard, which I attribute in part to my not being sufficiently precise in ordering the quantity of wine to be diminished. About the eighth day she seemed to have an appetite, although she could not swallow any thing solid, and even liquids were got down with the utmost difficulty, often returning both by the mouth and nose. As her throat was greatly filled with phlegm, which seemed to prevent her swallowing, I ordered a gentle emetic to be given, which operated moderately: this was the second deviation I had made from my original plan, and of which I repented much afterwards, as the child received no apparent benefit from it, and soon afterwards began to appear worse. About the tenth day I was alarmed by seeing that fatuity appear which has been already mentioned, and which I had always found so fatal a symptom; at the same time, the throat swelled much externally around the forepart; the pulse, which had continued quick

and weak, became now exceeding full and strong, with an equal degree of celerity; great blotches of a purple colour, approaching to livid, appeared in various parts of the body, and universal slight convulsions took place.

As soon as this change began to appear, blisters were tried; but in spite of them, and every method I could devise, the child grew gradually worse; the pulse sunk totally, whilst, at the same time, the convulsions grew stronger; the deglutition never became more free; ulcers returned in the fauces; the teeth became furred; tongue foul; breath offensive, and often laborious, until, at last, on the eighteenth day, its swallowing and breathing both becoming totally obstructed, the unhappy sufferer died in convulsions.

It is to be remarked, that towards the close of this disorder, large quantities of a matter resembling the coagulable lymph of the blood, was brought up both from the *trachea* and *oesophagus*. I have known the  
the

same to happen in several other bad cases; and in one that was opened after death the *aspera arteria* was found lined with this matter, like what is said of the croup. From this, and the disappearance of the ulcers in the fauces, and other symptoms already mentioned, in many fatal cases, I am led to suppose, that the visible disease in the throat was by much the least part of it, and that in bad cases it spread down to the lungs and stomach, and even perhaps through the alimentary canal.

From this case I was more firmly persuaded of a maxim which my whole former practice had served to inculcate, that it is exceedingly dangerous in an epidemic to deviate in any measure from a practice which has been found successful. A physician, it is true, should be attentive to every, the most minute circumstance; but this attention should be of the speculative, not of the active kind, until some instance of bad success shews that his former mode requires a change; in which case the attention he has bestowed will furnish him

with that change without the hazard of repeated trials.

Having written this dissertation in the few hours of leisure that were left by an extensive practice on the disorder which is the subject of it, I hope I may be excused the irregularities that are apparent in its composition; among these are the following miscellaneous remarks that would have been more properly inserted in other places.

The disorder was most prevalent among the middle ranks of life. Few, comparatively speaking, of the poor being liable to it, and, at least, equally few of the great. It likewise hitherto has been pretty much confined to the City, so called, and Eastern parts of the metropolis; Westminster, and the new buildings in that quarter, feeling little of its fury; confined narrow courts were more liable to it than large open streets, as were also low damp situations.

Vastly more of the female sex than of  
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the male were seized with it, and it seemed particularly fatal to girls, from two to eight years of age. I saw but one child at the breast who had it, and that but lightly.

This disorder seemed to agree with the measles, in being infectious before the sickness shewed itself; so that the sending away of those children who had not been seized with it, as soon as any began to complain, did not serve in many instances to prevent their having it. The period that intervened between the time of infection and the appearance of the disease could not be determined. I have seen it indisputably take place the fourth day, but, in other instances, it was several days later. The infection seemed to remain in a house after all the family were recovered for some, but not many, weeks.

The disease was totally at a stand during some days sharp frost that happened, but recovered new vigour soon after that was over. I never saw any danger attend it,

except where there were ulcers of the throat. A purging was always dangerous, and a swelling about the larynx after the turn, was particularly so. I saw but four cases of *anasarca* succeed it, and these were all in poor persons, and unattended with danger.

The best preventative of the disease I found to be rhubarb, taken in the quantity of a few grains every morning, so as to procure one laxative motion in the day. I did not see one who used this, confined afterwards to bed, though several persons obviously began it after they were infected, but before the time of their sickening. Peruvian bark I found useful in the latter stages of the disease, but cannot say I had the smallest reason for supposing it so in the beginning, although I have often prescribed it, and seen it tried by the recommendation of others.

I have avoided laying down general rules in what I have written; perhaps all epidemics should stand, in some measure, on  
their

their own ground, at least until we are convinced that we are acquainted with the whole circle, and I am sure this differed in many respects from any of which we have a distinct account. I have nowhere endeavoured to magnify, diminish, or suppress, any one circumstance for the sake of making it agree with preconceived opinion; my description, therefore, will not appear so exact, regular, and uniform, as it might have been made: most probably Nature is uniform in all her movements; but it will, I fear, be many thousand years before we shall be sufficiently master of her operations to point out that uniformity. My aim has been, therefore, to relate facts, and to render such most conspicuous as seemed of the most importance in the whole appearance of the complaint.

On first turning my thoughts to write on this subject, I believed it would be useful to make myself master of whatever had been written historically upon a disorder which is generally supposed not to have existed above two hundred years, as, I think,

think, a proper deference to the public should make every man endeavour to be well instructed himself before he attempts to instruct others : a man without reading, who presumes to write, is like the blind leading the blind. In this research I soon found it necessary to enlarge my view to all the epidemic disorders which have prevailed during that period, that among so many imperfect descriptions I might collect whatever could possibly have any relation to the subject before me. Having thus finished a sketch of these for my own information, together with an account of the weather for that period, several important conclusions seemed deducible from it ; but as these are different from many commonly received opinions, and as I think the number and accuracy of the authorities I could examine, and indeed the length of the period that can at present possibly be examined in this view, not sufficient to establish systematic deductions, I shall only throw out what has occurred to me as surmises ; which indeed have arisen entirely from what I read, as formerly I was of a different opinion,



nion, and so also are most of the writers I have perused; but in reading an author critically, and attending to those facts which often force their way into his work, in spite, I may say, of his theory, very different conclusions from those he draws may be deducible.

There are some grand classes of epidemics which prevail every year, and which are produced by the various changes of the seasons. Thus, spring is accompanied by inflammatory diseases; summer by complaints in the stomach and bowels; autumn by catarrhs; and winter by intermittents: these being obviously produced by the state of weather attendant upon them, other epidemics are supposed analagous to them, and obedient to the same rules, which on examination not being the case, all further scrutiny is laid aside, perhaps too hastily. There is another reason why little has been attempted hitherto in this investigation, which is, that we only of late possess tolerably accurate registers of the weather for any one place, and have as yet scarcely  
any

any of the diseases that can be depended upon. There is likewise a very great disagreement between the opinions of authors and the vulgar as to the hurtfulness of different kinds of weather, the former always asserting that dry seasons are most noxious, whilst the latter as constantly blame the wet. Now although in many points little weight is to be given to the sentiments of the latter, yet in matters within their reach the case is otherwise, and in the present difference neither are totally right nor wrong; the truth seems to me as follows:

The most natural and healthful seasons in this country are a moderately frosty winter, showery spring, dryish summer, and rainy autumn; and whilst such prevail, the wet part of them is infested by vastly the greatest proportion of complaints, but those not of the most mortal kind. A long succession of wet seasons is accompanied by a prodigious number of diseases; but these being mild and tedious, the number of deaths are not in proportion to the co-existent ailments: on the other hand, a dry season

season in the beginning is attended with extremely few complaints, the body and mind both seeming invigorated by it; if, however, this kind of weather last very long, toward the close of it a number of dangerous complaints spring up, which as they are very short in their duration the mortality is much greater than one would readily suppose from the few persons that are ill at any one time; and as soon as a wet season succeeds a long dry one, a prodigious sickness and mortality come on universally. So long as this wet weather continues, the sickness scarcely abates, but the mortality diminishes rapidly; so that in the last of a number of rainy years, the number of deaths is at the minimum.

The change of a long dry season, whether hot or cold, to a rainy one, appears from all I can collect on the subject, to bring about the temperature of air favourable to the production of great epidemics; some however seem more speedily to succeed the predisposing state of the air, others less so; or it may be that the state of air favourable  
to

to them exists at the very beginning of the change, whilst the state favourable to others progressively succeeds: of this last, however, I am very uncertain, as it will be obvious on examining the order in which I shall immediately arrange them, that the first are of so overbearing a nature that they will force every other disease to hide its diminished head in their presence. It is also to be remarked, that two infectious diseases are almost never prevalent together; therefore, although the same distemperature of air seems favourable to most epidemic disorders, yet some must appear sooner, others later.

The order in which these disorders have a tendency to succeed each other, seems to be plague, petechial fever, putrid sore throat, with, or without *scarlatina*; dysentery, small-pox, measles, simple *scarlatina*, whooping-cough, and catarrh: I do not mean by this that they always succeed each other as above; for often the individual infection is wanting, when another takes its place, until perhaps that infection is im-  
ported

ported from a place which has been so unfortunate as to have a coincidence of the two causes, without which it appears that no epidemic can take place, that is a favourable disposition of the air and that particular infection. Whenever it happens that one infectious disorder takes the place that should have been more properly occupied by another, it becomes much more virulent than it is naturally, whilst the former, if it afterwards succeeds, becomes milder in proportion: this perhaps is the reason why the same disorders, nay, the same appearances in a disorder, are attended with much more fatality in one year than in another.

I shall proceed to give as concise an abridgment as possible of the materials from whence I drew these reflections, hoping that the deficiencies of the sketch will be excused on account of the great difficulty of completing it. We have no compilation on this subject which can be at all depended on; Dr. Short's, although the most copious, abounding with the most unparalleled

leled. absurdities and mistakes; the materials therefore for this account was to be culled from a vast variety of authors; and my own collection, though consisting of above four thousand volumes on medicine, is totally inadequate to so vast an undertaking.

First Epidemic Constitution, 1590, 1591, 1592, all exceedingly dry years, as was part of 1593; afterwards very rainy weather until the end of 1597. In 1593 the plague killed eleven thousand five hundred and three in London; the same year it was prevalent in Alcmarr. A catarrh prevailed in 1597. The rainy weather began in Florence in 1592, during which a pestilential fever raged there, attended with a whitish tongue, and an inflammation, with ulcers about the throat and mouth.

Second Constitution, 1598. An excessive heat and drought, which continued next year; 1600, a severe winter; 1601, a drought of five months continuance;

1602, a cold spring and summer, cold dry harvest and winter; the rest of this Constitution very rainy, until the end of 1608, except seven weeks frost in 1607. In 1603 the plague was imported from Ostend, where, and in the Low Countries, it raged much, and killed thirty-six thousand two hundred and sixty-nine in London.

Third Constitution. 1609, three months most rigorous frost, wherein the Thames became like a solid highway; 1610, an excessive hot dry summer, as were those of 1611 and 1612; 1616, 1617, and 1619. The winters of 1614 and 1615 great frost and snow; the rest of this Constitution wet until the end of 1624. In 1609 the plague broke out in Alcmár, as also in Denmark. In 1610 the Hungarian fever commenced in many places, and made great havock for several years, so as often to be denominated a plague. About the same time the malignant sore throat is supposed to have commenced in Spain, where it killed incredible numbers. In 1611 the plague is said to have destroyed two hun-

dred thousand at Constantinople. In 1614 the most fatal small-pox spread all over Europe. In 1618 the sore throat broke out at Naples, where it continued its ravages for twenty years; it was preceded by a similar disorder among cattle. In 1618 the plague in Bergen. In 1619 it broke out in Denmark and in Grand Cairo.

Fourth Constitution. 1625, a hard frosty winter, summer wet and hot; 1626 and 1627 excessively hot summers; 1630 and 1631 a great drought; the other years wet until 1634. In 1625 the plague killed thirty-five thousand four hundred and seventeen in London; it raged in Denmark both in 1625 and 1629; as also in 1625 in Leyden. In 1632 inflammations of the jaws prevailed, with an erysipelas in one or more places of the body.

Fifth Constitution. 1634, excessively frosty winter; 1635, 1636, 1637, and 1638, very hot and dry summers; then very rainy years until 1643. In 1635 the plague in Leyden, and the camp fever spread



spread all over Germany. In 1636 the plague was in London, whereof died thirteen thousand four hundred and eighty  
1637 the plague in Denmark.

Sixth Constitution. 1643 and 1645, extremely hot summers, then inconstant rainy seasons until 1650. In 1643 a fatal malignant fever was spread by the armies all over England; 1644, a malignant epidemic fever in Denmark; a similar fever in England, in which there was a roughness and fliminess of the throat and jaws, with pain, but scarcely any swelling or inflammation, it seemed only a mere defluxion, by which the sick seemed choked, and for which astringent gargles were useful. In 1650 a general catarrh.]

Seventh Constitution. 1651 to 1659, all very hot summers and mostly very dry years; thence to 1665 very wet. The winters of 1651 and 1658 remarkably cold. In 1651, in the country about Rome, a contagious epidemic quinsy prevailed, and made terrible slaughter among children.

A small ulcer arose in the mouth, for which juice of wood-sorrel, syrup of pomegranates with the bark, and, chiefly, spirit of vitriol were useful. All that took these medicines recovered, but those who were not tractable, and refused medicines, died; it did not seize adults, nor the aged. In 1654 the plague was in Denmark; and in 1655, and the two following years, it prevailed exceedingly in the South of Europe; the agues likewise of these hot years were malignant, and spotted fevers were very common. In 1664, after a mild rainy winter, a malignant purple fever raged in Prussia, and killed great numbers under twelve years of age, those only escaping who had no inflammation, or œdematous tumour in their throats. Such as recovered, after sweating, had scales peeling off their skin; then adults had a swelling over their body and of their belly, which continued several weeks like leucophlegmatia, and then went off by sweat and urine. This epidemic seems a considerable deviation from their general progress laid down in the scheme of them already mentioned,

tioned, and is therefore particularly noticed here.

Eighth Constitution. 1665, an excessively severe frost, which continued to the end of March, summer temperate; 1666, a very hot dry year, followed by two as wet and cold. In 1665, immediately after the frost, began the plague in London, which killed according to the least computation, sixty-eight thousand five hundred and ninety-six; since that time the plague has vanished from this city, and all other epidemics seem to have become less malignant, owing to many causes; among which may, perhaps, be a greater use of fresh vegetable food, a less use of fish, an universal use of tea, superior cleanliness in our persons, a greater attention to our poor in times of scarcity, which are now scarcely felt in any extreme degree, and, lastly, the tremendous fire in 1666, since which the streets have been very much widened, and the houses so enlarged, that the same number of inhabitants now occupy above double the space. In 1667 an epidemic

fever with a thrush prevailed in Holland, in which acids were useful, but neither bleeding nor purging.

Ninth Constitution. 1669, the summer intolerably hot, after which the winter was as severely cold and frosty; 1670, severe frosty winter; the rest of this Constitution bad and wet. In 1669 a most fatal fever prevailed, with slimy tongue, sore mouth, &c. in which bleeding was hurtful, but acid and laxatives most beneficial. Sydenham does not mention this fever, nor its return in 1678, although, next the plague, they were the greatest epidemics in his time; which, together with his little knowledge of putrid fevers, can only be attributed to his practice lying about the court: whilst Morton, who practised in the city, gives abundant proofs that putrid complaints were as prevalent then as at this time. The same year in Norway malignant measles are said to have prevailed with a thrush, which, if mismanaged or neglected, ended in a fatal mortification. In 1675 a coryza or cough prevalent.

Tenth

Tenth Constitution. 1678, summer and harvest drougthy, hot, and clear; 1679, winter long, severe frost, and intensely cold; 1680 and 1681, summers extremely dry and hot; the next two years rainy. In 1678 the same fever and sore throat prevailed as in 1669. In 1679, after a most deluging October, a catarrh was universal. In 1682, sphacelated tongues and *Angina Maligna* prevailed among cattle; in the same year in Dublin a fatal petechial fever.

Eleventh Constitution. 1684, the severest frost remembered at that time, succeeded by a very dry and hot summer, to which 1686 bore a near resemblance; the other years were rainy to 1691. In 1684 spotted fevers, particularly of the miliary kind, were common. This and the following year of 1685 are remarkable for the greatest number of burials; from 1665 to 1714, although 1684 does not contain St. James's, Westminster, and neither 1684 nor 1685 contain St. Ann's, Westminster, nor St. John's, Wapping, parishes which are in-

serted in every future bill of mortality, and which then buried above sixteen hundred annually at a medium. In 1688 an epidemic catarrh prevailed all over Europe.

Twelfth Constitution. 1691, a frosty winter and excessively hot and dry summer. The same in 1694, the other years rainy and variable. In 1691 a fatal spotted fever prevailed; in 1693 an universal catarrh; and in 1695 the hooping cough.

Thirteenth Constitution. 1698, exceeding hard frost in the winter; the rest of this Constitution rather rainy. In October 1698, began a fatal contagious spotted fever, which spread all over England. Coughs attended most diseases in 1703.

Fourteenth Constitution. 1704, so excessively dry a year that all grass was burnt up; this continued until August 15, 1705; the rest of this Constitution cold and wet. In 1704 malignant spotted fevers were common. In 1708 coughs and coryza's prevailed every where, so that few escaped.

Fifteenth

Fifteenth Constitution. 1709, an exceedingly great frost all over Europe, and even in Portugal; 1712, a very frosty winter; the rest of this Constitution variable. In 1709 the plague broke out in Dantzick immediately after the thaw, and killed twenty-four thousand five hundred and fifty-three. In 1710 the plague in Copenhagen killed twenty-five thousand. In 1712 fore throat universal in July and August, with dizziness and pains of the limbs, in London.

Sixteenth Constitution. 1714 and the six succeeding years were all dry with hot summers. The winter of 1716 so severe a frost that the Thames was covered with booths; that of 1718 likewise very frosty; the rest to 1731 cold, wet, and variable, except 1723, which was cold and dry; and 1729, which was a cold, dry winter, followed by a hot, dry summer. In 1720 the plague killed sixty thousand in Marseilles. In 1729 an universal epidemic catarrh in November.

Seventeenth Constitution. 1731 was  
a very

a very dry year which continued until harvest 1732 ; summer of 1733 rather dry and pleasant, as was most of 1738 ; the remainder of this Constitution extremely wet. In the beginning of 1733 was an epidemic catarrh ; 1737, 1738, and 1739, were all much infested with catarrhal fevers, especially among children.

Eighteenth Constitution. 1740 was the severest frosty winter and spring that had happened for three hundred years ; 1741, extremely dry, hot summer ; 1742, a variable, but dry year ; the rest of this Constitution wet or variable. In 1740 a malignant petechial fever made great havoc in Bristol, and in Galway in Ireland. In 1741 it reached London, where this and the last year were the most mortal ever known, except when the plague reigned, the burials amounting to sixty-two thousand nine hundred and eighty. In 1742 the putrid sore throat broke out. In March 1744 an epidemic catarrh was universal, and was more fatal than usual.

Nineteenth Constitution. 1747 was



an excessively hot, dry summer; 1750, a dry year throughout, and intensely hot summer; the rest of this Constitution moderate, variable, or wet. In 1747 and the succeeding years the sore throat seemed to acquire new vigour, alarming the inhabitants of these kingdoms very much. In November 1758 was an universal epidemic catarrh.

Twentieth Constitution. 1760 was droughty from June 26 to September 16; the end of that and the following year severely wet, as was the end of 1763 and beginning of 1764; the rest of this Constitution moderate. In April and May 1762, a most epidemic catarrh.

Twenty-first Constitution. 1765 a very dry year, and rather hot summer, as was the next year, though not quite so much so; the remainder of this Constitution moderate years, rather inclining to wet. During this Constitution I do not find any very remarkable epidemic until the universal catarrh in November 1775, unless we reckon the  
the

the small-pox so of the year 1772, which, succeeding a hard winter, killed more than they had ever done in one year in London.

Twenty-second Constitution. The year 1776 was dry, and 1778 still more so. The winter of 1780 was the most frosty since 1740; yet these deviations from what might be accounted moderate weather were so small as scarcely to deserve notice. In May 1782 was a very general epidemic catarrh.

Immediately after the last mentioned year began the Constitution which has produced the present epidemic.

Thus have I given a cursory view of the weather, and some of the epidemics of the last two hundred years, and have purposely dwelt most on the extremes; that is, those of the greatest and of the least malignity, that by omitting the middle ones the difference might be most striking. Any person that chooses may divide the years differently, and indeed at first I had done so myself; yet it will still be found, I think,

think, that the same deductions as those I first laid down will hold good: should this trifling sketch besides excite any one who has more leisure and opportunities to bestow adequate pains upon the subject, I shall gain my end; and if he simply follows whithersoever truth leads, I doubt not that much public utility will be the consequence. By investigating minutely every circumstance that tends to produce or impede these infectious complaints, may we not hope in time to be able to obviate much of their malignity, and perhaps at last entirely to stop their course. The plague is now scarcely known in the west of Europe, and the numbers that fall sacrifices to the small-pox are the victims of obstinacy and bigotry. Having conquered these gigantic epidemics, shall physicians dread being able to prevent pigmy scarlatinas or catarrhs. Experiment has carried natural knowledge far beyond the apparent powers of man, and just observation, unsophisticated by theory, will carry medicine to a degree of perfection of which our present feeble conjectural art seems utterly incapable.

ARTICLE

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A R T I C L E   X X X I I I .

*History of a Gangrene of the Scrotum: By*  
 LEVERETT HUBBARD, M.D. of NEW-  
 HAVEN in CONNECTICUT: *In a Letter*  
*addressed to the MEDICAL SOCIETY of*  
 LONDON.

Read October 2, 1786.

**T**HE reputation of the Medical Society of London induces me to communicate the following extraordinary Case for insertion in their Memoirs.

Mr. S—— H——, of this city, aged forty years, a temperate man, and of a good constitution, by profession a Shoemaker and Tanner, was seized with an intense pain in the glands of the left groin, on September the 19th, 1784.

September 20th. I was sent for, and the messenger told me that the pain was intolerable;

lerable; but I was engaged another way, and concluding that the disorder would subside with an anodyne, I sent him one.

September 21st. I visited the patient, and found him in an high fever; the *scrotum* and *penis* greatly tumified, and of a livid colour; I immediately opened a vein, and took away seventeen ounces of blood, which was as buffy as is usual in a violent pleurisy, with very little serum; I ordered a fomentation of bitter herbs boiled in water, to which was added rum. After using the fomentation, I applied a cataplasm of white-bread, milk, and white-rose leaves, and I ordered him to take a few doses of camphorated nitre.

September 22d. I found him still under an high fever, and took twelve ounces more of blood, which was less buffy than on the day before; the parts affected now appeared in a state of mortification, black, and insensible to the touch; I scarified the *penis* and the *scrotum* in several places, without giving pain to the patient, and  
then

then applied strong spirits and the cataplasms as before; gave him a table spoonful of the *Cortex Peruv.* and ordered him to take a like dose every two hours, to be washed down with a strong decoction of the same, with the addition of red-rose leaves.

September 23d. The tumor and inflammation were somewhat abated; he complained of pain in two of his fingers of the right hand, on which I observed tumors much inflamed, of a ripe cherry colour.

September 24th. The *carpus* of the same hand tumified and inflamed, and of a livid hue: I continued the same prescriptions, with the addition of an emollient clyster.

September 25th. I found his pulse low, with great faintness and dejection of mind, apprehending that death would soon close the scene. I ordered him some wine, which raised his spirits and abated his gloomy apprehensions,

apprehensions ; and continued the dressings as usual. I opened a tumor on his wrist, which discharged purulent matter.

September 26th. I requested the assistance of my friend Dr. Nesbitt. We found the patient under an high fever, and bled him the third time, though we considered the case almost desperate ; we continued the bark, with the elixir of vitriol, which was given with the utmost freedom, without any regard to the fever, as we judged it essential to the patient's recovery. In three days there came on a digestion and separation of the mortified parts, which by degrees were removed by the knife ; we dressed the ulcer with dry lint, sometimes making use of spirits and the common digestive, till the whole of the *scrotum* was taken off, leaving the testicles uncovered with the *parastatæ* ; after the *scrotum* was sloughed off, the state of the juices were so acrid as to destroy two other coats, the *cremaster* and the *tunica vaginalis*, which digested, and also sloughed off, leaving the *tunica albuginea* in a sound

state; he had violent pain in the testicles, and there was reason to suspect suppuration; when pressed with the finger the parts were very elastic, which induced us to think that there was matter contained within: accordingly, we made a small puncture through the *tunica albuginea*, but the discharge was only a bloody serum; we continued the same treatment; the testicles suffered the same very painful sensation for several days, and we concluded that matter was formed in them, and opened one of them to its centre to ascertain it, but found only a discharge of bloody serum; the wounded testicle was dressed with a digestive, and healed in a few days, at which time the surface of the testicles next the *perinæum* began to granulate and to heal very fast, and caused an adhesion, or union of the testicles, from each extremity, which now resembled a twin peach or apple; the spermatic chords suffered a great contraction, and the testicles adhered closely to the *perinæum*, and cicatrized favourably.



The *preputium* was entirely taken off the *penis*, the muscles were diseased, and partly destroyed, the urethra was left without a covering, but the bulb or glans was not affected; a covering however gradually formed over the body of the *penis*, but less smooth than before. Soon after the discharge from the mortified parts abated, he complained of pain in the left side of the *abdomen*, which extended up as far as the short ribs, it was here tumified and inflamed; whereupon we ordered that part to be fomented four or five times a-day with warm spirits, and the inflammation and swelling soon disappeared: two or three days afterwards a pain came on in the right side, extending as it had done on the left; we applied the spirits as before, but without effect; we then ordered the application of a cataplasm, which soon brought on a suppuration; we perforated the ulcer, and it discharged a large quantity of *pus*, which continued more or less for ten days; the patient remaining very feeble and greatly emaciated with fever, we ordered a decoction of barley with

figs, fago, falop, and panada (gruel had been his usual diet with a little wine) and he continued recovering for the space of ten days, when he was suddenly seized with a pain in his bowels, succeeded by a fœtid diarrhœa; in twenty-four hours he was greatly reduced, frequently discharging two, or three ounces of purulent matter, attended with a bloody mucus; we gave him lenient purges, such as fenna, manna, and a solution of gum arabic, in barley-water; clysters prepared with a decoction of the bark and red rose leaves were frequently administered; these in a few days gave relief, and the matter of the internal ulcer being discharged through the rectum, the patient recruited every day, and on December the 5th, 1784, was able to attend his former business.

In forty-nine days he took fifty-eight ounces of that sovereign medicine the bark, which seemed to contribute in a great measure to his perfect recovery.

A R T I C L E XXXIV.

*A large Exfoliation of the Tibia removed by Mr. THOMAS WHATELY, F. M. S. Surgeon: Communicated by JOHN COAKLEY LETTSON, M. D. &c.*

Read December 11, 1786.

**T**HE following Case is submitted to the Public, not for its novelty, but as an instance, shewing to what extent Nature is able to operate, and how cautious we ought to be in determining on the necessity of amputation.

William Olave, No. 7, Parson's-Yard, Shoreditch, aged forty-one, of a healthy constitution, was attacked on the 18th of March 1783, with a violent pain near the inner angle of the left leg. It continued day and night with unremitting violence, rendered him incapable of walking, and deprived him of sleep. An external inflam-

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mation

mation soon appeared upon the lower part of the Tibia, which in ten days suppurated and broke. Though the pain was then less severe, it confined him chiefly to his bed for nine months. He applied at different times to different surgeons for relief; one of them advised him to have it taken off without delay; being unwilling to consent to the operation, he applied to a public institution, was twice visited by the surgeon, who each time pressed him to lose his leg; but being still averse to it, was dismissed without relief. At this time I first saw him, and found the disease to extend more than six inches along the Tibia, just above the inner angle; the bone was bare in several places, and in others were many ulcerated holes in the integuments; he had also much pain and inflammation, with a fluctuation of matter just above the outer angle, and was much emaciated.

Having opened the abscess by the side of the fibula (which was found to communicate with the diseased Tibia), I tried

whether the bone was loose, but could not move it, till a strong sharp-pointed instrument was fixed upon it, and even then the motion was barely perceptible on pushing it side-ways. I next destroyed by caustics all the fungous flesh and integuments<sup>\*</sup>, covering those parts of the diseased bone that were not bare, which gave me a good view of the whole disease. As the exfoliation was very large, I found Nature had been active in repairing the defect, and the presence of the dead bone preventing a deposition of ossific matter in its proper place, a considerable layer was added to the outer edge of the Tibia (being the only part unexfoliated), by which it became nearly as strong as before: the same process was con-

\* A large portion of the Tibia was already bare, and it was absolutely necessary to destroy by caustics the fungous granulations and integuments which covered, but did not adhere to the other parts of the bone, as well as those which hung over the edges of it; for while this impediment remained, neither the new-formed bone could have been removed, nor the exfoliated piece taken out; nor did it occasion any want of integuments at the close of the cure, for as the wound contracted, the old integuments approached on each side so near as perfectly to cover the place where the cavity had been.

tinued from the upper edge of it, and extended so low as to cover a large part of the exfoliated piece by a layer of ossific matter a quarter of an inch in thickness. This portion of the layer I removed piece-meal, by means of a levator, to make way for the exfoliated piece, which in one place being nearly divided, I completely separated by applying a trephine, and readily removed the upper part, which was two inches in length and one in breadth. The lower portion of the exfoliated bone could now be moved more easily, and having made several unsuccessful efforts either to extract it whole by the common forceps, or to divide it by the trephine, I at length procured a pair of large and strong pincers, with which I gradually attempted the extraction in all directions; it seemed jammed in on every side, but by a little perseverance, that part next the angle gave way, and shortly afterwards I extracted the whole, leaving a large chasm six inches in length, three in breadth, and in the part next the angle, three in depth; this piece weighed an ounce and a half, was nearly four inches long,

long, and two-thirds of the substance of the Tibia and cancelli. Dry lint, and an emollient poultice were applied to the leg: the first night he was very restless, but the next, slept more than he had done for many preceding months. On the third day an erysipelatous inflammation began to spread upon the leg, but soon ceased by the use of bark and wine. When the first dressings were digested from the wound, I extracted a considerable piece of the cancelli, and afterwards several other pieces of bone; but the fistulous sore on the opposite side of the leg remained open, till a large loose part of the external side of the Tibia was removed from the bottom of the wound, after which it healed up.

Though six weeks after the first operation, he was able to walk two miles to be dressed, a loose piece of exfoliated bone still remained at the upper part of the wound; which I could not extract; but having destroyed the granulations surrounding it, by caustics, I found that it passed upwards, under an arch of the Tibia, within

within the cancelli. To set this piece at liberty, I expected that I should have been obliged to work with the trephine through the sound Tibia (which in this place was near an inch thick) but, happily, I divided it by force with a levator into two parts, and with the forceps readily extracted them, each being an inch long, and part of the internal *lamina* of the Tibia. This large cavity soon filled up with granulations; in a few months every part of the wound was perfectly healed; and he now maintains a wife and large family by hard labour.

This disease seems to have arisen from the violence of a suppurative inflammation, unconnected with any peculiar virus, which occasioned a mortification of a large portion of the Tibia, and the dead part being of an irregular form, and firmly linked within the sound bone, was necessarily prevented from having a free motion; and though perfectly separated from it, the ordinary powers of nature were unable to cast it off; force alone could remove it,  
which



which inevitably broke off those parts that were afterwards taken away.

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Some years since I removed with success, almost in the same manner, a large exfoliation of the Tibia, from the leg of Jane Bantam, of Edensor, Derbyshire, which was deemed incurable. The exfoliated piece was longer than that in the present case, and consisted of the whole external substance of the Tibia.

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 ARTICLE XXXV.

*Memoirs of JACQUES BARBEU DUBOURG, Professor of the FACULTY of MEDICINE of PARIS; Member of the ROYAL SOCIETY of SCIENCES of MONTPELLIER, of the MEDICAL SOCIETY of LONDON, and of the ROYAL MEDICAL SOCIETY of PARIS; of the ACADEMY of SCIENCES of STOCKHOLM, and of the AMERICAN PHILOSOPHICAL SOCIETY of PHILADELPHIA: By J. C. LETTSOM, M. D. &c.*

Read February 25, 1787.

*To the MEDICAL SOCIETY of LONDON.*

**I**T was not till the beginning of this month, when the volume of your Memoirs was nearly printed, that you determined to “ preserve some honourable “ memorial of former associates who may “ be removed by death,” and appointed me to prepare some account of my late honoured friend Dr. DUBOURG, who was the first  
 corresponding

corresponding member elected into our Society<sup>a</sup>. Short as was the time allotted me for effecting it, I accepted the appointment, more from the desire of offering a grateful tribute to his memory, than from a presumption of ability to do justice to it. As I had not the honour of his acquaintance till the year 1773, I am compelled to draw the Memoirs of his Life, till that period, from the Eloge, published in the second volume of the *Histoire de la Société Royale de Médecine*.

JACQUES BARBEU DUBOURG was born at Mayenne, on the 15th of February 1709, at which place he received the rudiments of his education; here his improvement was rapid, for at the fifteenth year of his age he had so far completed his education, as to resolve upon that plan of life which seemed destined for his future attachment and cultivation. He had two brothers, who had devoted themselves to the church, and probably fraternal affection, more than moral constitution, early biased his mind

<sup>a</sup> On the 5th day of October, 1773.

to pursue the same path; and from this motive, the study of theology now occupied his attention; in the pursuit of which he acquired a critical knowledge of the Hebrew, and he has since been frequently consulted in the interpretation of the most difficult passages in this sacred language.

As a scholar, and as a moralist, this amiable youth might be deemed worthy of the priesthood; but when the period arrived that the irrevocable oath essential to assuming the sacerdotal office was to be exacted, that for ever binds the priest to the altar (and which can never be pronounced without the risk of sacrilege), his mind, in which the seeds of freedom early germinated, revolted at the prospect of perpetual restraint, and made him abandon a choice that was primarily dictated by the example of those he most loved, rather than by conviction of judgment.

Freed from the shackles of theological studies, he cultivated literature in general, as much more congenial to that liberality of mind,

mind, and favourable to that spirit of independence, which constituted the most prominent features in his character.

In the gratification of his own unbiassed taste, poetry and history became his favourite studies, to which he united those more immediately connected with medicine; though it was not till the thirty-eighth year of his age that he offered himself before the Faculty of Medicine of Paris, into which body he was admitted in the year 1748, after having maintained his Theses with great spirit and distinguished reputation<sup>b</sup>; but prior to this period he had evinced his attachment to the science of medicine by his defence of it against the College of Surgery<sup>c</sup>.

His

<sup>b</sup> His Theses were,

1. *Daturne etiam vitalium organorum somnus?* aff. 1746.
2. *Utrùm anni climacterici cæteris periculosiores?* neg. 1747.
3. *An Variolarum morbus absque eruptione?* aff. 1747.
4. *An Trachæotomiæ nunc Scalpillum, nunc trigonus mucro?* affirmat, 1748.

<sup>c</sup> Lettre, &c. à l'abbé Desfontaines au sujet de la maîtrise-ès-arts. 1743, in 12mo.

Deux

His reception into the faculty of medicine interrupted not his literary labours; the correspondence which he maintained with the learned in England and Italy, rendered it requisite for him to acquire the languages of these respective countries. His friendship with the celebrated Lord Bolingbroke more particularly inspired him with a taste for English literature, and he translated with success this nobleman's letters on History, from Pope's edition in 1738<sup>e</sup>, to which he added a translation of an ingenious and philosophical letter by Lord Bathurst, upon the advantages of retirement, which teaches us the knowledge of ourselves in the sweet enjoyment of meditation; and upon the utility of study, which in multiplying the sources of virtue and happiness, helps us to deserve the esteem of men, and as much as possible to live without them, and in exile is equally useful to the wise man as to the

Deux lettres a une dame au sujet d'une expérience de Chirurgie faite à la Charite, le 22 Juin 1744. Paris, 8vo.

<sup>d</sup> Lettres sur l'histoire, traduites de Bolingbroke, 2 vols. 12mo. Paris 1752.

fool,

fool, since by it the one finds repose, and the other his reason.

Man, who is but an atom on the *Globe*, and whose existence on it is transitory, has by his industry, and by his indefatigable curiosity, discovered the relations of the parts of which it consists, and ascertained the periods of the revolutions which they have undergone. Two sciences, *Geography* and *Chronology*, have been the result of these researches, and it is upon these that the knowledge of history is founded: the whole extent of the earthly globe, in the strict sense of the first, is but a circumscribed space, which it measures with precision, according to the dimensions of its height and breadth, upon which the immense ocean, the course of rivers, and the chain of mountains are instantly perceived, and which presents in a single table all the known climates, ranged according to the proportion of their distances. The second traces and adjusts the succession of events; less compounded than *Geography*, the objects of which it treats, like time,

have but one dimension, that of their duration. *Chronology* hitherto had not been reduced on tables; DUBOURG had the merit of conceiving this arduous design in thirty-five plates<sup>d</sup>, which placed together, and rolled upon two cylinders, imitated the revolution of centuries, and composed a chronological table, extending to the year 1753, when our author wrote.

After having thus distinguished himself as the historian of all nations and ages, he conducted a journal of medicine, entitled, *Gazette d'Epidaure*<sup>e</sup>, which continued three years, and contained many practical and interesting observations.

Sometime afterwards, the physicians and surgeons of Paris were much divided on a medical legal disquisition on the duration of gestation, and the time of parturition;

<sup>d</sup> These were preceded by an explanatory discourse. Tables have been since formed in England by Dr. Priestley, Dr. Blair, and Dr. Playfair.

<sup>e</sup> *Gazette d'Epidaure, ou Recueil hebdomadaire des nouvelles de medicine, &c.* Paris, 1761—63, 8vo. 4 vol.

which



which was conducted with great heat and acrimony by the different parties: Dr. DUBOURG was engaged in this controversy, and distinguished himself by a valuable and elaborate publication<sup>f</sup>, by which he acquired additional fame and reputation, like the late Doctor Hunter, upon a subject not very dissimilar: this amiable physician was on the side of humanity; for a mind endued with sentiments of honour and virtue, is the least liable to suspect the want of them in others.

To the cultivation of *Botany* he devoted much of his time. His garden, which contained a large assemblage of plants, was open to students, and the lovers of Botany; and in 1767 he published a copious work<sup>g</sup>, explanatory of his new method of arranging plants; which also comprised many

<sup>f</sup> Recherches sur la durée de la grossesse et le terme de l'accouchement. Amsterdam, 1765.

<sup>g</sup> Le Botaniste François, comprenant toutes les plantes communes et usuelles, disposées suivant une nouvelle méthode et décrites en langage vulgaire, 2 vol. 12mo.

curious essays on the nature of diseases and their remedies.

In person, Dr. DUBOURG was somewhat above the middle stature, and full, but not gross in figure; of a fair complexion, and great affability in his countenance, with a firmness, at the same time, in his features, which conveyed the idea of the union of dignity of mind, with softness of manners: with a constitution thus organized for the happy acquirement of confidential intercourse, his understanding was refined and improved by the cultivation of letters, and deep reflection on man, in the most extended view; this is particularly evident in his “*Code de la raison humaine*”<sup>n</sup>;” in which he first considers him in his individual existence, and afterwards pursues the investigation through all his relative duties in life; as the member of a family in the patriarchal state, till he becomes a citizen of the world, in the most enlarged and philosophical view, formed for communicating hap-

<sup>n</sup> Petit code de la raison humaine, ou Exposition succincte de ce que la raison dicte à tous les hommes, &c.

pinests to others, and of participating in it, as flowing from the divine and inexhaustible source.

A mind actuated by such sentiments of urbanity, must be peculiarly prone to the intercourse of the most generous and social affections, which begets friendships, founded upon sincerity, and unites friends in indissoluble bonds of amity. In this sacred union, the best and wisest of men have been the most choice in forming connections, which influence and improve the dearest enjoyments of life. Dr. DUBOURG, with an affability of liberal and easy manners, maintained a scrupulous caution in forming his friendships: often has he said, “ *J’aimerois mieux, avoir un*  
“ *honnête homme pour ennemi, qu’ un fri-*  
“ *pon pour ami.*”

About the middle of the eighteenth century, there arose a luminary in the new, whose radiance was perceptible in the most enlightened nations of the old hemisphere. It was in that province, which not a century before, was the seat of fava-

ges, wherein *Penn* diffused the mild spirit of legislation, and of religion, that *Franklin*, a native of Boston, first burst forth upon the philosophical world, and realized, what the warm imagination of poets had ascribed to Prometheus. But the fire which the enterprize of his great mind had snatched from heaven, he controlled; and rendered one of the most active and tremendous agents in nature, subservient to his direction, and to that of posterity.

Our departed associate was admitted into the friendship of this great philosopher early in the year 1773, and ever afterwards continued one of his most intimate and bosom associates; and it was our colleague that had the honour of diffusing the knowledge of the electrical philosophy throughout France and the continent of Europe, by the publication of *Oeuvres de Mr. Franklin*.

About this time I visited Paris, from whence *Franklin* was recently returned, who gave me a letter of introduction to

Dr. DUBOURG, part of which he published in the second volume of *Franklin's Works*; and this was the first instance of my name being recorded in print.

In France, where literature has begot a spirit of free inquiry, a zeal for liberty and the rights of mankind, has been gradually diffused, and a passion for patriotism has pervaded their confidential circles, and particularly influenced the character of the youth. Our colleague, whose love of freedom and dread of restraint, had determined him, at his sixteenth year, to relinquish prospects of advantage for the liberal pursuits of philosophy, had the same independency of mind, confirmed by the maturity of judgment; his recent, but intimate connexion with *Franklin*, animated his zeal for the prosperity of nascent republics; and in his sixty-fourth year *he was the first ally that America could claim in France.*

There is an union between the sexes of heart and soul; of sublime friendship, founded upon unlimited affection, which places

man in the first and most endearing situation he can possibly enjoy; and few partook of the blessings of connubial felicity in a more exalted enjoyment than DUBOURG. That man is depraved beyond redemption, who, insensible to female endearments, prides himself in an apathy which deprives him of the finest feelings annexed to his nature: not so, with the physician and philosopher whose loss we regret, and whose memory we gratefully record; who, sensible of domestic felicity, gloried in his conjugal attachment, and wreathed in a civic crown, laurels of public fame, in dedicating to his bosom companion, *Le Botaniste François*, a work published in 1767, in two duodecimo volumes.

As he was devoted to her in the tenderest affection, he bemoaned her decease, which happened in August 1777, with tears of affliction, which nothing could wipe away but time, and the consolations of religion and philosophy. His letter to me, which announced this melancholy circumstance, I have repeatedly read, and as often admired  
the

the melancholy expressions he indulged in his loss, and the Christian submission with which he endeavoured to support it. The ardour of youthful affection is distinguished for generous warmth; but as it is often formed from passion, rather than judgment, it dazzles, but does not consume; and the fires of youth are sooner extinguished than the embers of age: DUBOURG mourned his lost mate till death placed them in the same cemetery. He was attacked by a fever early in December 1779, of which he died on the 13th, in the seventy-first year of his age.

Religion, the first gift of heaven to man, calculated to promote his happiness here, and to secure it in futurity, has too often been perverted to the worst of purposes; instead of diffusing mutual happiness, it has been the engine of mutual injuries; but the philanthropy of DUBOURG embraced the amities of the gospel, and universal toleration was the ardent wish of his heart. The address of Barclay to the Prince then on the British throne, which for boldness and truth

is

is unequalled in history, he often read to circles of his acquaintance; and in the liberal warmth of his heart, he thus concluded it, “ May I live to see that sect, to  
“ whose opinions Barclay gave a system,  
“ established in France.” Little did I then think that the prayer of DUBOURG would be realized by the policy of De Vergennes; that the Quakers of Nantucket would find an asylum in 1787 in the bosom of France.

It is not the prince alone, supreme as he is, that forms the genius of an empire; it is the gradual evolution of sentiment in the people, which is slow in its progress, but permanent in its duration: this should encourage every good citizen to exertion, in gradually diffusing among the people just and virtuous principles, which ultimately conduce to private and public happiness: every man has his circle of influence, and so far as he extends the light of truth, he contributes to improve mankind; and I am persuaded, that the liberal spirit of toleration, which Dr. DUBOURG long and uniformly promoted, conducted  
with



with the efforts of others, to prepare the minds of the French for a system of religious toleration, to which they would not have been reconciled, at any period, since the revocation of the edict of Nantz, till the Augustan age of Lewis the sixteenth.

May the beneficent spirit of philosophy, that inhabited the breast of our departed associate, inspire the rulers of the earth, to extend to man the privilege of addressing his Creator, in the language of his own heart, to whom alone he is finally amenable for his faith and for his actions.

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