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With the compliments
of the Author

A
DISSERTATION
ON
APOPLEXY. ✓

DISSEMINATION

APPELLATE

AS APPEALS THERE

DISSEMINATION

THE PRINCIPLES OF THE THEORY OF KNOWLEDGE

APPELLATE

RELATIVE TO THE THEORY OF KNOWLEDGE

THE PRINCIPLES OF THE THEORY OF KNOWLEDGE

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A

DISSERTATION

ON

APOPLEXY;

SUBMITTED AS

AN INAUGURAL THESIS

FOR

THE DEGREE OF DOCTOR OF MEDICINE.

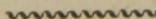


BY

NATHANIEL LITTLETON HOLLAND, A. B.

OF VIRGINIA;

HONORARY MEMBER OF THE PHILADELPHIA MEDICAL SOCIETY.



“Plurima mortis imago.”



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AN
INAUGURAL DISSERTATION
FOR
THE DEGREE OF DOCTOR OF MEDICINE;
SUBMITTED
TO THE EXAMINATION
OF THE
REV. FREDERICK BEASLEY, D.D.
PROVOST,
THE
TRUSTEES AND MEDICAL PROFESSORS
OF THE
UNIVERSITY OF PENNSYLVANIA,
ON THE
TWENTY-SEVENTH DAY OF MARCH,
1815.

IN AUGURAL DISSERTATION

FOR

THE DEGREE OF DOCTOR OF MEDICINE

TO THE EXAMINATION

BY FRIEDRICH HAYLEY, D.D.

PROVOST

OF THE UNIVERSITY OF PENNSYLVANIA

IN THE YEAR 1800

PHILA.

TO

BENJAMIN SMITH BARTON, M. D.

PROFESSOR OF THE THEORY AND PRACTICE OF MEDICINE, NATURAL HISTORY, AND BOTANY, IN THE UNIVERSITY OF PENNSYLVANIA:

The Following Pages,

THE INAUGURAL FRUITS OF A MEDICAL EDUCATION

CONDUCTED PARTLY UNDER HIS CARE,

ARE,

WITH SENTIMENTS OF THE HIGHEST VENERATION
FOR HIS TALENTS,

RESPECTFULLY DEDICATED;

AS

A TRIBUTE OF FRIENDSHIP, GRATITUDE, AND ESTEEM,

BY HIS PUPIL,

NATHANIEL LITTLETON HOLLAND.

TO

DOCTOR JACOB G. PARKER,

OF VIRGINIA.

SIR,

IN dedicating to you this Inaugural Dissertation, I do not merely comply with the customary forms observed on similar occasions, but am irresistibly impelled by a sense of gratitude, affection, and duty. The unwearied attention you have bestowed on my medical education, the parental anxiety you have evinced in the progress of my studies, and the innumerable kind offices I have received at your hand, have left impressions on my mind which the lapse of time can never efface.

To expatiate on those qualities which confer reputation on merit, and dignity on worth; which soften the asperities of learning, and elevate and refine the social charms of life, is a pleasing and grateful employment.

Rarely indeed, are accomplishments so excellent united in a single character.

Since, to have been intimately acquainted with such an individual; to have observed the superiority of his intellectual endowments; to have been conversant with those mild and benevolent virtues of his heart, which enforce respect and conciliate affection; to have been conducted through the intricate paths of science, and, to have profited by the experience of such a guide, has been the fortune, so shall it be the pride and boast of my future life.

N. L. HOLLAND.

PREFACE.

EVER since the institution of Universities and Colleges, the publication of a thesis has generally been a requisite by which the first honour in medicine was obtained. It has hitherto been sanctioned by custom to exhibit this specimen of the student's abilities in the *Latin* language. But when I reflect on the very small proportion of my countrymen, or of the world, who read the *Latin* language with facility; and when I consider that this first public effort in medicine, is made, not with a view to display academic acquirements, or to gratify any darling passion for the classics, but with the hope of being useful to my fellow men; I willingly dispense with the proofs of learning which might seem to be exhibited by a dissertation written in a foreign language, for the more humble view of rendering my ideas intelligible to those who may be acquainted only with our native tongue.

The University of Pennsylvania, (for the wisest purposes no doubt) have resolved that it shall be left to the option of the candidate to write either in the *Latin* or *English* language.

APOPLEXY, (the subject of the following pages) has been so often and so ably discussed by professors, that a proper field for the display of ingenuity or originality of thought is indeed denied: fortunately however, it is more agreeable to myself and may be more satisfactory to the world, to state what observation and experience have taught me to believe and to adopt, than to launch on the ocean of theory where sound judgment is so often obscured by the airy flights of imagination.

I would not be thought, however, to detract from the just and well established merits of theory.

“To think is to theorise;” thought is the province of the philosophic mind, and the establishment of fact is the laudable end to which all our theoretical reasonings should be directed.

Of the imperfections of this production I cannot doubt; but as Mr. John Bell has well remarked, “a book once published is like a life

come to its final consummation;—irrevocable; needing no apologies if generally good, admitting none if it be not so.” “If however,” says Dr. Dorsey, “any author, may justly claim the lenity of criticism, it is the medical man, who writes and publishes under circumstances every way hostile to correct composition, and detects in his progress defects and errors, when the printer’s stamp like that of fate has fixed their perpetuity.”

Philadelphia, March 30th, 1815.

INAUGURAL DISSERTATION.

ANATOMICAL DISSERTATION

... from the ... and subject of the ... one of the ... disease to which ... from my earliest ... much of my ... faculty within the ... observation has ... which I ... its ... as yet ... found. The ... the organ ... given so ... and ... up the ...

INAUGURAL DISSERTATION.

APOPLEXY, from the violence, suddenness and subject of its attack, is justly esteemed one of the most distressing and formidable diseases to which humanity is liable. It has from my earliest pursuits in medicine gained much of my attention, and its frequency and fatality within the limited sphere of my own observation has excited a spirit of inquiry, which I trust, will not be entirely destitute of its uses to society, though centred in a genius as yet unknown in the Temple of Medicinal Fame. The delicacy and vital importance of the organ assailed by this disease, renders its career so rapid that in a few short moments it may commit irremediable mischiefs;—it may nip the brightest ornament that society has to boast.

HISTORY OF THE DISEASE.

Apoplexy, is thus very aptly defined by the illustrious Cullen; “*Motus voluntarii fere omnes imminuti, cum sopore plus minus profundo, superstite autem motu cordis et arteriarum.*”* In this definition (and surely with great clinical accuracy,) the learned Professor omits mentioning the “*respirationem stertoream*” or stertorous breathing, as a pathognomonic symptom of the disease, and which is to be found as such in the writings of Vogel and Sagar, and even in those of the distinguished Sydenham.

Stertorous breathing is supposed (and I believe with much justice,) to be particularly attendant on the worst forms of apoplectic disease: but that even this is universally the case, as has been affirmed, I beg leave to doubt; first, from a well-marked case of the disease which fell under my own observation, unattended by the least stertor; and secondly, from the reports of the accurate Morgagni, who relates dissections of apoplectic persons where

* Synops. Nosolog. Method.

the effusion was considerable, yet no stertor had occurred. Doctor Cullen also stands alone in the list of nosological writers, when he brings carus, cataphora, coma, and lethargus under the same genus with apoplexy, and considers them only gradations of one and the same disease.

If a nosological arrangement of diseases be admissible and right, (as I have no doubt it is) I should not hesitate a moment in classing these affections with apoplexy and calling them only gradations of one and the same disease. —Thinking with Dr. Cullen, that the “abolition of the powers of sense and motion is in some degree only, or as he happily expresses it, “*motus voluntarii fere omnes imminuti;*” meaning by this to imply, that under the title of apoplexy are comprehended those diseases which as differing from it in degree only, cannot, with a view either of pathology or practice, be properly distinguished from it: such are those above enumerated, Carus, Cataphora, &c.

Apoplexy, sometimes seizes suddenly, without any premonitory symptoms, striking the unfortunate subject to the ground, and bereaving him at once of the voluntary efforts of

every function both of body and mind. It is much oftener however, preceded by various symptoms; such as frequent vertigo, disinclination to motion or exertion of every kind, with drowsiness and fits of incubus; some degree of numbness, or loss of motion in the extremities; some faltering of the tongue in speaking, with the voice unusually slow; slight inflammation of the eyes, with transitory interruptions of seeing and hearing; frequent head-aches and loss of memory; incoherent replies to questions proposed, &c. When to these symptoms the apoplectic paroxysm has itself succeeded, the face is for the most part flushed, the eyes half open, fixed and glazed. Respiration is difficult, irregular and *sometimes stertorous*, while the pulse remains very full, slow and hard. The bowels are always constipated, except the sphincter ani be affected with palsy, when the fæces are discharged involuntarily. The excretion of saliva is augmented and appears in the form of white froth without the mouth. The senses, together with voluntary motion, are greatly impaired or totally abolished; or as I have hinted before, according to the force of the hurting powers producing the disease, are

the faculties of both mind and body debilitated, deranged or entirely destroyed.

So far as my information and experience extend, the above is a full history of the symptoms and appearances of what has been termed *sanguineous* apoplexy. The term *serous* apoplexy, has however been applied to a set of symptoms differing somewhat from those already enumerated, yet resulting no doubt, from the same proximate cause. That apoplexy has, by medical writers, been denominated *serous*, which from the state, or temperament of the patient may be supposed, or from the dissection of the body after death, is known, to result from serous exhalation upon the brain. In *serous* apoplexy the attack is in general more gradual, the face is pale and tumid, the pulse is small, weak and intermittent, and the extremities are cold and flaccid. The cases of this disease may be best determined from the subjects and circumstances of attack; it being observed that phlegmatic temperaments, cachectic habits and advanced age are most commonly its victims. Although in both these forms of our disease, the whole of the body is affected with a loss of sense and motion, yet it sometimes takes place more upon one side of the body

than the other; in which case, the side least affected with palsy, is often convulsed.

From this unhappy state we sometimes have the satisfaction to see our patients restored to their pristine health and vigour:* but more frequently, (if by early assistance, the immediate violence of the disease is subdued,) they lead out a miserable existence of hemiplegia, fatuity, or some other distressing relick of the original affection.—Hence the remark of the celebrated Boerhaave; “soporosi, hebetes, pusillanimes, vertiginosi, remanere solent.”† It sometimes happens that an apoplectic paroxysm is happily resolved by some spontaneous evacuation, as, vomiting, hemorrhage or profuse sweat; leaving the patient in the usual enjoyment of his faculties. This, however, is very rare; and even when by the combined efforts of nature and of art, the present danger is averted, the system is generally left in a state of predisposition to future attacks, which sooner or later prove fatal.‡

* The chance of permanent recovery from *sanguineous*, is much greater than from *serous* apoplexy; for reasons to be hereafter named.

† Aph. 1018.

‡ It is remarked by the most experienced observers, that

When to the more alarming symptoms of this disease which have been above enumerated, difficult deglutition, a weak, small and intermitting pulse succeed; or when drink is returned by the nostrils, violent convulsions supervene and partial cold sweats break out over the body; but little hope of a fortunate termination can be entertained; and without the speedy aid of a kind and omnipotent Providence, the unhappy patient soon sinks under the weighty hand of death.

DIAGNOSIS.

Having now exhibited the phenomena of apoplexy, it seems next requisite that I should notice the symptoms and appearances by which it may be distinguished from other diseases in some respects similar.

The diseases to which I here allude, and which are particularly worthy attention, are, hysteria, syncope, epilepsy, and ebriety.

A brief consideration of each of these, in order, will, I trust, shed sufficient light on this very important, though truly plain part of my subject.

the third attack of apoplexy is seldom—the fourth, never survived.

FROM HYSTERIA,

Apoplexy is most easily distinguished. The hysteric paroxysm commonly begins by pain in the left side, about the flexure of the colon, with a sense of distention, advancing upwards, till it gets into the stomach; removing from thence into the throat, it occasions by its pressure a sensation as if a ball was lodged there, which by authors has been called *globus hystericus*. These are symptoms which, (as far as my own observation can testify and the concurring testimony of authors confirm,) are almost universally attendant upon the hysteric disease; to apoplexy, they are foreign, and never known to occur. Time of life may also prove a useful guide in distinguishing these diseases; apoplexy very seldom appearing earlier than the fortieth year, and hysteria as seldom occurring later than the thirtieth or thirty-fifth year of life.

FROM SYNCOPE.

The points of difference between syncope and apoplexy are too obvious to occupy much of our time.

In syncope, the action of the heart and respiration become considerably weaker than

usual, or for a time they cease altogether. In apoplexy, these functions continue. In syncope, the face is pale and contracted; while in apoplexy it is red and turgid. In syncope, the eyes are closed; in apoplexy, they are half open and fixed. From the age, sex and temperament of the patient we may also learn much; young persons and persons of delicate habit, and therefore women, rather than men, being the subjects of syncope; while persons advanced in life, those of robust form, and sanguine temperament, and therefore men, more frequently than women, being the victims of apoplexy.

FROM EPILEPSY.

It requires, perhaps, more attention to form the diagnosis between epilepsy and apoplexy, than between apoplexy and syncope or hysteria; as in this affection sense and voluntary motion are equally disturbed as in apoplexy itself. When however, we consider the convulsed state of the whole body of the epileptic patient, and particularly when this has been preceded by that sensation usually termed *aura epileptica*; the true nature of the disease can no longer be doubted. Whereas apoplexy, as may be inferred from its history delivered above, is

never attended with general convulsions, or any sensation that might be mistaken for the *aura epileptica*.

FROM EBRIETY.

The soporose state induced by the immoderate use of intoxicating liquors might be mistaken for apoplexy, by a superficial observer of the phenomena of disease. The sleep however, succeeding a fit of drunkenness, is not so profound as that of apoplexy; nor are the organs of sense so much stunned and paralyzed as in this disease.

From the scent of the breath, appearance of the face, and duration of the fit, may also be learned much. In ebriety, the countenance is pale and the fit comparatively short; while in apoplexy the face is flushed and the paroxysm of much longer duration.

DISSECTION OF THE DEAD BODY.

The phenomena of disease which so often elude the researches of the brightest understandings, can often be only successfully investigated in the dissection of the body after death; and in no instance does the happy result of dissection more plainly appear than in the disease now under consideration.

From the observations of the celebrated Morgagni and others, it appears that that species of the disease usually denominated sanguineous apoplexy, is directly induced by overdistention of the blood-vessels of the brain, or rupture of these, and consequent suffusion of that organ. This has, however, been controverted by authors of no inconsiderable fame; who have in their turn asserted, that apoplexy is never the offspring of over-distention of the blood-vessels of the brain, or of effused blood or serum upon that organ.

The latter of these opinions, though illustrated and supported by the ingenuity and talents of the distinguished Doctor John Brown, appears to me to be rather the fruits of a mind delighting in the exalted regions of theory, than the calm and deliberate observation of the accurate and well informed anatomist. The former, seems to be amply supported by the dissections of Lieutaud and Willis, and by the reasoning and experience of many of the most learned and worthy of our profession.

From the dissections of Mr. John Hunter and George Fordyce, it would appear that *extravasation* between the skull and dura

mater, the dura mater and pia mater, or into the ventricles of the brain, more frequently produce apoplexy, than any other cause. In upwards of ninety dead bodies (the subjects of apoplexy), dissected by these gentlemen, extravasation was always found to be the immediate cause of the disease.

Relying upon these observations, is it not right to infer, that compression from extravasation or over-distention of the blood-vessels of the brain is always the proximate cause of apoplexy?

The substance of the brain itself is found in various diseased conditions; sometimes it is much harder, at other times much softer and more flaccid than natural; sometimes tumours or tubercles, and at others, phagedenic ulcers or gangrene appear. Farther, to enumerate the different diseased states of this important organ, as shown by dissection, would be superfluous, especially since our boasted art bows submissively to their fatal career.

PREDISPOSING CAUSES.

From the various convolutions made by the blood-vessels after entering the skull, it is to be presumed that nature either intends a de-

lay of blood in the head, thereby to give a proper tone or tension to the brain, or that this delicate organ may be defended from the common or occasional impetus of the blood; neither of which ends could be effected by the general disposal of the vascular system.

OLD AGE.—It is remarked by all writers of note, on apoplexy, that it is a disease of advanced life, seldom occurring earlier than the fortieth, and generally, about the sixtieth year. No cause now at my command, will so readily and satisfactorily explain the phenomena of this disease as occurring especially at this period, as the *plethora venosa** of Dr. Cullen, which so certainly predominates in the system at this time of life.

A LARGE HEAD, has generally been supposed to be a circumstance which predisposes to apoplexy, and it is generally believed that this disease happens more frequently in such cases than in others. Perhaps the uncommon size of the head is only an effect of the predisposing cause, and might be considered, as pro-

* The change which takes place in the system of blood-vessels, at or about the acmè of life, is very ingeniously and handsomely set forth by Dr. Cullen, and amply confirmed by the experiments of Sir Clifton Wintringham.

duced by the determination of blood to the head, rather than as being its cause.

OBESITY.—This is very justly mentioned by writers, as another predisposing cause of our disease.

It is supposed to produce this effect by compressing the vessels in other parts of the body, thereby more readily filling those of the brain, which are entirely free from such compression. The return of blood through the veins of the head towards the heart, is especially interrupted by every circumstance that produces a more difficult transmission of the blood through the vessels of the lungs.

It is well known that, at the end of every expiration, some interruption is given to the transmission of blood through the lungs; and that this at the same time, gives an interruption to the motion of the blood from the veins into the right ventricle of the heart. By this reasoning we also explain, why polypous concretions in the cava, or right ventricle, are found to occasion apoplexy.

A SHORT NECK*, is no doubt one of the predisposing causes of Apoplexy. This idea will

* Different authors, one of whom is Boerhaave, have supposed that a vertebra is sometimes wanting, the neck consisting only of six instead of seven vertebræ.

appear probable when we reflect on its consequences; that the heart must necessarily be nearer the head, and the blood of course flow to it with more force; while at the same time the return of the blood through the veins of the neck, is more easily interrupted.

Painful and long application of the mind to one subject, may very readily excite a determination to the head. Morgagni mentions the case of a learned man, who if at any time he fixed his mind on abstruse speculations, before he rose in the morning, had always some drops of blood falling from his nose when he got up.

Many other causes, which predispose to apoplexy, have been noticed by authors; these I view as secondary objects, since they reflect but little additional light on the immediate subject of investigation.

OCCASIONAL CAUSES.

The various *occasional causes*, from which the brain may suffer compression, are so numerous, that an attempt to name them all, would at least be superfluous, if indeed it be within the sphere of possibility. I shall therefore content myself with mentioning such of these *causes* as are most likely to occur, and

such as are most commonly found preceding or accompanying this disease. Among these are, violent passions of the mind, as anger, &c.

These appear to result in a preternatural determination of blood to the head; as may be seen by the turgescence of the blood-vessels of the face while under the influence of such passions. The violence with which the blood is propelled to the head, in anger, and the difficulty of its return, which is owing to the disordered state of respiration, are well exemplified in the following case from Haldanus. "A burgher of Berne, in Switzerland, of the name of Rust, an excellent and pious man, about fifty years old, of a bad habit of body, and subject to costiveness, happened to quarrel with another person at an entertainment. In the affray he received a slight blow on the face, which increased the passion so much that he fell down apparently dead, and remained a considerable time in this state. Upon recovering himself he went home, and complained much of head-ach; nevertheless he ate a little soup, which he soon vomited, together with the other contents of his stomach. He then went to bed, and slept tolerably well until one o'clock next morning, when

he was struck with an *apoplexy* of which he died the same day.”*

Grief, fear and joy, are all passions, sometimes terminating in apoplexy. Dr. Rush has stated that the door-keeper of Congress died of this disease, from joy, upon hearing the news of the capture of lord Cornwallis and his army during the American revolutionary war.†

VIOLENT AND SUDDEN EXERTION.—This I esteem one of the occasional causes of our disease, since it retards the passage of the blood through the lungs from the right side of the heart, and of course interrupts the return of blood from the head. Its effects are manifest, in its universal concomitant suffusion of face.

VOMITING.—We now consider a powerful occasional cause of apoplexy. In the act of vomiting, all the contents of the abdomen are violently compressed, while the diaphragm and abdominal muscles are in a state of convulsion; the blood in the ascending cava is sent with more force to the right side of the heart, thereby impeding the discharge of blood from the descending vein, and the descending aorta will

* Heldanus, Cent. vi. Observ. XI.

† Diseases of the mind, p. 339.

also be pressed, thereby giving the blood a greater determination to the head: add to this, during the act of vomiting, respiration is obstructed, so that the right ventricle of the heart cannot discharge its blood into the pulmonary vessels; hence the return of venous blood from the head is impeded; while there is at the same time a great quantity sent up by the large arteries, and apoplexy is often the unfortunate consequence of rupture of some of the vessels of the brain.

EXTREME INTOXICATION.—The disease produced by excess in wine or spirits, or other powerful stimuli, such as æther, opium, &c. may be divided into three stages. The first, is that in which the person has several unnatural perceptions, his judgment however, remaining still entire. The second is a state of perfect delirium, in which he talks and acts unreasonably. The third, is a state of coma or apoplexy.

There is a certain point of intoxication, when a person sees objects double, and yet has so much of understanding as to know that it is a mere illusion of sight, proceeding from the wine or spirits drunk. He has erroneous perceptions, but yet is not delirious. At such a period a person is still capable of conducting himself with tolerable propriety; he gives a

distinct and rational answer to any question that is proposed to him, but it is not always very distinctly pronounced.

If more strong liquor be taken, a state of delirium ensues, in which the patient talks idly, and unreasonably; emits screams and ejaculations; laughs and swears alternately, and has no command over his actions.

If the debauch is continued, he at last falls from his chair in a state which is commonly called *dead drunk*, and which is a state of real apoplexy.

During the time of this scene, there is considerable disorder prevailing in the heart and arteries; the circulation is much quicker and stronger than usual; the pulse rises both in frequency and force; the heat of the skin is increased, the face glows, the eyes become red and suffused, and a great determination of blood to the head is evident.

SYMPATHY.—That nervous consent of parts, usually termed by physicians, *sympathy*, is, I apprehend, more frequently the exciting cause of apoplexy than we are aware. Through the medium of the exquisite *sympathy* existing between the stomach and brain, I would account for the instantaneous death of persons

receiving blows on the region of the stomach; through the medium of *sympathy* between these two important organs, I would explain the participation of the stomach in every important affection of the brain; and to this celebrated, but incomprehensible agent, I would ascribe that apoplexy, induced by certain acrid, crude and indigestible substances, received into, or generated in the stomach; and which may with much propriety be called *apoplexy of the stomach*.

“To the causes now mentioned, as occasioning apoplexy, I may add other causes producing the same disease, by directly destroying the mobility of the nervous power. Such causes seem to be the mephitic, arising from fermenting liquors, and from many other sources; the fumes arising from burning charcoal; the fumes of mercury, of lead, and of some other metallic substances; opium, alcohol, and many other narcotic poisons.” To all which I would add the power of cold, of electricity, violent sternutation, posture of the body, &c.

PROGNOSIS.

In some cases of this disease, it is almost impossible to foresee the event; in others how-

ever, the prognostic may be formed with considerable certainty. In forming the prognosis, the following circumstances should be especially considered: First, the age, strength, constitution and former habits of the patient. Secondly, the symptoms, nature and duration of the disease. Thirdly and lastly, its particular remote causes.

If the coma and other symptoms are slight, and the strength not much exhausted, the probability in favour of recovery is very great; but if the symptoms continue violent, for some four or five days, and the pulse, which all along had been full and slow, becomes quick and frequent, there is but little hope of a fortunate termination, and the scene is generally closed either by death or hemiplegia.*

When the disease depends on the sudden cessation of any usual evacuation, and this returns, together with a gentle and durable sweat, the prospect is favourable.

Copious discharges of urine, containing the lãteritious sediment, spontaneous evacuations of the bowels and violent spontaneous vomiting, have all brought on a resolution of our disease. When on the other hand, the breath-

* Macbride.

ing is *stertorous*, the patient has lost the power of deglutition, and fluids are returned by the nostrils; when there is a cold, clammy sweat over the surface of the body, when the bladder and sphincter ani are paralyzed, and the urine and fæces are discharged involuntarily; when the face has a cadaverous appearance and the eyes are flaccid and dull; then indeed may we soon expect to see our devoted patient sink under the chill hand of merciless death.

The accession of fever often obstructs the fatal career of apoplectic disease; hence Hippocrates, when speaking of the solution of disease by fever, remarks; “*Quibus sanis dolores fiunt derepente in capite, et statim muta evadunt ac stertunt, in septem diebus pereunt, nisi febris prehenderit.*”

PROPHYLAXIS.

Since there is no disease to which the human body is liable, whose attack is more violent, or whose permanent cure is more difficult, it particularly becomes me to offer such advice as will most likely prevent its accession. In persons predisposed by nature to this disease, the antiphlogistic regimen should be

strictly observed, and moderate exercise timely practised. A vegetable and acescent diet should be employed, and ardent liquors of every kind religiously shunned. Supper should be either entirely omitted or very sparingly used; and the bowels should be kept gently open by some mild laxative. The time allotted to sleep should be very limited, since there is nothing which more promotes the plethoric predisposition; or to use the words of Dr. Gregory, "*Excessus quoque somni haud parum nocet; totum hominem torpidum, debilem, hebetem, fere fatuum, reddit; motum sanguinis languidum facit, et plerasque secretiones et excretiones minuit; hinc plenitudo, obesitas, flacciditas, et ad omnia vitæ munera impotentia.*"*

In truth every cause which can determine the blood to the head, should be diligently avoided.

Heat, from whatever origin, errhines and every thing which can produce violent sternutation or a full inspiration, should be sedulously shunned. When, however, an attack of apoplexy is immediately threatened, blood-letting is the most efficient remedy, and the blood should preferably be drawn from the jugular

* Gregory *Cōsp.* vol. I. de Somno.

vein, but if this be inconvenient, a bleeding in the arm, from a large orifice, may be substituted.

In fine, a judicious regulation of what has been termed the *non-naturals*, seems all important to the prophylaxis. These, however, by the baneful practices of modern life, have been wofully abused. The rich sauce, the spicy ragouts and entremets, heightened by the fragrant aromatics of both the Indies, however savoury and pleasing to the taste, are most assuredly the inviters of the most formidable maladies.

Excesses in devotions to the deities, Bacchus and Venus, seem to have become *fashionable vices* of early life, and unfortunately for deluded humanity, life's real pleasures are too often either drowned in cups of jollity and mirth, or lulled into never ceasing repose in the arms of the fair.

“Sobriety, temperance and virtue, insure vigour to the constitution, and keep the understanding free and undisturbed.” That this happy state is desirable, must be acknowledged by all; for as Juvenal happily and rightly expresses it,

Grandum est, ut sit mens sana in corpore sano.

METHOD OF CURE.

The distressing and fatal effects that have hitherto followed the progress of apoplexy, have, in every age, called aloud upon the sympathies and exertions of the medical world.

For the cure of this disease, whether from causes, external or internal, and which I presume to be almost universally those from compression, the proper remedies should be immediately and promptly employed.

If the cause proceed from without, such as violence offered the skull, thereby fracturing and depressing a portion of the cranium, the chirurgical operation for elevating the depressed bone and thereby relieving the compression of the brain, should be immediately performed; and succeeded by blood-letting, purging, or other such remedies as the condition of the patient may seem to require.

If however, the disease proceed from internal causes, (as is most frequently the case,) the practice should be directed as I am now to point out.

In the cure of sanguineous apoplexy, no time should be lost in employing the most active remedies.

BLOOD-LETTING.—On the person's being seized, due care must be taken to remove all compression from about the neck, to support him in an erect posture, and to allow a free admission of cool air. If the subject be of full habit and the disease has been preceded by marks of a plethoric state, he should immediately lose sixteen or eighteen* ounces of blood. It will be most effectual if taken from the jugular vein; but if this cannot be conveniently done, it may be taken from the arm.

The opening of the temporal artery, when practicable, has been recommended by practitioners; this, however, I think objectionable, upon two grounds, first, the difficulty and inconvenience of penetrating that vessel, and secondly, the less probability of affording relief to the engorged vessels of the brain even by such an operation. I have said, 'the less probability of affording relief;' since it appears to me, that the distended vessels of the brain would be more immediately relieved by opening a large vessel which leads directly from them, than by cutting off in some small degree

* The quantity of blood to be taken, should always be determined by the habits, constitution and present condition of the patient.

only, the blood, destined to become an augmenter of the disease, but which has as yet, had no diseased influence.

CUPPING AND SCARIFYING the temples and back part of the head, should be used, if bleeding has been practised as much as the strength would permit, without removing the symptoms.

PURGING, is another remedy to be promptly and actively employed in the treatment of apoplexy.

This should be first attempted by active glysters; but if at the same time any power of deglutition remains, it should be promoted by the exhibition of *drastics* by the mouth.*

I am aware that active purging has been objected to as a remedy in apoplexy; but experience, the best of human monitors, teaches us its utility, and I can now, with no little confidence say, that it may be *repeatedly* practised, if the symptoms are obstinate, with all the good effects worthy so noble a remedy. It acts not only by evacuating the contents of the intestines, but generally the head is relieved

* If there is any apprehension of exciting vomiting by a full dose of a purgative, it may be exhibited in broken doses at proper intervals.

in proportion to the quantity of the fluid discharged.

BLISTERS, should be applied early in apoplexy. If they produce their effects by giving a general stimulus, as is by some supposed, they would certainly prove injurious; but observation has taught us, that they produce little irritation except upon the part to which they are applied; and therefore are so frequently used in phrenitis, pneumonia, and hemorrhagy. In apoplexy, they should be applied to the head, to the nape of the neck, or between the shoulders, rather than to the extremities; as in this case they seem to produce their good effects more by the evacuation they occasion, than by the power of derivation, which they in some degree exercise.

The limited views which we at present have of what has been termed SEROUS APOPLEXY, will necessarily lead to a cautious, and sometimes, perhaps, an inefficient treatment of the disease.

It seems to me proper that blood-letting should be restricted to much narrower bounds in *serous* than in sanguineous apoplexy; as it is more difficult for us to ascertain the state of the blood-vessels of the brain, in the former, than in the latter of these cases.

In the *serous* form of our disease, the blister should be applied especially to the scalp, but if the symptoms be urgent, to the back and extremities also; with a view principally of hastening the absorption of any fluid that may be already effused.* To this end, warm purgatives and sternutatories are likewise indicated.

Stimulants of various kinds, such as vol. salts, cordials, &c., have been much employed in serous apoplexy; but as they determine the circulation to the head and might thereby increase the cause of the disease, their use appears somewhat doubtful. When, however, they are to be employed, sufficient evacuation should precede their use.

SEROUS APOPLEXY, is sometimes the consequence of a general *hydropic diathesis* of the system. In this case it is symptomatic, and should be treated by remedies directed to the primary disease.

When apoplectic symptoms proceed from opium, or any other narcotic poison taken into the stomach, the offending matter ought to be

* As no lymphatics have as yet been discovered in the brain, it is supposed that the extremities of the veins will, in this case, act the part of absorbents.

thrown off as soon as possible, by exciting vomiting; should none have arisen spontaneously, this done the patient should lose some blood and take a purgative, that the stagnation of the blood and consequent congestion may be removed.

The *coup de soleil*, or stroke of the sun, which is so common in warm climates, to those who are exposed to its immediate influence, seems evidently to be an attack of apoplexy. It is to be treated in the same manner as pointed out for the treatment of sanguineous apoplexy.

COLD AFFUSION.—In the worst forms of apoplectic disease, when the stertor and comatose symptoms run highest, it has been recommended to employ the cold affusion to the head, and to different parts of the body, as the most ready means of exciting and rousing the patient from his senseless condition.

In those violent cases, where life seems to be almost extinguished; sinapisms, applied to the palms of the hands, and soles of the feet, and frictions to the spine and extremities, have been found highly serviceable. But in this condition, sanguine expectations cannot be

indulged, and if our best exertions should fail, it must console us to know that we are baffled by a disease, whose fell career has seldom terminated but in death.

IN following the impulse of my feelings, I cannot leave this University, without tendering in the only public manner which perhaps will ever proffer itself, my most grateful and sincere acknowledgments to its enlightened Professors. Collectively as a faculty, and individually as gentlemen, they claim my highest regard. With Professor Chapman I have had the pleasure of a more intimate acquaintance, which I need not add, I well appreciate. Receive then, Sir, the sincere thanks of the heart, the only return for your politeness I can offer; and be assured that you, as well as the other Professors, will ever possess the highest respect of your grateful pupil.

THE END.

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