Letters concerning the internal dropsy of the brain : to Charles William Quin, M.D. ... from William Patterson, M.D. ...

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LETTERS

CONCERNING THE

INTERNAL DROPSY OF THE BRAIN,

TO CHARLES WILLIAM QUIN, M. D.

FELLOW OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS,
PHYSICIAN GENERAL OF HIS MAJESTY'S ARMY IN IRELAND,
AND OF THE ROYAL HOSPITAL FOR INVALIDS NEAR DUBLIN,

FROM

WILLIAM PATTERSON, M. D.

MEMBER OF THE ROYAL IRISH ACADEMY, AND CORRESPONDING
MEMBER OF THE LONDON MEDICAL SOCIETY.

MUSSABAT TACITO MEDICINA TIMORE.

LUCRETIUS.

DUBLIN:

PRINTED FOR WILLIAM GILBERT, AT THE MEDICAL LIBRARY,
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1794.

The Author's great Diſtance from the Preſs will, he hopes, plead his Apology for the following Errata, which the Reader is requeſted to correct.

E R R A T A.

Page 3 *line* 8 *dele* two inverted commas.
——12 — 26 *for* fullneſs *read* fulneſs.
——13 — 8 — hemorrhoidal *read* hæmorrhoidal.
——do. — 11 — hypochondrical *read* hypochondriacal.
——do. — 12 — atribiliary *read* atrabiliary.
——14 — 8 — apoplexia *read* apoplexiæ.
——do. — 9 — hydrocephalica *read* hydrocephalicæ.
——do. — 18 — apoplexia *read* apoplexiæ.
——16 — 26 — efforts *read* effects.
——17 — 14 — error *read* errour.
——18 — 13 — Savage *read* Sauvages.
——do. — 25 — proximated *read* proximate.
——20 — 21 — Phlegmons *read* Phlegmon.
——21 — 22 — diſſection *read* diſſections.
——24 — 28 — diaphanus *read* diaphanous.
——32 — 15 — depletions *read* depletion.
——37 — 9 — atomy *read* atony.
——59 — 28 — plaiſter *read* plaiter.
——71 — 16 — ditto —— ditto.
——78 — 24 — delignium *read* deliquium.
——80 — 29 — reviewed *read* viewed.
— 83 — 28 — on *read* on
— 92 — 17 — Endiometer *read* Endiometer

For

Benj^n Bell Esq^r Edinburgh

With sentiments of

particular Respect

From

The Author

LETTER I.

SIR,

FREQUENTLY reflecting with concern on the rarity of Medical Works in this kingdom, and ſenſible of the limited ſtate of our knowledge, reſpecting the nature of the Dropſy of the Brain, I read with pleaſure the advertiſement which announced your Treatiſe on this Diſeaſe; and give me leave to ſay, that my pleaſure was not a little heightened by the peruſal of that very reſpectable publication.

You appear to have condenſed, and placed in an inſtructive point of view, the moſt material parts of what is generally known concerning that inſiduous and intractable malady. In particular, your diviſion of it into a *chronick* and an *acute* ſpecies ſeems to be a very judicious mode of diſtinction. To your pathology of the latter ſpecies, on the firſt reading, I accorded without ſcruple; becauſe it tallied with ideas which I had acquired on the ſubject.

From what ſource I had imbibed thoſe ideas, I did not then, nor for a conſiderable time afterwards, exactly recollect. At length, in looking over ſome notes, I diſcovered the origin from whence they were derived; and I found that I was indebted for them principally to the late Dr. Macbride. This ingenious phyſician, when treating of fevers, and remarking on the varieties of Nervous fever, writes thus: "In particular, the diſeaſe which Dr. Whytt has deſcribed ſo accurately under the name of Internal Dropſy of the Brain, appears to be a nervous fever, and might rather be termed the *Hydrocephalick Fever*, as the appellation of Dropſy gives an idea of a chronick diſeaſe. We may therefore conſider this as a variety, diſtinct from the *febricula*, or *febris nervoſa communis*."

This extract is taken from the ſecond edition of his METHODICAL INTRODUCTION, printed at Dublin, in 1777; the firſt edition being publiſhed in 1772; which, you'll pleaſe to obſerve, was ſeven years before the appearance of your Inaugural Diſſertation at Edinburgh, in 1779.

In Dr. Withering's account of the Fox-glove, publiſhed in 1785, I find that he conſiders the Hydrocephalus Internus to be at the beginning dependent upon inflammation, or congeſtion; and that the water in the ventricles is a conſequence, not a cauſe of the diſeaſe; and therefore that the curative indications ought to be extremely different in the firſt and the laſt ſtages. "Some years ago," ſays this accurate

accurate obſerver, " I mentioned theſe opinions, and the *ſucceſs of the practice reſulting from them*, to Dr. Quin, now phyſician at Dublin. That gentleman had lately taken his degree, and had choſen Hydrocephalus for the ſubject of his Theſis, in the year, 1779. In this very ingenious eſſay, which he gave me next morning, I was much pleaſed to find " that the author had not only held the ſame ideas relative to the nature of the diſeaſe, but had alſo confirmed them by diſſection."

Such diligent inquirers, or indeed the drowſieſt reader, could not turn over *Morgagni de Cauſis et Sedibus Morborum*, eſpecially his letters on the diſeaſes of the head, without conceiving a theory of this kind. To ſupport this opinion, I ſhall beg leave to call your attention to one or two caſes, in addition to thoſe you have tranſcribed from the ſame author.

Analogous to your 6th caſe, in the ſame epiſtle, and 12th paragraph, he gives us one of a young woman, who, after being extremely heated by a journey in winter, was ſeized with a violent pain in the head, and an acute fever. Although under the influence of the ſexual revolution, her pulſe was ſtrong and firm. She had no delirium; but was often reſervedly ſilent; and with theſe ſymptoms ſhe died in a few days. On opening the head, the inſide of the cranium had a reddiſh brown caſt, and the outſide of the pia mater, where it covered the upper part of the brain, was ſmeared with a yel-

lowiſh kind of matter, which, although perfectly inodorous, reſembled pus in conſiſtence and colour. Concerning the real nature of this fluid, our author makes different conjectures; but to me it appears probable, that it was the gelatinous ſubſtance which is found on the ſurfaces of internal parts affected with inflammation.

An inſtance of a ſimilar kind of fluid being found in the brain, we again meet with in the ſame author's 4th letter, and 6th paragraph. A ſlender man, forty years of age, labouring under an acute fever, loſt the power of ſpeaking on the ninth night; and when ſpoken to, ſhowed not the leaſt ſign of underſtanding. At length, about the 13th day, he died. Stagnated ſerum lay between the brain and its membranes; and the ventricles were full of it; but in other reſpects, the brain ſeemed natural. This is reckoned by Morgagni a caſe of ſerous apoplexy; but from the make of the patient, the ſpecies of fever, and the time of its duration before the comatoſe ſymptoms ſupervened, I am led to conceive it to have been hydrocephalus internus. Againſt this idea, the brain, excluſive of what the writer calls ſtagnated ſerum, having been found in a natural ſtate, does not furniſh a concluſive reaſon, becauſe the ſtagnated matter, or condenſed gluten, is to be regarded as a conſequence of previous inflammation, the uſual marks of which might have been rendered rather obſcure by the three or four days atonick condition of the encephalon.

Theſe

Theſe two caſes, without taking up time in citing others, may ſerve to ſhow, by their ſtrongly marked phænomena, that even a curſory peruſal of Morgagni muſt ſuggeſt the pathological opinion, *That hydrocephalus internus is cauſed by an accumulation of blood in the veſſels of the brain*; the theory which you, after Macbride, and in conjunction with Withering, ſo happily adopted.

That your father, who was an eminent phyſician, did not avail himſelf of the advantages to be derived from the peruſal of the celebrated Morgagni, would not only be an injurious, but an improbable ſuppoſition. Morgagni's work, in which we are here intereſted, was publiſhed in 1760; and the firſt caſe given in your collection in 1790, from Dr. Henry Quin, is dated in 1768; eight years after the appearance of the Epiſtolæ de Cauſis et Sedibus Morborum. Nor did Dr. Macbride's Methodical Introduction appear, until twelve years after the publication of thoſe valuable Epiſtles.

Although Dr. Quin attended the caſe next ſtated, and occurring in the year, 1771, yet it does not appear from the circumſtantial narration, that either he, or the conſulting phyſician, entertained even a notion of your adopted theory, or apoplectick character of the diſtemper. That either of them did entertain ſuch a notion, I do not think can be inferred from the language of the detail, nor from the mode of treating the patient. For we do not find the idea held by the parents, namely, that of

the

the diſeaſe being a common fever, was contradicted by the Doctor, who accordingly permitted the adminiſtration of *James's Powder*; the conſequence of which was, as might be expected, that the ſtupor very ſoon came on.

If Dr. Quin had felt even a faint conception of the preſent theory, would he in this caſe have preſcribed, early in the diſeaſe, a remarkably ſtrong vomit of Ipecacuanha and Antimonial Wine? Blood indeed was twice drawn; but it does not ſeem to have been done from any novel indication. On the contrary it appears, that he held only a common opinion of the diſorder, moſt probably that of its being a bilious fever. For he ſays, "the ſerum was apparently bilious, the craſſamentum *not* inflamed;" and this idea is carried through the greater part of the hiſtory. And, upon the ſame principle, we may preſume, that the Bliſter, which was applied between the ſhoulders, was deferred until an advanced period of the diſeaſe.

Now, from theſe grounds, I would draw the following inferences: That Dr. Macbride, who muſt have been a reading man, in all likelihood acquired his opinion of the nature of hydrocephalus internus from the above work of Morgagni; that Dr. Withering drew his ideas of the diſeaſe from the ſame ſource; and that your father, from whom you derive, if he did not read Morgagni, took the hint from Dr. Macbride, with whom he could not fail of having frequent converſation, they being cotemporary

porary and celebrated practitioners in the ſame city. Or, if they never had any converſation on the ſubject, is it at all probable that your father neglected reading the Methodical Introduction? Here he might have ſeen the leading features of the new theory, and, if copied from his deſign, would he not have ſoon proclaimed his title to the invention? But if the author of the Introduction be not indebted to your father for his ideas on the ſubject, permit me to aſk, why your treatiſe is ſilent with reſpect to the ſuggeſtions contained in that reſpectable publication? Permit me alſo to inquire, why you have not recogniſed the diſcourſe, beforementioned, which you had with the ingenious examiner of the digitalis? In my humble opinion, the concurrent ſupport of two ſuch diſtinguiſhed authors, as Dr. Macbride and Dr. Withering, would be a valuable acquiſition to any doctrine.

Let the honour of invention be conferred where it may, I muſt obſerve, that an objection ſeems to lie againſt the propriety of your conveying the term, Apoplexia, to the diſeaſe under conſideration. The uſual idea that is entertained of Apoplexy, is that of a ſudden diſorder, as ſignified by both its Greek and Latin names, *Apoplexia*, and *Attonitus*. The juſtneſs of theſe appellations is confirmed by medical records. Out of forty-ſix caſes of Apoplexy, examined in Morgagni, I find that twenty-five of the patients died ſuddenly, or in a few hours; eighteen laboured under the diſeaſe ſome days; and the remaining three, *only*, languiſhed a conſiderable time.

time. But it appears, that theſe tedious caſes were rather paralytick, than of a true apoplectick nature.

To a name, were it merely a name, it would be frivolous to object. Yet when in this name is implied a quality, it is neceſſary to inveſtigate its applicability to the ſubject. The apoplexy, or *apoplectick ſtroke*, as it is called, is not only precipitate in its nature, but is alſo a diſeaſe belonging to a period of life, very different from that in which hydrocephalus internus generally prevails. The ſubjects of the former are in a conſiderable majority *old*, whilſt thoſe of the latter are for the moſt part *young*. Amongſt the forty-ſix caſes of apoplexy before alluded to, we find twenty-ſix from fifty-five years of age to eighty-five, ten from forty to forty-three years, ſix from twenty-two to thirty-five years, one only uncommonly young, viz. fourteen years, and the ages of the remaining three not mentioned. On the contrary, the ſubjects of the latter, or hydrocephalus internus, are almoſt univerſally young. That this is the fact, the following ſynoptical view of forty-eight caſes, compiled from authentick regiſtries, will abundantly prove. And as a relative piece of ſatisfactory information, I ſhall add a ſmall table ſhowing the ſex and event.

AGES.

From birth to two years	-	18
—— three to five	-	13
—— ſix to nine	-	6
—— ten to twelve	-	6
—— twenty to forty	-	5
		48

SEX AND EVENT.

MALES.		FEMALES.	
Died	16	Died	12
Recovered	15	Recovered	5
	31		17

31
17
48

That the two diſeaſes differ alſo conſiderably in their eſſential periods of continuance, is equally manifeſt from authorities, which, I ſuppoſe, you will not be inclined to diſpute. In thirteen of your caſes, I obſerve the following terms of

DURATION.

From ten to thirty days -	9
Thirty-five days - -	1
Forty-two days - -	1
Chronick - - -	2
	13

DURATION IN NINETEEN CASES,

FROM DR. PERCIVAL.

Two weeks and under -	7
From two weeks to three -	6
—— three weeks to four -	4
—— one month to ſix weeks -	1
Three months with intermiſſions	1
	19

By

By theſe examples of duration, it ſeems evincibly proved that few caſes of real hydrocephalus internus terminate in leſs than ten days; whilſt a review of the forty-ſix caſes of apoplexy, extracted from Morgagni, cannot fail of convincing us, that a great majority of perſons ſeized with this latter diſorder are actually ſtruck dead, or expire in a comparatively ſhort ſpace of time. And indeed you bear teſtimony alſo to the validity of this opinion, where you ſpeak of confining yourſelf to the hiſtory of ſymptoms, as they occur in young ſubjects, "in whom the *ſlow* and *gradual* progreſſion of them generally gives ſome regularity to the appearance of the diſeaſe — whereas when perſons more advanced in life are attacked by it, the progreſs is in general more rapid, and the danger more immediately imminent, as the ſymptoms approach nearly to thoſe of a *pure apoplexy*."

It is true, you deem two caſes, one aged fifty-two and the other twenty-five years, reported by Drs. Fothergill and Huck, not very common in the uſual courſe of practice; but if, after a peruſal of them, any reader entertains a doubt as to the *occaſional* exiſtence of the diſeaſe in adults, you refer him to the eleven firſt Epiſtles of Morgagni, from an attention to which you think he will be convinced that water lodged in the cavities of the brain, *accompanied by other appearances*, "is and has been a much more frequent cauſe of death, even in adults, than moſt phyſicians hitherto have imagined." The validity of this deduction, I do not mean to controvert:

vert: I only wiſh to eſtabliſh, what you have very properly noticed, that the exiſtence of hydrocephalus internus in adults is rather *incidental*, and certainly an unfrequent occurrence in the uſual range of medical practice.

By adverting to the hiſtory of each of the diſorders, we ſhall ſee a ſtriking contrariety of character. The hydrocephalus is uſhered in with all the ſymptoms of pyrexia: Languor, inactivity, diminiſhed appetite, nauſea, vomiting, hot and dry ſkin, quickened pulſe, and diſturbed ſleep. This ſtate having continued ſome days, in general five or ſix, moderate affections of one or both eyes take place, and the other circumſtances are exaſperated, with delirium, &c. until about the ſpace of eight days longer. And, what is very much to my purpoſe, the teguments of the cranium are ſometimes ſore to the touch.

The diſeaſe then makes that remarkable tranſition, which denotes the commencement of its ſecond ſtage; ſuch as ſlow unequal pulſe, leſs ſenſibility of pain, lethargick torpor, ſtrabiſmus, &c. Theſe ſymptoms are ſoon ſucceeded by thoſe of the third ſtage—a regained equality of pulſe, but ſo quick and weak, that it is hardly poſſible to number it; oftentimes a difficulty of breathing, *reſembling* the ſtertor apoplecticus; ſometimes red ſpots or blotches on the body and limbs; impaired deglutition; and convulſions, which form the cataſtrophe.

Here then we have a deliberate progreſs, from ſtage to ſtage. But what have we in apoplexy?

Its

Its aſſault is in general ſo impetuous, that the patient is as it were *thunderſtruck*. The whole of the external and internal ſenſes, and the whole of the voluntary motions are in ſome degree aboliſhed; the ſufferer falls down; ſnorts; and commonly dies. If life be protracted, the ſenſes are rarely reſtored, the voluntary motions often continue impaired, and palſy is apt to ſupervene.

No doubt, in ſeveral caſes, the apoplectick ſtroke is preceded by various ſymptoms, as frequent fits of giddineſs, headachs, tranſitory interruptions of ſeeing and hearing, ſome falſe viſion, degrees of temporary numbneſs, ſome faultering of the tongue, a loſs of memory, and frequent drowſineſs. But theſe are not ſymptoms of pyrexia, and are manifeſtly different from thoſe that notify the introduction of hydrocephalus.

Beſides, how contrarious are the habits of the parties obnoxious to theſe two diſeaſes! You tell us, that perſons liable to hydrocephalus have been extremely lively before its commencement, and of acute underſtandings. Very many of them have been obſerved to poſſeſs an unuſual clearneſs of the ſkin, through which the veins are ſtrongly portrayed, eſpecially about the temples, forehead, and neck; a fullneſs, prominency, and luſtre have been remarked in the eyes; and in a few caſes the exiſtence of a ſcrophulous taint has been ſuſpected.

Contraſt theſe tokens of temperament with thoſe which appear in apoplectick caſes, and obſerve the reſult. Perſons of large heads and ſhort necks, perſons of a corpulent habit, perſons who have paſſed an indolent life, and uſed a full diet, eſpecially thoſe who have indulged in frequent intoxication, are the uſual ſubjects of apoplexy. Men who have long laboured under a copious and frequent hemorrhoidal diſcharge, upon either its ſuppreſſion or ſpontaneous ceſſation, are particularly liable to be ſeized with this diſorder. The cholerick, the hypochondrical, and thoſe poſſeſſing what is called an atribiliary conſtitution, are alſo ſubject to it. Where now in this repreſentation can we trace the fair ſkin, the blue veins, the plump brilliant eyes, or the ſcrophulous vitiation, the leading marks of hydrocephalick prediſpoſition?

In which of the celebrated diviſions of apoplexy would you place the apoplexia hydrocephalica? With the *ſanguineous?* Or with the *ſerous?* In three of your ſix caſes, where the body was opened, we find that the blood veſſels of the brain were very turgid; in one of them were patches of inflammatory cruſt; and each of theſe four produced likewiſe a good deal of ſerum. The other two had ſerum; but no diſtenſion of the blood veſſels is mentioned. From this ſcrutiny it appears, that our anſwer to the preceding queſtions ought to be—The hydrocephalus belongs to both ſpecies of apoplexy —but this would be abſurd.

You will nevertheleſs ſay, as indeed you have already ſaid, that it belongs neither to *ſanguineous* nor *ſerous*, for it is of itſelf a diſtinct ſpecies; and in compliance with your theory, has our great Noſologiſt, Dr. Cullen, made it the third variety of his Genus, *Apoplexia*. But he owns that, as it is hard to collocate in a ſyſtem of Noſology diſeaſes which vary in their progreſs, "ideoque apoplexia hydrocephalica locum maximum idoneum aſſignare difficile eſt." And for preferring this ſtation he aſſigns no better reaſons, than becauſe it is not evident to the ſenſes, like external hydrocephalus; becauſe it differs alſo from the latter in its ſymptoms; and becauſe it bears a great reſemblance to apoplexy in its proximate cauſe and *towards its end* —— his words on this point are, "denique, quia cauſa proxima et *tandem* ſymptomatis, apoplexia quam maxime affinis eſt." Yet in his character of it, he ſtrongly corroborates my opinion: "Apoplexia hydrocephalica *paulatim* adoriens; *infantes et impuberes*, primum laſſitudine, *febricula* et dolore capitis, *dein* pulſu tardiore, pupillæ dilatatione, et ſomnolentia afficiens."

That the analogy does not hold good, is farther proven by diſſection. Out of the forty-ſix caſes of apoplexy, before cited, in twenty-four extravaſated blood, frequently to a conſiderable amount, was found in the brain, accompanied generally with little or no water, but ſometimes with a good deal. In nine of the caſes, turgeſcence with various quantities of water took place. In the remaining eleven,

a diverſity

a diverſity of appearances occurred irregularly, viz. pus, ſerum, veſicles, turgeſcence, and extravaſation. In ſome the ſerum was acrimonious, as its ſaltiſh taſte proved, in which ſo faithful an evidence as Morgagni would not deceive us; and in others, prodigious caverns were formed in the ſubſtance of the brain.

Compare this ſtatement with what is related in your diſſections, and we diſcover no ſuch combinations of phænomena in your accounts—No extravaſation of blood with turgidity or ſerum; no preternatural cavities; no purulent matter; nor any ſaline taſte in the effuſed fluid. As to this fluid, you expreſsly ſay, that it is always void of acrimony. Beſides, apoplexy very often ariſes from diſeaſes of the heart and large arteries; from morbid affections of the lungs; and from diſturbances in the abdominal viſcera; which are not the cauſes that the ſubjects of hydrocephalus are apt to generate.

As juſtly might we conceive an analogy between mania and hydrocephalus internus, as between it and apoplexy, becauſe, in caſes of inſanity, we are taught by diſſection, that the blood veſſels of the brain are often turgid and red; that water is collected within the membranes and ventricles; and that, although the ſubſtance of the brain be generally harder than uſual, it is ſometimes partly ſoft and partly hard. For confirmation of this I beg leave to refer you to the 8th and 61ſt letters of Morgagni,

gagni, where you will find ten anatomical examinations to this effect.

Nay were we to perſevere in following the ſame clew, we would obſerve phænomena, in bodies dead of various diſorders, ſimilar to thoſe that appear on opening maniacks. Conſult the 4th ſection of a very learned work, Arnold on Inſanity, and you will find, that, after diſeaſes which had chiefly affected the head, or ſeemed to have derived their origin from it, but had not been attended with the ſmalleſt ſymptom of real Mania, ſcarcely a ſingle appearance has occurred on diſſection in the one caſe, which has not been likewiſe diſcovered in each of the others. Hence we might have grounds for appropriating Mania, Phrenitis, Epilepſia, and other qualifying terms to hydrocephalus, as well as for adjoining to it that of *apoplexia*. Aware of this objection, indeed, you acknowledge its force; but confeſs that you cannot give any very ſatisfactory anſwer. However, in ſuggeſting the circumſtance of age as a material cauſe for the difference between apoplexia hydrocephalica, and the true apoplexy of adults, you ſupport my opinion, that children are moſt liable to the former. "It ſeems highly probable," you remark, "that the brain of children is much leſs ſenſible to the efforts of ſtimuli or preſſure, than it afterwards becomes at a more advanced age." —a property which ſeveral obſervations conſpire to aſcertain. To your obſervation ſtating the forcible compreſſion which the brain of infants endures at the time of birth, I would add, that the contents of the

the cranium in childhood bear the effects of fracture and depreſſion in a degree far exceeding what can be borne by the encephalon of adults, and to an extent, which, if applied to the brain of the latter, would be to theſe immediately fatal.

To give greater latitude to reaſoning or ſpeculation on a ſubject which you think can effectually be illuſtrated by facts only, you conſider inadmiſſible. Facts, it is true, when an adequate number can be obtained, are the beſt grounds on which reaſoning can be built. But when they are few, deductions from them will not be very ſatisfactory; the facts themſelves are often fallacious; and falſe experience is a ſource of conſiderable error in Medicine. We are frequently obliged, in ſubjects intricate and intereſting like the preſent, to indulge in ſpeculation, and to endeavour from ſmall data, to acquire, by means of our rational faculties, a releaſe from total uncertainty, if we cannot attain entire ſatisfaction; at any rate, in the exerciſe of thoſe powers, we may gain a more accurate method of thinking on the ſubject, which may finally lead to ſomething inſtructive concerning it. Give me leave, therefore, to ſay in the words of the poet,

> " Together let us beat this ample field,
> Try what the *open*, what the *covert* yield."

Endeavouring always, during the purſuit, to " *eye nature's walks*," and never inconſiderately turn aſide from them in tracing the cauſes of morbid phænomena.

In this reſearch, I truſt, that we may hit upon at leaſt a plauſible anſwer to the queſtion which you have ſtated, but have left unſolved; namely, If, as laid down in your theory, the apoplexia hydrocephalica ariſes in the firſt inſtance from a morbid augmentation of blood in the veſſels of the brain, why do the ſymptoms in any reſpect deviate from thoſe undoubtedly proceeding from the ſame cauſe in *Phrenitis* and *Apoplexy?*

To inveſtigate this point, we muſt take a view of the nature of the different kinds of inflammation. The beſt modern doctrine on this ſubject appears to be that which (purſuing hints from Savage and other celebrated Noſologiſts) is ably maintained by the ingenious Dr. J. C. Smyth, in the 2d vol. of the London Medical Communications. The principal cauſes of ſpecifick diſtinction amongſt various forms of inflammation, he refers to one or other of the four following circumſtances:—1ſt. the cauſe exciting the inflammation; 2d. the function, or uſe in the animal œconomy, of the part inflamed; 3d. the natural texture or ſtructure of the ſame; 4th. that texture or ſtructure of a part which is not natural to it, but is the conſequence of ſome previous diſeaſe.

That the proximated cauſe, according to the language of Pathologiſts, is in every inſtance one and the ſame, is a doctrine which is here freely admitted; yet it is maintained, that the remote cauſes, the objects of ſenſe and of obſervation, are widely different,

ent, and have conſiderable influence in varying both the external marks and the nature of the diſeaſe. Thus, for example, the appearance, termination, and method of cure in the Angina, or inflammation of the fauces, are very diſſimilar, where the malady has been produced by cold; has been excited by a venereal infection; or has been occaſioned by contagious miaſmata.

The ſecond circumſtance, viz. the function of the part affected, productive of ſpecifick diſtinction amongſt inflammations, is perhaps the leaſt important of any, but, from being the moſt obvious, has given riſe to the greateſt number of diviſions in thoſe complaints; as teſtified by the long liſt of names to be met with in every medical book on the ſubject. No doubt there is a propriety, and even an advantage in diſtinguiſhing with accuracy the organ immediately affected by inflammation; yet it is equally certain, that, in all ſuch caſes, the great diverſity in the ſymptoms is more imputable to a difference in the function of the part engaged, than to any ſpecifick variation in the nature of the inflammation.

The third circumſtance mentioned as a ſource of characteriſtick diſcrimination amongſt theſe diſeaſes, was the peculiar texture or ſtructure of the part inflamed; a circumſtance which, though hitherto neglected, or but ſlightly noticed, ſeems to conſtitute ſome of the moſt important diſtinctions of this claſs of diſorders. For experience has long taught us,

that every part of an animal body, the cuticle and hair perhaps excepted, is liable to inflammation; and by carefully obſerving the phœnomena, it will be found no leſs manifeſt, that, according to the nature of the part concerned, the diſeaſe aſſumes a different appearance; is attended with different ſymptoms; becomes more or leſs ſevere; and requires a different, nay ſometimes an oppoſite, mode of treatment.

Without pretending to aſcertain all the various ſhades of inflammation, according to the great diverſity of ſtructure in the ſeveral parts of the human body, our author only propoſes to give the outlines of ſome of the moſt obvious and ſtriking diſtinctions derived from this origin. He therefore conſiders the following, as diſtinct ſpecies of inflammation, each of them having a ſtrongly-ſpecified character, which, in every inſtance, ſeems entirely dependent on the peculiar ſtructure of the part inflamed.

1ſt, The Inflammation of the Skin —— *Eryſipelas.*
2d. —— Cellular Membrane —— *Phlegmons.*
3d. —— Diaphanous Membranes.
4th. —— Mucous Membranes.
5th. —— Muſcular Fibres.

As the firſt, or eryſipelatous inflammation is eſſentially a diſeaſe of the ſkin, a part differing in texture, &c. from any of the contents of the cranium; and as that ſpecies of it aſſuming any analogy, namely, the Sideratio, is a critical ſolution of the attendant fever; it does not appear to bear that affinity to our diſeaſe, which would juſtify its uſe for the purpoſe

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of illuſtration. Neither does the phlegmon, which is an inflammation of the cellular membrane; nor does the inflammation of pituitous membranes, whoſe texture differs materially from that of the meninges of the brain; nor in any meaſure does the inflammation of muſcular fibres ſeem applicable to this purpoſe.

I ſhall, therefore, confine my attention to the 3d ſpecies, the inflammation of Diaphanous Membranes; a diſeaſe which is at preſent more known by its termination, than by its ſymptoms. Under this name are comprehended all thoſe membranes poſſeſſing a firm hard texture, and a certain degree of tranſparency; ſuch as the pleura, peritonæum, pericardium, meninges of the brain, &c.

From the ſmall ſhare of ſenſibility which thoſe membranes, in their natural ſtate, ſeemed to enjoy, it had been too haſtily concluded, that they could not be the ſeat of inflammation or of acute pain. But it is unneceſſary to take up time in refuting an opinion, which is ſufficiently contradicted by the ſymptoms of the diſeaſe, and by the numerous diſſection of morbid bodies. The particular ſymptoms which characterize the inflammation of theſe membranes, are not yet fully aſcertained. That it is attended, however, with conſiderable pain, and with a high fever; and that the fever is in proportion to the inflammation and pain; appear to be facts ſubſtantiated by obſervation. But from thoſe diſeaſes with which it is liable to be confounded, it is particularly diſtinguiſhed by its termination.

Diaphanous

Diaphanous membranes, in conſequence of inflammation, become thickened, opaque, and ſloughy, with mucous or purulent exudations on their ſurface, ſometimes cauſing preternatural adheſions; at other times the cavities lined by thoſe membranes are found to contain a turbid ſerum, with filaments floating in it. Theſe phœnomena, jointly or ſeparately, occur in pleuriſy, peritonitis, &c. Beſides, diſſections abundantly prove, that the membranes of the brain, both dura and pia mater, are likewiſe ſubject to inflammation, connected frequently with fever; and that this inflammation terminates in a manner ſimilar to the others.

Amongſt the cauſes of inflammation peculiar to diaphanous membranes, the ſcrophulous virus is juſtly accounted one; and this virus is reckoned both by you and Dr. Percival to be a prediſpoſing cauſe to hydrocephalus internus Now, ſeeing that we have ſo powerful an agent, frequently preſent in the conſtitution, ready to produce the proximate cauſe, or that which conſtitutes the inflamed ſtate, may we not conclude, that an inflammation actually takes place in the brain, and that it is of the ſpecies which attacks diaphanous membranes?

This ſuppoſition, by turning to the hiſtory of hydrocephalus, is found to receive material ſupport from remarking ſome of the leading ſymptoms of the diſeaſe, as fever, headach, and other appearances indicating topical determination, eſpecially to the contents of the cranium. Nay further, I think that a contemplation of the ſymptoms, compared with

with diſſections and the inflammation of diaphanous membranes, juſtifies me in venturing a ſtep beyond you, and leads me to believe, with Dr. Withering, that hydrocephalus internus originates in inflammation, and that the water found in the ventricles of the brain after death is the conſequence, and not the cauſe of the diſorder.

The ſcrophulous taint being admitted a remote cauſe of the diſeaſe, as above noticed, does not furniſh a tenable objection againſt its originating from inflammation. It is true, Dr. Percival does not doubt, from ſeveral caſes which occurred within the circle of his obſervation, that the diſeaſe under enquiry is cauſed ſometimes by inflammation. Yet he believes, that it moſt frequently ariſes from glandular obſtruction, and either local or general plethora.

That a morbid condition in the lymphatick, and a plethorick ſtate in the ſanguiferous ſyſtem, either partial or total, may be indirect, or prediſpoſing cauſes of hydrocephalus, I do not mean to deny. But I cannot comprehend how the conglobate glands of the brain, if it contain any, or even the lymphatick veſſels which it is ſuppoſed to poſſeſs, can grow diſeaſed ſo as directly to occaſion the hydrocephalus internus. If any lymphatick glands or veſſels belong to the brain, and that theſe become obſtructed, would they not have been detected in this ſtate by diſſection? And, if they be obſtructed, would not the conſequent enlargement and impeded abſorption produce ſudden marks of oppreſſed brain, inſtead of

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that proceſſion of ſymptoms obſerved in genuine hydrocephalus? As to the influence of exterior lymphaticks, are not thoſe adjoining the head even long and grievouſly diſtempered, without immediately inducing any hydrocephalick affection?

Nor do I ſee in what manner a ſanguineous plethora, whether topical or general, will directly cauſe thoſe ſymptoms which indicate the preſence of hydrocephalus. If the plethora be topical, it would moſt probably occaſion what Hoffman calls a hæmorrhage in the brain, or ſanguineous apoplexy; which, as I have already ſhown, is a diſeaſe very different from that whereof we are expreſsly treating. For we may very well conceive, that a turgeſcence of blood in the brain, without a degree of tone in the veſſels to ſupport it, would be apt to terminate in extravaſation; and it is certain that, when the plethora is general, many more common outlets than thoſe within the cranium, are the vents through which it is diminiſhed. On the other hand, when thoſe veſſels poſſeſs a tonick power, accompanied with either ſtates of plethora, a moderate ſtimulus ſhall excite inflammation, which may end in atony and ſerous effuſion. And as to the operation of diſeaſed lymp aticks, it ſeems explained by a former obſervation, that is, the diſpoſition of the ſtrumous taint to produce an inflammatory diſtemperature in diaphanus membranes, and conſequently a ſimilar condition in thoſe of the brain. I therefore conclude, that glandular obſtruction and plethora of both ſorts, are not direct cauſes of hydrocephalus,

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but are to be reckoned merely thoſe tending to introduce that ſtate, which is more immediately productive of the diſorder.

To elucidate this opinion, I requeſt your attention to the phyſiology of the veſſels and fluids of the brain in thoſe peculiarly ſubject to this diſeaſe. The capacity and force of the heart, I obſerve, in proportion to the ſyſtem of veſſels, is greater at the beginning of life than at any afterperiod; at the ſame time a greater quantity of blood is contained in the arteries, proportionably to what is contained in the veins; and the veſſels of the head likewiſe receive a greater quantity of blood, in proportion to the reſt of the ſyſtem. — And in young perſons alſo, the lymphatick ſyſtem is fuller than in the old.

We have, then, force in the arterial ſyſtem, quantity of blood in the ſame ſyſtem, and determination to the veſſels of the head in thoſe periods of life in which the hydrocephalus evidently prevails. Beſides, that a plethorick ſtate is apt to produce inflammation, ſeems demonſtrated by the phœnomena apparent in active hœmorrhagy, in which not only this ſtate, but a ſanguine temperament are obſerved to take place. On theſe occaſions, before the blood flows, there are ſome ſymptoms of fulneſs and tenſion about the part from which it is to iſſue. Some redneſs, ſwelling, and ſenſe of heat are perceptible in ſuch parts as fall under view; and, in the internal parts, from which blood is to proceed,

there

there is a ſenſe of weight and heat; and in both caſes, various pains are felt in the adjoining parts.

When theſe ſymptoms have ſubſiſted for ſometime, pyrexia, or fever, ſupervenes; in which the pulſe is frequent, quick, full, and often hard; and blood drawn from a vein, upon its concreting, commonly preſents the gluten ſeparated, or the buffy coat formed, as in caſes of inflammation. Moreover, young people, even thoſe in a ſtate of childhood, are very liable to active hœmorrhagy from the noſe, which particularly proves the impetus to the carotids, or principal blood veſſels ſupplying the head. Hence I infer, that perſons, ſubject to hydrocephalus internus, are ſuch as inherit not only partial and general plenitude, but inflammatory diatheſis; and conſequently, that Dr. Percival's objections againſt a degree of inflammation being the immediate cauſe of the diſeaſe, are not as yet ſufficiently founded.

Perhaps what the Doctor calls a dropſical metaſtaſis may be adduced to corroborate the doctrine of inflammation. He tells us, that an affection of the brain, which appeared to be hydrocephalick, and probably originated in inflammation, was ſuddenly and completely relieved by the attack of an acute pain in the ſide, which terminated in a fatal abſceſs and hydrothorax. On the other hand, the ſtrongeſt ſymptoms of phthiſis, ſuch as coughs and ſtitches in the breaſt, he obſerved ceaſe almoſt entirely in a few days, and ſoon to be ſucceeded by ſigns of hydrocephalus,

drocephalus, viz. dilatation of the pupils and ſtrabiſmus. Theſe tranſlocations from one membrane to another ſimilar one, reciprocally from thoſe of the brain and thorax, which, we have ſeen, are both of the diaphanous kind, appear rather owing to a tranſlation of action, than a metaſtaſis of fluid. For it is not reaſonable to ſuppoſe that an effuſed fluid, eſpecially in the brain, could be ſo quickly tranſported; whereas we are certain that an inflammatory action is rapidly transferred from one poſition to another.

From theſe conſiderations it appears, that hydrocephalus internus may be eſſentially a ſpecies of inflammation connected with a plethorick ſtate, or with a ſcrophulous vitiation, or ſometimes with both. And now we may eaſily conceive why the ſymptoms differ, in many reſpects, from thoſe occaſioned by that which you repute the ſame cauſe, a turgeſcence of the veſſels in the head, ſubſiſting in *Phrenitis* and *Apoplexy*.

This concluſion is ſupported by collateral evidence drawn from the occurrence of anomalous phœnomena in thoſe very caſes of the diſeaſe, wherein it is ſuppoſed to proceed from the ſame cauſe—a watery collection in the cavities of the brain. For did a collection of this kind always take place, or were it the parent of the diſorder, would not the ſymptoms of compreſſed brain early or conſtantly ſhow themſelves in a ſtriking manner? That they do not early appear, in a great number of caſes, muſt be univerſally acknowledged; and, that they

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are not conſtantly preſent in every caſe, muſt be equally granted; becauſe it is certain, that the diſtemper has occurred, where thoſe ſymptoms have been wanting, even in its advanced ſtage.

The dilatation of the pupils, the ſquinting, the ſcreaming, have not appeared from beginning to end, yet the diſeaſe has been conſidered an hydrocephalus; and, on opening the head, the veſſels of the meninges have been found *red* with blood, the ventricles generally containing ſerum, but ſometimes entirely without it. Nay the very contrary of the leading pathognomonick ſymptom, dilatation of the pupils, has been obſerved to take place, as we find in a caſe, related by Mr. Hooper, in the firſt Volume of the Memoirs of the London Medical Society. In this inſtance, the pupils were *contracted*, and remained unaltered by different degrees of light falling on the eyes; yet, the head being opened, half a pint of clear water was found in the ventricles of the brain.

I have the honour to be, &c.

LETTER II.

SIR,

IF the nature of the real hydrocephalus internus be inflammatory, as I truſt the preceding Letter will manifeſt, your indications of cure are particularly well adapted to rebate or remove it. But Dr. Percival, although he commends your view of the diſeaſe, is inclined to aſcribe leſs to inflammation than you do, and adviſes much caution in the uſe of blood-letting, even in its firſt ſtage. "For," ſays he, "the veſſels of the brain ſeem quickly to loſe their tone by diſtention; and great torpor and debility of the whole ſyſtem ſucceed." Yet ſince he admits that diſtention exiſts, and thinks that it quickly diminiſhes the tone of the veſſels in the brain, why diſſuade from early blood-letting, which ſeems to be the moſt effectual means for obviating this diſtention? He might have obſerved, that, however ſtrongly you ſuſpect a congeſtion of blood in the brain to be the cauſe of the ſymptoms, you alſo conſider gene-

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ral and copious bleeding as a hazardous expedient; that you prefer local evacuation by means of leeches, or cupping and ſcarifying; and that you do not proceed to the opening of the jugular vein or temporal artery, except it can be done with apparent ſafety.

Your practical aim here, according to my view of the diſeaſe, is judiciouſly directed; and is not only admiſſible, but I believe in ſome degree eligible, even in an advanced ſtage of the diſorder. I likewiſe concur in your propoſal of recommending, on the authority of Morgagni, deep inciſions to be made in the occipital veins. In one caſe, a boy ſix years old, Dr. Withering, agreeably to his belief of an inflammatory ſtate, directed early in the diſeaſe ſix ounces of blood to be taken from the arm, and the temporal artery to be opened the ſucceeding day. In five days after, he gave an infuſion of folia digitalis; the effect of which was an increaſed ſecretion of urine; and the patient ſoon recovered.

By the bye — you do not appear to have been ſo fortunate in your trials of the digitalis, though its diuretick qualities fully anſwered your expectations. With this intention, however, you believe that it had not been preſcribed, until it was adminiſtered under your immediate inſpection to a patient, in the year, 1786. But give me leave to refer you to Dr. Withering's Account of the Foxglove, where you will learn, that he uſed this plant in hydrocephalus ſix years before you did; and this Account was publiſhed a year before your caſe occurred, but

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did not, perhaps, fall into your hands. That he preſcribed it on principles ſimilar to yours, cannot be doubted; becauſe the trial was made in the early period of his experiments, when its qualities as a diuretick were the leading objects of his attention. Accordingly we find him, in treating a patient the ſucceeding year, expreſsly mention that he directed the digitalis in conſequence of his judging the latter ſtage of the caſe to be due to the effect of a watery effuſion in the brain.

The confidence which you place in the uſe of bliſters applied to the head, and in the efficacy of a ſubſequent drain, is in my opinion well founded. As to their mode of operation, I would conſider it ſimilar to that in pleuriſy; and, ſuppoſing the primary diſpoſition of hydrocephalus internus to be phlogiſtick, I ſhould hope that their effects, by a ſtudious attention, might be rendered comparatively ſalutary. If they ſo prove, they will probably operate, as you obſerve, by giving greater activity to the external veſſels of the cranium, and checking the flow of blood into thoſe more deeply ſeated; or, by diminiſhing the volume of fluids circulating in the cranium, they may leſſen the degree of preſſure on the brain, which muſt take place where the veſſels are unuſually turgid.

Whatever may be their mode of operation, it is certain that they have been freely and advantageouſly employed by many eminent practitioners. Doctor Ambroſe Dawſon, in particular, adviſes to

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cover the whole head with a bliſter; to apply bliſters behind the ears; and to keep them all open. Although he lays much ſtreſs on opiates, he truſts conſiderably to bliſters, which he repeatedly uſed in two caſes that terminated ſucceſsfully. To ſhake our faith in this character of bliſters, Dr. Percival ſoon after tells us that Dr. Dawſon informed him, that his notes were not ſufficiently minute to aſcertain the caſes to be of the malady in queſtion. Beſides, he at the ſame time avers, that he never ſaw any inſtance in which they could be ſaid to produce other than palliative effects; yet ſome years afterwards, in 1791, he ſeems to think favourably of them, eſpecially when applied to the head for the purpoſe of depletions. He goes farther: "Under every circumſtance of the diſeaſe," ſays he, "bliſters are expedient; and the application of them ſhould be renewed as often as can be done without exciting ſtrangury."

That bliſters, as above ſtated, act through the medium of a vaſcular connexion between the external and internal parts of the head, is an opinion which can be ſtrongly exemplified. To ſay nothing of anatomical demonſtration, we have a ſtriking evidence of this connexion in a caſe related by Morgagni. A moroſe pedagogue, ſeizing a country boy by the hair on the crown of the head, ſhook and dragged him violently. The reſult was, that the boy became immediately apoplectick, and died the following night. The pericranium on the crown of the head was found torn from the perioſteum; a

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conſiderable quantity of blood lay on the dura mater; and, the veſſels connecting this membrane to the parts beneath it being ruptured, blood was effuſed within the lobes of the cerebrum, and had penetrated quite down into the ventricles. Whilſt this inſtance of barbarity confirms the above mentioned connexion, it ſerves to enliven our hopes of the advantages to be derived from external applications to the head, in the malady we are endeavouring to inveſtigate.

From one external application to the head, which you have noticed, I mean that of cold, conſiderable benefit would probably enſue. As no caſe occurred to you in which it was employed, you confeſs that you are led to mention it rather from a wiſh to have it tried, than any experience of its good effects. But has it not been tried? To ſhow that it has, give me leave again to refer you to the ſame book of Dr. Withering, by which you will perceive, that this attentive practitioner did not neglect the application of cold in a powerful manner, that is, by daſhing ſix pints of cold water upon the head ſhaven, and repeating it every fourth hour. Had you met with this book, I preſume, that you would have availed yourſelf of ſuch good authority to ſupport this indication of cure. And why you ſhould not meet with it; or, if it did by chance come in your way, why you do not take any notice of it; to me ſeem rather extraordinary problems — eſpecially when I reflect on the converſation that paſſed between you and the author, in 1779, as before quoted; and recol-

lect that his book appeared five years before your laſt publication. That you never at leaſt *heard* of the celebrated Account of the Foxglove, in which ſo honourable mention is made of your name, it would be prepoſterous to ſuppoſe. And on hearing of it, who, in the ſame caſe, would not have been impatient to have got it into his poſſeſſion?—Be this as it may, the application of cold to the head, the expedient under conſideration, ſhould probably be confined to the early ſtage of the diſorder, with a view to moderate inflammatory diſpoſition; becauſe in the more advanced periods, or when mercury is adminiſtered, it might either interfere with this remedy, or rebuke the ſweatings of the head, which have been found very advantageous.

Your mode of regulating the adminiſtration of catharticks appears ſo judicious, that I ſhould not make any remarks concerning their uſe, were they not preferred by Dr. Percival before blood-letting, as means (along with bliſters) of obtaining depletion of the head. With you he recommends mercurial purgatives; but having adviſed them to be *ſtimulating*, it may be inferred that he has not been influenced by your neceſſary precautions againſt ſuch doſes, as would excite nauſea and vomiting. For a ſtimulating purgative muſt either be in ſuch quantity, or of ſuch quality, as would in many caſes, eſpecially where the ſtomach is ſo frequently diſordered, prove actually emetick—an effect which, you properly obſerve, would haſten conſiderably the

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progreſs of the diſeaſe; and I would add, an effect which muſt be highly pernicious at its commencement—a ſuggeſtion which, indeed, you likewiſe offer, when ſpeaking of the exhibition of vomits.

Touching vomits, we may here remark, that ſeveral years ago it was ſtarted as a queſtion, Whether they be or be not, ſafe medicines in febrile diſorders *caput petentes?* Applying the queſtion to hydrocephalus internus, which I reckon of a febrile nature, and moſt certainly *caput petens*, I would anſwer, That here emeticks are in my opinion injudicious remedies, eſpecially in ſtrong doſes at the beginning of the malady. And I aſk, would you give them at this period, or indeed at any other, upon the principle of promoting abſorption by the general concuſſions ariſing from their operation?

But to return.—On purgatives, when they act merely as ſuch, ſome eminent practitioners have placed conſiderable reliance. The late Dr. Macbride, diſtinguiſhed both for ſkill and talents, attributes his ſucceſs in ſome caſes to purging, and conſiders it the rational method of proceeding; which opinion he ſtrengthens by reporting an inſtance, terminating happily by thoſe means, under the management of Dr. Haliday of Belfaſt, a phyſician deſervedly high in the eſtimation of the publick. But to me it appears, that in attempting the cure of hydrocephalus by catharticks as principal remedies, they ſhould in this view be confined to the early ſtage of the complaint; and, if then unattended

with advantage, they ought not to be carried to the more advanced ſtate, except in the guarded manner which you recommend.

Drains from the head, made by ſetons or iſſues, as you properly obſerve, being dilatory in their operation, are not appropriable as cures to hydrocephalus internus, in the uſual bounds of its courſe. But in a lingering, or chronick caſe, there may be room for their application; and as prophylacticks they may be introduced with ſtrong expectations of advantage. For inſtance, according to your ſuggeſtion, in a family where one child or more ſhall have already died, affected by the uſual ſymptoms of the diſorder; if on any ſubſequent occaſion, ſome other child ſhould exhibit morbid phænomena indicating a tendency to a ſimilar ſtate, "ſetons or iſſues may have time to operate, and therefore ought to be recommended." And where no family propenſity to the diſeaſe can be traced, if ſymptoms appear which threaten future miſchief, the remedies, whoſe influence will be moſt permanent, namely, ſetons or iſſues, are perhaps beſt adapted to the relief or preſervation of the patient.

With a ſimilar view, viz. to obviate a morbid acceſſion of blood to the head, might I venture to name compreſſion of the carotids? This queſtion is ſuggeſted by finding that Dr. Parry actually moderated the ſymptoms of phrenitis and mania, by preſſure on thoſe veſſels in the neck. Where indications of turgeſcence and other propenſities are manifeſt,

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would it do any harm to preſs on the carotids a certain length of time daily? To prevent injury in the trial of this expedient, a ſpring machine might be contrived to compreſs the arteries, without materially affecting the veins or lymphatick veſſels.

But here it may be aſked, would the degree and repetition of the preſſure, requiſite to produce the deſired effect, be in danger of cauſing too great an atomy in the brain, and thus, by frequently ſuſpending the ſtimulus of blood, lay the foundation for greater ſerous effuſion? Or, in plethorick habits and the older ſubjects, would the neceſſary compreſſion, by interrupting the circulation, tend to promote apoplexy? Or, what other bad conſequence might be apprehended from this project? Yet, however hypothetical it may appear, I am againſt ſtifling a ſingle idea that has for its object even the mitigation of a diſeaſe, which ſo often baffles the ſkill of the moſt experienced phyſicians.

Your advice to preſerve the patient's head in an eaſy elevation whilſt in bed, is a good regulation in the courſe of the cure; and the ſame idea extended, might prove very ſerviceable in a plan of prevention. Several years ago, ſome ſtudents, who were much afflicted with headachs, ſore eyes, and ſore throats, applied to the celebrated Winſlow for his aſſiſtance. As their complaints did not yield either to bleeding, or the beſt adapted medicines, this diſtinguiſhed phyſician and anatomiſt made ſome inquiries reſpecting their uſual mode of life; and

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he found, that they had a cuſtom of lying low in bed with their heads beneath the pillow. Upon this diſcovery, he enjoined a change in their manner of lying; they obeyed him; and they ſoon got rid of their maladies.

The ſame idea ſtruck Dr. Lettſom; and he has applied it to the point under conſideration. With me he maintains, that hydrocephalus generally prevails in children; owing to the great laxity of their ſolids, and the larger proportion of their fluids: And he aſks, May not the uſual mode of nurſing likewiſe contribute to its frequency? Thoſe are in general reputed the beſt nurſes, who ſhake and toſs their little charges with the greateſt vehemence, which, conſidering the delicate ſubjects upon whom ſuch gymnaſticks are performed, may be productive of more harm than good. The cuſtom of permitting children to ſleep on the lap, with the head ſometimes hanging down for hours, would in grown people occaſion painful affections of it; and why not be hurtful to infants, whoſe brain is more vaſcular?

But it is not during the period of nurſing only that children are expoſed to theſe dangers; for when older and more at liberty, regardleſs of the conſequences, they are apt to place themſelves in very improper attitudes; ſometimes ſtanding on their heads, at others ſtriving who ſhall hang the longeſt over rails with their heads downwards; beſides the violent exertions of running, leaping, &c. to which

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they are naturally inclined. Inſtances have occurred, where even parents, ignorant no doubt of the riſk, but indulgent to their little fondlings, have miniſtered to amuſements of this pernicious kind, which have been followed by hydrocephalus in its moſt direful form. Should not then ſuch calamitous events ſerve as cautions againſt thoſe 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?

Leaving to the ſucceeding part of this Letter my intended remarks on Pediluvium, with ſome obſervations upon other articles of cure, I here proceed to examine (under impreſſions ſimilar to yours) the merits of the celebrated remedy, Mercury — a remedy held in ſuch high eſtimation by certain practitioners, that they deem it almoſt a ſpecifick.

The firſt caſe, in the year, 1775, in which this Medicine was employed by Dr. Dobſon, appears to be one of the moſt favourable to its reputation that I have had an opportunity of inſpecting. An Emetick, a few grains of Calomel, a little Tartariſed Antimony, a Pediluvium, and one Bliſter, being adminiſtered without relief, the mercurial courſe was commenced, and followed by the happieſt effects— an abatement of the diſeaſe in forty-eight hours, and afterwards a perfect recovery.

The next caſe, that of a child ſeven months old, treated by Dr. Percival, in the year, 1777, had not

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an equally fortunate termination. Only a temporary advantage having been obtained from a Bliſter to the back, an Emetick, and laxative doſes of Magneſia, the mercurial plan was adopted, in conſequence of information from Dr. Dobſon of his ſucceſs in the preceding example. In the ſpace of a week, one hundred and ten grains of the milder mercurial ointment, which contain about twenty-two grains of mercury, were conſumed in the uſual way of friction; and it was conjectured, that a portion of two grains of calomel, which had been given ſeparately as purgatives, might alſo have been carried into the circulation.

Combining other circumſtances with this ſtatement reſpecting the mercury, ſome doubts ariſe of its effects on the ſalivary organs, and conſequently of its real uſefulneſs. We are told, that the child's mouth, which had been dry, became moiſt in the courſe of twenty-four hours, and often filled with ſaliva. But by the friction of two ſcruples of the ointment, which contain about eight grains of crude mercury, four of which might be ſlowly abſorbed, is it uſual for marks of ſalivation to appear in ſo ſhort a ſpace of time, and particularly in a ſucking infant? The author himſelf ſays, the tongue only *appears* ſwoln; although it and the gums are ſore and moiſt, yet the breath is not offenſive; and the ſymptoms of ſalivation are not violent. As the patient laboured under a ſevere fit of dentition, and a ſlow irregular fever, from theſe might ariſe the dry ſtate of the mouth, and affection of the

tongue.

tongue. When the irritation was diminiſhed by the Bliſters, a moiſture in the mouth, and even a ſlavering, might enſue, which would produce the apparent ſoreneſs in the gums and tongue, as frequently happens in thoſe caſes of exaſperated dentition. Beſides, experience ſhows that a miſtake might have ariſen with reſpect to the cauſe of theſe circumſtances, and occaſion a deception as to the ſalivating effects of the mercurials. The mouth has been obſerved to grow moiſt and fill with frothy ſaliva ſome days before death, at the age of four or five years, when the diſcharge could not be aſcribed to the excitement of the ſalivary glands by teething. And we may take into account the remarkable difficulty with which hydrocephalick ſubjects are affected by mercury, owing to the peculiar torpor and inactivity of their abſorbent ſyſtem.

However juſt theſe ſuſpicions may appear, there are grounds for believing with Dr. Simmons, that the mitigation of the ſymptoms in this caſe may be aſcribed rather to the effect of the bliſters, than to any beneficial operation of the mercury. Nay he thinks, that the mercury, ſuppoſing that in ſo ſmall a portion it proceeded the length of affecting the mouth in any degree, was in ſuch procedure even prejudicial. For he has remarked, that, in infancy, when the general irritability is great, particular organs are not ſo readily and independently affected by their peculiar ſtimuli, as they are in advanced life, when the general irritability is diminiſhed. Hence a ſalivation from the uſe of mercury, in very

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young ſubjects, has ſometimes been preceded by convulſions; whilſt, in the generality of adults, it is attended with no other ſymptoms than what the ſtate of the mouth may naturally be expected to produce in the reſt of the ſyſtem. Whether, then, it is aſked, if the mercury in the preſent inſtance had any effect, might it not have added to the irritation of the gums, and thereby have contributed to keep up the convulſions, under which the child expired?

But it is not probable that, in the caſe under review, the mercury did act by ſtimulating the ſalivary glands, and thereby leſſening the fluid diſcharges in the ventricles, if any had been elſewhere than on the ſurface of the brain; becauſe the flow of ſaliva does not appear to have been ſufficient for the purpoſe; and the copious diſcharge from the Bliſters, which were applied near the ſeat of the diſeaſe, would be equivalent to produce ſuch an effect with more certainty. Beſides, might not the diminution of the tumour of the head, which was alſo ſoon manifeſt, be due in part to the uſe of the brandy rags and of the emetick, conſpiring to promote abſorption, the former by their ſtimulus, and the latter by its concuſſion?

Whether theſe animadverſions be well founded, or not, the motives may be aſſigned, which in all probability actuated the parties on the occaſion. Commencing a new purſuit of which a perſon has adopted and cheriſhed a fond idea, it is natural, as

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teſtified by Dr. Percival, to be partial to any circumſtance that ſeems propitious to the favourite opinion; and on the other hand, it is equally natural, as done by Dr. Simmons, to view ſuch opinion with circumſpection, to examine it with critical exactneſs, and to receive or reject it according to the reſult of the ſcrutiny.—The proceedings on both ſides are uſeful to ſcience. And with a ſimilar intent, that of contributing to the ſcience of Medicine, it may be worth while to try if medical records could have furniſhed Dr. Dobſon with hints, which might have led him to the introduction of Mercury into the cure of hydrocephalus.

That mercury was uſed in certain febrile diſeaſes of children, more than a century ago, we learn from Harris. Happening to converſe with an eminent phyſician concerning the ſublimation and ſweetening of this mineral, he aſſured our author that he had a hundred times relieved boys in fevers, ſeized with a *lethargick dulneſs* and *ſleepineſs*, by the uſe of Calomel. This remedy, it is true, was not preſcribed by the eminent phyſician here alluded to, on the principles upon which it is now employed in hydrocephalus internus. He gave it merely with a view to expel the matter which foſters worms in the inteſtines, by which he ſuppoſed the functions of the brain were diſturbed. But it is remarkable, that the caſes, in which it was uſeful, were thoſe wherein affections of the head, demonſtrative of hydrocephalus, were prominent appearances.

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The quantity of Calomel, which children will bear as a purgative, is well known to modern practitioners, who preſcribe it in conſiderable doſes. To adminiſter it largely with this intention, is not a new practice; for Sir Theod. Mayerne, a hundred and fifty years ago, beſtowed particular encomiums on this preparation, given to the extent of twenty grains at a time. The preſcription of ſmall doſes, in which it was ordered for many years, ſeems to have proceeded chiefly from its being often ill prepared by the chemiſt, and badly levigated by the apothecary, which made it a harſh medicine, and therefore practical men were deterred from uſing it with due freedom.

Mercury has been long employed not only as a local, but as a general remedy. More than fifty years have paſſed ſince it was highly commended by Dr. Gilchriſt in inflammatory complaints and fevers. He affirms, that " in a genuine, exquiſite, topical inflammation, mercury, as a purge and attenuant, is beyond every thing. In univerſal inflammation, there is not, perhaps, after bleeding, a more powerful antiphlogiſtick than cinnabar, camphire, and nitre. Cinnabar is in great credit with ſome in ſerous and lymphatick ſtagnations, not yet *extra vaſa*." And, if a mild preparation of mercury be freely uſed in nervous diſeaſes, admitting parallel indications with thoſe in nervous fever, he ſaw no good reaſon why it might not be uſed in common fever alſo.

But mercury has been uſed for a conſiderable time with a view ſtill nearer to that with which Dr. Dobſon, in a ſtate of apprehenſion and perplexity, flew to it for ſuccour in hydrocephalus. In the memoirs of the Pariſian Academy, for inſtance, we find that Du Verney ſucceeded in curing an abdominal dropſy, above ninety years ago, by raiſing a gentle ſalivation, after the operation of tapping had been performed. And, combined with diureticks, it has long been a favourite remedy with ſeveral practitioners in that diſorder, before the evacuation of the water, eſpecially where the viſcera have been thought indurated. So that from theſe obſervations, it may be inferred, that Dr. Dobſon, a man of erudition, who carefully conſidered his famous caſe of hydrocephalus, moſt probably recollected thoſe facts reſpecting Mercury, and derived from them ſanction and ſupport in commencing and purſuing its application. At leaſt it is apparent, that a perſon of reading and reflection might have drawn from thoſe ſources very good grounds of encouragement for the employment of Mercury in this diſeaſe.

Be this as it may, it appears that Dr. Percival, unſhaken by the ſtrictures paſſed on his firſt caſe, perſevered in his opinion of the advantages of Mercury; and had it ſtrengthened ſoon afterwards in the caſe of his own child, a girl, above three years old, who ſhowed ſigns of amendment in forty-eight hours from its uſe, and in ſix days her recovery was perfected. A trial ſo fortunate, where the parties were thus tenderly circumſtanced, muſt beyond

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doubt infuſe a ſtrong partiality in favour of the Medicine to which the cure is aſcribed. We accordingly find the Doctor, in the year, 1791, ſteady to his early attachment, and a powerful advocate for the ſuperior merits of the mercurial plan.

In confirmation of its preference, he reports that of twenty-ſix caſes, the number that he particularly examined, eleven of the patients recovered, and fifteen died; in ſeven of the recoveries mercury was employed, and other remedies in the remaining four; in four caſes of the deaths mercurials were uſed, and other remedies in eleven. Theſe facts, drawn from authentick records, he conſiders as affording remarkable proofs of the pre-eminence of a mercurial courſe; and in this concluſion he is confirmed by his own experience. At the ſame time he acknowledges, that it is far from being a certain remedy; but reflecting on the almoſt conſtant fatality of the diſorder, under every antecedent method of cure, he thinks it ſhould be embraced as a valuable acquiſition to the healing art.

Yet in the recital of one of the earlieſt caſes in which mercury had been employed, our author apprehends that he too much diſparaged former modes of treatment, and too haſtily declared his ſole and excluſive truſt in the internal and external uſe of that remedy. Perceiving the errour of this intire reliance, he now confeſſes that there are ſeveral medicinal aids, which, however inſufficient in themſelves to conquer this formidable diſeaſe, may

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contribute to ſo happy an event by mitigating pain and ſpaſm, by increaſing the ſerous diſcharges of the body, and by doing even that for which his favourite remedy is chiefly ſelected, namely, promoting abſorption.

With theſe views he now generally preſcribes either opium, muſk, ammonia, calcined zinc, ſquills, or bliſters, in conjunction with the mercurial courſe, with which, he thinks, that they perfectly coincide. In purſuing this enlarged plan, he has experienced fewer diſappointments than formerly, and has derived ſatisfaction under it, from the conſciouſneſs of not being chargeable with neglect or omiſſion. Yet other practitioners, leſs fortunate in their trials with mercury than this juſtly-eſteemed phyſician, have not regarded it with the ſame degree of partiality.

From your detail of nine caſes, in which it was adminiſtered, I perfectly agree with you, that even the liberal uſe of mercury cannot be depended on as a ſource of relief. Although we find that thoſe of your patients who recovered did uſe this remedy in the form of calomel, yet the quantity, as you obſerve, was ſo inconſiderable, when compared with the aſtoniſhing doſes which were taken without the ſmalleſt effect by others, that it appears more reaſonable to attribute their cure chiefly to the diſcharge procured and maintained by bliſters.

But let us ſee what a critical examination of more numerous facts will produce: By a review

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of the forty-eight caſes before noted, occurring ſince the introduction of mercury as a ſpecial remedy, I perceive that twenty-eight patients died, and twenty recovered. In twenty-two of the deaths mercurials were employed; in ſeventeen of theſe twenty-two, it was uſed rather freely; and in ſome of them it very ſoon excited a copious ſpitting; but in the four remaining fatal caſes, it formed no part of the curative ſyſtem.

Of the twenty fortunate caſes mercury was uſed in ſeventeen, in the moſt of theſe freely, and in ſome to the extent of ſalivation; but ſigns of amendment appeared ſometimes too early to give it the whole credit of curing, as other means eſteemed powerful were in general liberally combined in the treatment; and ſometimes it would have been ineffectual, or even pernicious, had not tonick medicines reſcued the patients from a ſinking debility. Moreover, in the whole ſeventeen caſes, purging, bliſtering, &c. were either premiſed, adjoined, or uſed poſterior to mercury; in ſome of them, inſtead of its characteriſtick action, it operated merely by ſtool, urine, or perſpiration, which can be obtained without it; and in ſome, as in your examples, it was taken in too ſmall quantity to produce a medicinal effect.

Amongſt the remaining three recoveries, I find that one was accompliſhed by the vapour bath, a ſecond by bleeding and purging, and a third by bliſters, leeches, the warm bath, &c. Beſides, two ſtated

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as recoveries ſeem rather doubtful, namely, your ſoldier, and the diſpenſary child treated by Dr. Armſtrong; concerning the iſſue of another caſe, mentioned by Dr. Percival, we are left in the dark; and ſome patients lived to lament the total loſs of their eye-ſight.

More cures, it is true, have been performed ſince the introduction of Mercurials, than appear to have been effected in preceding times. But this comparative ſucceſs, as deducible from the above ſurvey, may, in a great meaſure, be aſcribed to increaſed attention to the phœnomena of the diſeaſe; to a more aſſiduous inveſtigation of its nature; and to an accumulation of caſes from greater ſkill in the diagnoſtick. Hence a more judicious line of practice has been followed, as well with regard to the adjuſtment of other remedies, as to the preſcription of mercury. At the ſame time, we ſhould not forget, that the number of patients who died, was greater than the number who recovered, under its adminiſtration, in the proportion of twenty-two to twenty. Yet, as it is certain that this mineral has ſometimes been of ſervice, it ſhould be always employed, but not ſo haſtily and largely, as you, notwithſtanding your doubts of its reputation, ſeem freely to adviſe. In my opinion, its uſe ought to be commenced with deliberation, purſued with conſtancy, and inſpected with warineſs.

From an inſtance in the foregoing ſurvey it appears, that a remedy, the VAPOUR BATH, which you

have not touched upon, merits conſideration. The caſe, in which it was ſucceſsfully employed, was treated by Dr. Hunter of York. The ſubject, a child in the third year of its age, being afflicted with the diſeaſe in an alarming degree, and various remedies having been unſucceſsfully tried, the Vapour Bath was at laſt recommended; not from any juſt reaſoning on the caſe, but rather from a deſire to cultivate a forlorn hope. The patient was therefore placed in a fumigating chair; and the operation was continued for the ſpace of ſeven minutes. As the child bore it well, and ſeemed in ſome degree better on the ſucceeding day, our practitioner was encouraged to perſiſt in the fumigation. He accordingly adviſed it to be repeated every other day; and, to his utter aſtoniſhment, at the expiration of twenty days, every ſymptom was diminiſhed. The only medicine preſcribed during the courſe of fumigation, were ſeven grains of Peruvian Bark twice a day, with a view to increaſe abſorption.

To explain the operation of the Vapour Bath, he obſerves, that, when impregnated with aromaticks, a temporary fever is brought on, and a copious perſpiration is produced; which latter uſually terminates, as ſoon as the patient is dreſſed. From theſe appearances, he thinks it may be rationally inferred, that it effectuates the abſorption of water preternaturally collected in the ventricles of the brain. Or, as Dr. Percival thinks, who propoſed this ſort of bath to a patient, in 1788, by warming the whole habit, it may give energy to the nervous and lymphatick

phatick ſyſtems. On theſe grounds it does not appear admiſſible in the early ſtage of the complaint, leſt by ſtimulating the ſanguiferous veſſels, it ſhould add to the inflammatory condition of the meninges.

The warm bath, though not ſingly curative, has we find been manifeſtly ſerviceable as a ſubſidiary means. Like the vapour bath, its ſtimulus might be hurtful in the firſt ſtage of the diſorder; but in the more advanced ſtate, yet before the ſtrength be too much exhauſted for its uſe, the warm bath, by ſoothing pain, relaxing ſpaſm, and rendering the ſkin perſpirable, may turn out advantageous. Where the general bath is not eligible, the partial one, or Pedilave, which you adviſe for very deſirable purpoſes, ought not to be neglected; or perhaps it ſhould not be omitted in any inſtance; ſince, as you juſtly obſerve, the ſimilarity which appears to exiſt between phrenitis and hydrocephalus internus, favours the idea of attempting to attack the proximate cauſe in the one caſe, by the ſame means that have ſometimes been effectual in the treatment of the other. —— But here give me leave to interpoſe a remark, namely, That it is difficult to comprehend how a diſeaſe can reſemble phrenitis, if it be a ſpecies of apoplexy, as you conſider internal hydrocephalus.

Another meaſure, which is not compriſed in your Methodus Medendi, is that of Errhines. This is an omiſſion, which I would not expect to diſcover in a treatiſe on a diſeaſe, that is ſuppoſed

to bear an analogy to apoplexy, in which theſe applications have been long recommended. Not only in apoplexy, but in hydrocephalus, have they been preſcribed; and we accordingly find an excellent judge of the ſubject write thus: "Sternutatories having ſometimes proved beneficial in hydrocephalick affections, I therefore ſuggeſted the uſe of them in the preſent caſe." This was a long-protracted and very devious caſe; but whether theſe remedies were applied, or not, the writer, Dr. Percival, does not inform us.

To me it appears, that, before aſſuming the uſe of Errhines on this occaſion, precautionary conſiderations are very neceſſary: Our ſubjects are tender, irritable, and affected with plethora of the head, the particular part on which theſe medicines operate, and to which they give ſuch a degree of commotion, as would, no doubt, prove highly pernicious in the incipient ſtage of the diſeaſe. Nay I am not clear, that they are perfectly ſafe in the more advanced periods, when vaſcular repletion may be diminiſhed, and ſerous effuſion on the approach, or in any degree exiſting. For I apprehend, that the ſhock of ſneezing, as well as the agitation of vomiting, if by chance eventually harmleſs, would not promote abſorption in the advanced torpid ſtate, and would be a vexatious experiment to the patient, to whom the ſmalleſt motion of the head is generally ſo great an annoyance.

Stil

Still another remedy, omitted in your curative ſcheme, remains for our conſideration :——I mean OPIUM. Taking the hint, perhaps, from the fore-mentioned practice of Dr. Gilchriſt, this medicine, combined with mercury, was above thirty years ago ſucceſsfully employed againſt inflammation of the liver, particularly that occurring in the Eaſt Indies. The ſucceſs attending the uſe of this compoſition being communicated by a friend to Dr. Hamilton of Lynn Regis, he with equal efficacy transferred its application to other inflammatory diſorders. The benefit obtained by the adminiſtration of calomel and opium in peripneumony, the firſt ſubject of trial, filled him with aſtoniſhment.

By theſe medicines he has known many a life ſaved in the ſymptomatick variolous, and morbillous peripneumony; he never ſaw any remedies afford ſo certain and ſpeedy relief in obſtinate, dry, catarrhous coughs; and the ſame means have proved equally efficacious in pleuriſies. But the moſt extraordinary and early alleviation, that he ever obſerved reſulting from calomel and opium, took place in phrenitis and paraphrenitis, inflammation of the brain and of the midriff, which was repeatedly experienced in a great number of caſes; and ſo numerous and remarkable were the advantages derived from them, that he terms the compoſition, a *noble* medicine. To this ſpecial character of calomel and opium I can bear decided teſtimony, as I have preſcribed them in pleuritick diſeaſes, in which the ſtitches were piercing, and found them produce the moſt unequivocal

equivocal benefit—Dr. Hamilton's preſcription is, a combination of tartariſed antimony, camphire, and opium; but he always thought the latter of the moſt eſſential ſervice, by relieving that extremely haraſsing ſymptom, pain.

Introduced into notice by the ſame Dr. Gilchriſt, about the year 1735, opium, in moderate doſes, was ſtill more purely adminiſtered, at leaſt without ſuch active conjuncts as mercury and antimony, in fevers termed nervous, even at their beginning, and with ſignal advantage. When the diſorder ſeizes with greater ſigns of acuteneſs or inflammation, a gentle opiate, given in ſome ſimple Julap, he aſſures us, will have a happy effect to allay the overbearing ſymptoms. He alſo concurs in opinion with his correſpondent, Dr. Stevenſon, in thinking that opiates may be ſafely adminiſtered to promote an expected criſis; and from him we likewiſe learn, that others ſpoke of the incredible ſucceſs attending the uſe of opiates in fevers of a bad kind.

After thoſe proſperous courſes of practice, by an eaſy analogy, opium, as well as mercury, might be confidently introduced into the cure of hydrocephalus internus. Accordingly we find ſeveral practitioners making it a material remedy in their method of treatment. In three ſucceſsful caſes, Dr. Dawſon, although an admirer of bliſters, ſeems to aſcribe the cures to aromatized opium, in the old form of Theriaca Andromachi. Several other practitioners have preſcribed opium; and entertain favourable

vourable opinions of its effects. In a caſe, which ended fortunately, wherein digitalis, opium, and calomel had been employed, Dr. Percival aſcribes the ſalutary change rather to the opium than to the fox-glove, but to the opium only as an auxiliary to the powerful action of the mercury, which had been previouſly and largely uſed in the way of unction. And, with this enlightened phyſician I agree, that "when the pains are very acute, opiates, in large and repeated doſes, are eſſential to the cure; but if the patient be in a ſtate of *coma*, they are obviouſly improper, and muſk, combined with ſalt of hartſhorn, ſhould be freely adminiſtered."

Before terminating this Letter, it may not be amiſs to aid recollection by recapitulating the fundamental points of the general ſubject. From a retroſpective view, then, I here conclude, that it appears nearly demonſtrated, on the baſis of facts and obſervations, that the acute ſpecies of hydrocephalus is an inflammatory diſeaſe; that the watery effuſion is a conſequence of the inflammatory ſtate; and, therefore, that our endeavours to effect a cure ſhould be directed againſt this ſtate — early by all means — or otherwiſe, *ſero medicina paratur.*

Nay I will aſk, can a cure be accompliſhed after ſerum has actually been effuſed into the ventricles of the brain? Who, amongſt our numerous and expert anatomiſts, has manifeſtly pointed out in this organ the exiſtence of that ſyſtem of veſſels, the abſorbents, whoſe office it is to imbibe and carry off the

the peccant fluid? By what other conduits could this fluid be tranſported from thoſe cavities? Until I obtain ſatisfactory ſolutions of theſe queries, I ſhall remain firmly perſuaded, that there is not any ſuch diſeaſe, as an internal hydrocephalus, *originating* from water ſhed into the ventricles of the brain; and that, when water has been apparently lodged in them, and a cure in thoſe caſes wrought, proofs are wanting to ſhow that the fluid was removed by adequate conveyances.

Is it becauſe lymphaticks have been ſometimes noticed about certain arterial and venous paſſages in the head; is it becauſe ſwelled lymphaticks in the neck have been ſuppoſed to ariſe from diſeaſes of the encephalon; is it becauſe ſome have aſſerted, that water has been thence abſorbed—is it from theſe equivocal appearances and ſuppoſitions, that we are to credit the exiſtence of abſorbents in this organ? Notwithſtanding ſuch uncertainty, Dr. Warren, of Taunton, alleges there can be little doubt, that an abſorption really takes place in the brain; which proceſs, if not performed by thoſe veſſels, he thinks is probably brought to paſs by the extremities of the red veins. Some great anatomiſts, it is true, have diſcourſed of abſorbing veins; but later reſearches evince, that this opinion is erroneous, and abſorption by red veins is now peremptorily denied.

Although in this point I cannot concur with the above judicious phyſician, yet in others more important, I am happy to obſerve a coincidence of our opinions.

opinions. He ſuppoſes, indeed, that the hydrocephalus internus may, at times, be founded on hydropick tendency; but he is certain, that the frequent cauſe of the diſeaſe is inflammation, of which effuſion is the conſequence. And in ſupport of this doctrine, he tells us that he has obſerved, "that, in children of a puny and delicate conſtitution, the diſorder is generally much ſlower and leſs violent in its approach, than in thoſe of firmer and more robuſt habits, although the unhappy victims of it have commonly been children of the rudeſt health, and of the moſt active and lively diſpoſitions."

As to the cure of the diſeaſe, he is convinced, with me, that the indiſcriminate uſe of mercury is extremely injurious, and hopes it will in future be employed with more circumſpection. At the ſame time, conſidering the eminent men who have recommended it, he does not wiſh, in certain circumſtances, to diſcountenance its application. In fact, he had no reaſon to ſpeak favourably of it; for in ten caſes, which came under his care, and in which the mercurial treatment was purſued, the event proved fatal. Had theſe ten unfortunate caſes, with many others of the like kind, been included (which they were not) in my comparative view, the number of unſucceſsful examples would have exceeded much more conſiderably that of the ſucceſsful.

I have the honour to be, &c.

LETTER III.

SIR,

AS the following caſe, though anomalous, manifeſts ſome traits deſerving particular notice, I ſhall give it at full length, without making any apology for the minuteneſs of the hiſtory. By this means you will perceive, that the patient was vigilantly attended—that few phænomena eſcaped obſervation—and that ſcarce a rational expedient was omitted in the treatment.

CASE I.

April the third, 1790, I viſited Miſs ———, aged between eight and nine years, of a delicate habit, fair ſkin, blue veins, and reddiſh hair. Her diſpoſition of mind is lively, gentle, and affectionate. Her appetite is ſo averſe againſt animal food, that the vegetable kind, principally bread, conſtitutes the major part of her more ſolid aliment. For ſome years, ſhe has been liable to frequent, tormenting headachs,

headachs, and ſevere ſtomach ſickneſs; which were always removed at the time by an emetick, whoſe operation pumped up ſome bile; and an Empirical Noſtrum, of which ſhe took conſiderable quantities, came in for a great ſhare of honour on thoſe occaſions.

A few weeks ago, her dancing-maſter obſerved an unſteadineſs in her limbs, which he imputed to ſome recent negligence, as ſhe before had been remarkably attentive and ſteady. Soon after, her parents took notice of an unuſual toſſing of the head; ſtrange geſticulations of the extremities, particularly in thoſe of the left ſide; and an irregular hurry in her motions. Theſe appearances they, for ſome time, attributed to tricks or childiſh affectation; and did not ſeriouſly attend to them, until they manifeſtly increaſed, accompanied with diminution of appetite, coldneſs and impaired uſe of the left arm, and ſome impediment of utterance.—She had a catarrhal complaint, attended with a ſevere cough, before the convulſive geſticulations were noticed.

Upon examining her pulſe, it was found ſlow and ſmall; and on inſpecting her eyes, they looked regular and ſound. Her bowels are tardy; which is their habitual diſpoſition. Her head is free of pain, and diſturbance — upper lip tumified — ſleep good and compoſed — no thirſt.

In this ſituation, a large bliſtering plaiſter was immediately applied between the ſhoulders; a flannel

nel ſhift was ordered; and the diet moſt acceptable to the palate was allowed.

4th—The ſpaſmodick contortions much increaſed —eyes more convolved, yet viſion correct — pulſe larger, harder, and quicker—voice feebler, and leſs articulate — conſiderable proſtration of ſtrength — head diſengaged. Five grains of Muſk, five drops of Thebaick Tincture, and ten drops of Spiritus Ammoniæ Compoſitus were given every hour; an Anodyne Volatile Liniment was applied frequently to the external fauces; two fœtid Injections were adminiſtered; and, in the evening, Chalybeates with Bitters were made additional internal Medicines.

5th—Convulſive motions appeaſed — Muſk Mixture and Liniment continued, but the former at greater intervals.

6th—Symptoms nearly as yeſterday—Muſk Medicine purſued, with the addition of Valerian Infuſion —Chalybeate compoſition reſigned, as it ſeemed to diſturb the ſtomach—Rhubarb, Calomel, and Aromatick Powder given, to open the bowels, in which they happily ſucceeded.

7th—Continues better—Antiſpaſmodick formula continued.

8th—Convulſive twiſtings, particularly of the eyes, abated—Laxative Powder repeated—A ſtrong

aqueous

aqueous Infuſion of Peruvian Bark and Valerian was preſcribed.

9th—Laxative repeated—Two drams of Peruvian Bark, to be taken this day, in doſes of a ſcruple, waſhing down each doſe with two table-ſpoonsful of a ſtrong Infuſion of Valerian.

10th—Three grains of Cinnabar added to each paper of the Bark, and four drops of Thebaick Tincture to each ſpoonful of the Valerian Infuſion. This evening an alarming faintiſhneſs came on, ſucceeded by languor, oppreſſion, and much agitation. A draught, conſiſting of twenty-five drops of Thebaick Tincture and twenty drops of Vitriolick Æther, given at bed-time.

11th—Better to-day.—Bark, Cinnabar, Valerian, and Thebaick Tincture repeated—alſo Fœtid Injection and Laxative Powder. In the evening our patient, placed on an inſulating ſtool, was electrified between the ſhoulders, during three or four minutes, by friction over flannel; and afterwards a few ſparks were drawn from the ſhoulders and left arm through the cap of a director—Pulſe fuller and ſtronger—perſpiration not increaſed.

12th—Two ſmall ſhocks, about $\frac{1}{10}$ of an inch, were paſſed through the ſhoulders, and two through the haunches; after which a few ſparks were drawn from the trunk and extremities; and a little friction

uſed

uſed. — No ſenſible effects on the pulſe or ſkin— Stomach ſickneſs and vomiting—Gas, extricated from fixed vegetable alkali, by lemon juice, adminiſtered with effect againſt the vomiting.

13th—Electrified as yeſterday, and without any perceptible effects. Yet ſhe has been viſibly better ſince the 11th, which cannot be aſcribed to the electricity ſolely, as ſhe likewiſe takes Medicines.

14th—Five ſhocks of $\frac{1}{10}$ of an inch were ſent through the ſhoulders and haunches; ſome ſparks were drawn; and the electrick ſtream was thrown from a metal point over the left hand and arm. For ſome minutes after the operation the pulſe was not felt, and when examined it was not ſenſibly affected.

15th—Electrified as yeſterday — pulſe not acted upon. From the firſt, ſhe has had a terror at the electrick proceſs, which emotion was greatly augmented at every time of its employment. Might not this terror operate as a ſedative on the pulſe, and prevent it from being ſtimulated and raiſed, except on the firſt occaſion, when the dread was not ſo great, as on the ſubſequent trials?—The Bark, Valerian, Fœtid Injections, Laxative Powder, and Compoſing Draughts were continued during the uſe of the electricity.

16th—The Muſk Mixture, with Bark, Ruſt of Iron, and Aromatick Powder were ordered—Night Draught

Draught repeated. Theſe Medicines were continued till the 23d, with little variation. Agitations ſometimes greater, ſometimes leſs — tumefaction of the upper lip ſubſided—and the cough, which at the beginning was rather ſevere, is vaniſhed.

21ſt—A little after One o'Clock, P. M. our patient was taken out of bed, and put naked into a tub of water, ſomewhat more than milk warm, where ſhe remained only three minutes, becauſe ſhe fretted much, and complained of the coldneſs of the water. Whilſt in the bath, ſhe was rubbed; when ſhe came out, her ſkin was well dried; and, being wrapped up in flannel, ſhe was put into bed, where ſhe lay half an hour to reſt.

Before ſhe went into the bath, her pulſe was temperate; after ſhe came out, it was nearly the ſame; and, if any change, it felt rather ſlower and weaker. In the evening, the pulſe was ſtronger and fuller—ſkin warmer, but moiſt—ſpaſms, as they had been all the morning, moderate — ate veal, and drank ſome port and water after it—ſlept ſeven hours at one time, and two hours at another, laſt night.

22d—Bath warmer—ſtaid in with a bathing dreſs five minutes, during which ſhe was rubbed — leſs fretful in the bath than yeſterday — did not ſee her immediately before or after bathing, and therefore the pulſe, &c. at thoſe times, not aſcertained—had a motion to-day—ſlept laſt night ſeven hours without opium — a good deal agitated, both arms and face,

but

but not the eyes, in the middle of the day — has a little headach, which is only the fourth time ſince her preſent illneſs — ate beef-ſtake for dinner. In the evening, leſs agitated, but languid.

23d—Bath colder — ſtaid in five minutes — after coming out agitations conſiderable — pulſe little affected; if any alteration, rather feebler — vomited twice—no animal food to-day—had a motion—ſlept above ſeven hours laſt night without opium. In the evening, leſs agitated, but languid — took Saline Mixture—omit Muſk, Bark, and Steel.

24th—Bath colder, and ſtaid in a ſhorter time—not ſo much agitated in the morning — ſlept well without opium—countenance and under jaw a little agitated theſe ten days paſt.

25th—Bath not warmed—dipt without a bathing dreſs—ſome time after bathing agitated conſiderably —ate no fleſh meat to-day—ſat up ſeveral hours without leaning down on the ſofa, where ſhe uſually reclines the moſt of the day—walked alſo a good deal —ſpoke more, and more intereſted in ſurrounding occurrences—ſlept well laſt night without opium—tonick and antiſpaſmodick Medicines reſumed.

26th—Bath cold, and bathed as yeſterday—more agitated after it, and more all day than yeſterday—talked a good deal, and articulated pretty well—ate ſome mutton—walked ſome — did not reſt well laſt night, nor had ſhe an opiate—had three eaſy ſtools —above medicines continued.

27th—

27th—From this day till the 1ſt of May, incluſive, circumſtances continued nearly as they were on the 26th.

May the 2d—After bathing, quite free of agitations for ſome time, but commenced again as uſual —appetite not ſo good. Began this day to take half a grain of Calcined Zinc morning and evening, and an aromatized Infuſion of Colomba Root twice a day. Went out in a ſedan chair, without any other viſible effect, than a ſmall degree of wearineſs.

3d—No ſteadineſs after bathing to-day — medicines continued — appetite ſtill worſe — did not reſt well, although an opiate was given laſt night—complained of a pain in the arm, and, on examination, the Pronator Radii was found a little tumefied—went out in the ſedan.

4th—Hair cut ſhort, and head dipt in the cold bath—Zinc increaſed to a grain night and morning—Infuſion continued—ſweat a good deal theſe two or three nights paſt—appetite farther leſſened, yet the ſtrength continues as good as before.

5th—From this date till the 8th went out in the chair twice—bathed every day—appetite improving —ſleep good—bowels regular — Zinc and Colomba continued—ſpaſms leſs, particularly on the 6th inſtant.

8th—Bathed—throat a little ſore — ſlept well laſt night—appetite good — ſpaſms compoſed — gaining

ſtrength and fleſh—muſcular pain gone—medicines purſued.

9th—From this date until the eleventh, bathed regularly—one day took no animal food—uſed exerciſe as before mentioned — 10th and 11th, walked acroſs the room without aſſiſtance or ſupport—ſpaſms in general much ſettled—ſeldom agitated—reſts well —11th, went a mile and a half in a carriage with little fatigue—Zinc increaſed, the 10th, to a grain and a half, night and morning—Colomba Root continued—ſome nights, perſpiration conſiderable.

12th and 13th — Bathed and exerciſed — did not reſt ſo well theſe two nights paſt—13th, the morning pill ſickened the ſtomach, but did not occaſion vomiting—appetite diminiſhed—ſpaſms leſſened—continue the Zinc, and return to the Peruvian Bark.

14th—Felt an irkſome formicatio this day in the face—in other reſpects as yeſterday.

15th—Bathed and exerciſed — ſtomach ſick, and vomited two or three times — took Spiritus Ætheris Nitroſi, ſoon after which ſhe complained of a pain in her ſtomach — is languid ; yet the agitations are not ſo great as yeſterday.

16th—Reſted well laſt night—ſtomach better—bathed and exerciſed — ſpoke diſtinctly this evening —Zinc laid aſide yeſterday — Steel and Bark reſumed—bowels regular.

From

From the 17th till the 21ſt, when our patient was removed to the country, ſhe was bathed, exerciſed, took her food, reſted at night, and in every particular ſeemed to be gaining ground; at the ſame time perſevering in the Bark and Steel.

From the 21ſt of May, until the 22d of June, I did not ſee our patient, but had a pretty regular and correct account from one of the family, who kept a memorandum of the principal occurrences, of which the following is an abſtract:

21ſt—Rode in a carriage about nine miles, and was not as much fatigued as was expected—ate ſome lamb at dinner—ſlept pretty well, but was not refreſhed.

22d—Did not eat much breakfaſt, but was in good ſpirits—ate mutton for dinner—ſlept better.

23d—Slept well—did not take a good breakfaſt—was much agitated all day.

24th—More quiet—no appetite for breakfaſt—rode about ſix miles in a carriage, which fatigued her conſiderably—very ſick at ſtomach, reached, vomited, and threw up phlegm.

25th—Slept well—made a good breakfaſt—ate ſome lamb at dinner—bathed and took the air every day.

26th—After a good night agitated very much all the forenoon—took mutton for dinner—agitations as great in the evening, as in the morning.

27th—Had a good night; yet was ſo much agitated, that it was thought neceſſary to give the Antiſpaſmodick Medicine along with the Tonick; which latter ſhe had regularly perſiſted in — bowels ſo natural as not to require the laxative powder—has ſome little uſe of the left, but not any of the right, hand.

The moſt material proceedings, from the 28th of May until the 9th of June, incluſive, are mentioned in the following extract of a letter, dated on the latter day.

"I have the pleaſure to tell you, that A—— continues to recover; though, I do not think, ſo rapidly as at her firſt coming into the country. Friday the 28th of May, the day I wrote laſt to you, ſhe was very ſick in her ſtomach; threw up a great deal of phlegm; and, after a good night's reſt, was as uſual next day. She finiſhed the Muſk Medicine: I continued it—giving it only twice a day, for the laſt fourth part of the bottle; which had a very good effect on the increaſed agitation. She is now, in general, very quiet; but has little, I may ſay no uſe or power of her right hand; the left ſhe can do almoſt any thing with. She has gone on pretty regularly; much the ſame as I gave you particulars of in my laſt, until yeſterday, when ſhe was ſick again,

and

and threw up moſt heavy phlegm, like whites of eggs: but, after a good night, ſhe is well again to-day. I don't think her appetite continues as good as it was. I ſtill try to prevail on her to eat ſome animal food, but in general ſhe would not chooſe it. Her powders are all out—I will continue to give the Bark, until I hear from you."

Notwithſtanding thoſe two ſick days, ſhe had got ſtrong and ſteady in the muſcular powers, ſo much ſo that ſhe was able to *run about*, to uſe her left hand nearly as well as ever, and to command her right hand in a viſibly progreſſive degree of improvement. In this pleaſant and encouraging ſituation ſhe continued till the 13th of June, when ſhe complained much of headach, and of ſtomach ſickneſs, which was prevented from amounting to actual vomiting by a diligent uſe of the Saline Mixture.

Three days having elapſed without any relief from theſe ſymptoms, on the fourth (I being at an inconvenient diſtance) ſhe got by domeſtic advice two grains of Tartariſed Antimony, with Chamomile Infuſion, which excited vomiting, without cauſing any ſave a watery evacuation. At the ſame time, her night's ſleep was not as good as uſual; her appetite, as might be expected, was much impaired; ſome involuntary motion affected her right hand; and ſhe complained that what ſhe looked at appeared clouded, or rather ſtriped with red and purple.

18th—Her head was thought to be ſo bad, accompanied with ſtomach ſickneſs, that they gave her a ſecond emetick, which produced much phlegm and bile, and ſeemed to procure relief; but on waking next morning, ſhe complained equally of headach. After returning from the bath, ſhe was as ill as ever, begged for more Tartariſed Antimony, and went to bed early in the evening very feveriſh. About nine the ſame evening, three grains of James's Powder were adminiſtered; after which ſhe had a tolerable night; but ſoon after waking in the morning, ſhe was as ill with her head, as ſhe had previouſly been—the James's Powder had no viſible effect.

20th—At eight in the morning ſhe got four grains of the Fever-Powder, which proved emetick—ſlept a good deal in the courſe of the day, yet complained much of her head—at five in the evening and at ten the Powder repeated—had a gentle perſpiration for ſome hours; yet the headach, quickneſs of pulſe, and heat remain undiminiſhed — her heart too beats with remarkable rapidity; and ſhe is very much fluſhed.

21ſt—Has had very little ſleep — very hot—pulſe quick, but not ſo ſtrong as yeſterday—ſighs frequently—Rhubarb and Magneſia given without producing any effect—nor was an emollient Injection more ſucceſsful.

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In conſequence of this continuing illneſs, I was ſent for and arrived the 22d, when I found her complaining grievouſly of the headach — fits of incoherent mutterings, but in general ſenſible—face fluſhed —eyes compoſed, and regularly affected by light— tongue furred, but no thirſt—ſkin hot, with partial perſpirations — pulſe 90, hard and full — anxiety about the præcordia — bowels coſtive—urine generally ſufficient — no appetite for food — imperfect ſleep — voice ſtrong, and articulation diſtinct—*convulſive agitations vaniſhed, and is poſſeſſed of as full power of her hands*, &c. *as conſiſtent with her lately diminiſhed ſtrength.*

To the crown of the head, ſhaved and embrocated with cold vinegar, a large bliſtering plaiſter was immediately applied. An effervеſcing Mixture, with Infuſion of Colomba Root, was ordered to be freely exhibited — emollient injections were directed—two grains of Calomel were deſired to be certainly given every night — and, to compoſe the anxiety and reſtleſſneſs, a few drops of Thebaick Tincture were added to two doſes of the Neutral Mixture.

23d—Reſted tolerably during the night — bliſter operated fully—expreſſed much relief of the head— pulſe and other circumſtances as yeſterday—vomited ſome yellowiſh watery fluid ſoon after dreſſing the bliſter—A lividity about the noſe, and lower internal parts of the eye-lids—This day I was obliged to return home.

Next day I was informed by letter, that, ſoon after I left my patient, ſhe was ſeized with a violent delirium, raving inceſſantly, and requiring force to hold her in bed. On this attack, an emollient injection was thrown up, which procured an evacuation, but no relief. She loſt her ſpeech ſuddenly, and groaned continually—rolled her head much from ſide to ſide—colliſion of the teeth—deglutition difficult—in ſome time a copious ſweat broke out.

In the raving, whilſt ſhe could ſpeak, ſhe frequently ſaid "Mother! why did you waken me by wiping my mouth?" Hence her friends ſuppoſed that ſhe had ſuffered a paralytick ſtroke; which afterwards, indeed, appeared to be the caſe, from a diſtortion of the mouth, and a ſubſequent privation of the right arm.

25th—In the afternoon, I again ſaw her, and found her in a comatoſe ſtate — low delirium—ſtrabiſmus towards the left ſide—pupils dilated, and inſenſible to light—fluſhed—breathing quick—ſuſpiria —partial perſpirations — convulſively affected in the left ſide—torpid in the right ſide—deglutition much impaired—pulſe 110, and unequal—coſtive.

Two bliſters were applied on the head—four grains of Calomel were given—a dram of ſtrong Mercurial Ointment was rubbed on the thigh — and Leeches were propoſed for the temples. An injection of Salt Water, which had been given before my arrival, brought off ſome dark-coloured excrement abound-

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ing with ſubſtances each about the ſize of a ſmall grain of wheat, conſiſting of a whitiſh hollow body, with a black apex.

26th—Was quiet during the night; but the comatoſe and other bad ſymptoms continued—a large, ſolid, dark-coloured, but not fœtid, ſtool paſſed early in the morning, containing many ſubſtances in ſhape and colour ſimilar to thoſe above mentioned, but deſtitute of the black apex. Soon after this, a ſmaller and thinner ſtool, without any of thoſe bodies, was voided—two leeches applied to the right temple, from which about two ounces of blood were extracted—two grains of Calomel given—left arm and hand more convulſed—right arm continues motionleſs.

27th—Between eleven and twelve o'clock laſt night our poor little ſufferer was ſeized with a general convulſion; fits of which recurred at different intervals, and in various degrees of ſtrength, until the laſt. Deglutition became ſomewhat better, and articulation was attempted, a ſhort time before death; which cloſed the lamentable and melancholy ſcene about two o'clock the enſuing morning.

DISSECTION.

The cranium being raiſed, the blood-veſſels of the dura mater were turgid and reddiſh, exhibiting ſtrong marks of a preceding inflamed ſtate. About two ounces of blood flowed from the longitudinal

ſinus,

ſinus, by wounding its anterior extremity with the ſaw. The cortical and medullary ſubſtances of the brain ſhowed no other morbid appearances, than a kind of ſerous diffuſion over the circumvolutions of the lobes. The ſeptum lucidum was ſound; but the left lateral portion of the plexus choroides ſeemed inflamed. Upon cutting cautiouſly into the left ventricle, a guſh of a watery fluid, amounting to two ounces, iſſued immediately after the point of the ſcalpel; and the right ventricle produced about half that quantity. In the remaining important parts of the encephalon, no ſigns of diſeaſe were obſerved.

Before proceeding to offer any remarks upon this curious and intereſting caſe, in order to give the method of treating it a more competent title to your approbation, I take the liberty of acquainting you, that I had the aſſiſtance of my friend Dr. Plunket, of Dublin, by letter; and that I had, on the ſpot, the aid of my fellow-citizen, John Ferguſon, Eſq; an experienced practitioner, on whom a great ſhare of confidence has been long beſtowed by a conſiderable circle in this country.

Permit me now to remark, that the above caſe evidently appears, both in its incipient ſtage, and in the major part of its courſe, to be an inſtance of Chorea, or St. Vitus's Dance, having exiſted above ten weeks from the commencement of my attendance, before ſymptoms of hydrocephalus could be ſaid to have ſhown themſelves; which at laſt, indeed, put an end to the child's ſufferings. The peruſal of

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it naturally excites ſome conſiderations on the original diſeaſe; and on the manner in which convulſive affections produce watery effuſions in the brain.

That the Chorea is a rare diſeaſe, or at leaſt that it does not often occur in a common circle of practice, may be inferred from the total ſilence of ſome ſyſtematick authors, and the deficiency or brevity of others, on the ſubject. By the ancients, and by moſt of the moderns, it appears to be conſidered under the general head of convulſions, although it be attended with ſeveral peculiar circumſtances. That diſtinguiſhed noſologiſt and phyſician, the late Dr. Cullen, in the earlier editions of his ſynopſis, ſuppoſed it to be merely a variety of thoſe maladies; an errour which he not only corrects, but acknowledges in the fourth edition of that work. His falling into that miſtake is the more unaccountable, ſince Sydenham had given a conciſe, yet graphical deſcription of the diſorder; introduced, indeed, very immethodically in the Eſſay on the riſe of a New Fever.

To the portrait drawn by Sydenham, however improperly ſtationed, little addition appears to have been made by ſubſequent writers; unleſs we include the mention of ſome fatuity, and hyſterical inconſtancy of mind. In the definitions, which are ſuppoſed to comprehend the pathognomonick ſymptoms of the diſeaſe, I do not find that it is, even in the beſt of them, ſtrongly characterized. Sagar ſays, "Eſt motus ſemivoluntarius unius lateris, vel totius corporis

corporis in greſſu, ſitu erecto, aut comeſtione, geſticulationem, aut ridiculam hiſtrionis feſtinationem, referens." Cullen's character is "Impuberes utriuſque ſexus, ut plurimum intra decimum et decimum quartum ætatis annum adorientes, motus convulſivi ex parte voluntarii, plerumque alterius lateris, in brachiorum et manuum motu, hiſtrionum geſticulationes referentes; in greſſu, pedem alterum ſæpius trahentes quam attollentes."

Still more imperfect definitions might be enumerated from other noſologiſts; but without ſpending time in exhibiting thoſe, or in animadverting on the two already cited, I ſhall offer one differing in material points from ſome, and ſupplying the defects that I conceive to be in others, which may ſerve at preſent as a critique upon all.

The Chorea, therefore, I would define, A diſeaſe conſiſting of involuntary convulſive geſticulations, commencing and continuing chiefly in the extremities of one ſide, but not without being, in ſome meaſure, communicated to the head and trunk; affecting ſometimes both ſides; proceeding with irregular paroxyſms an uncertain length of time, at leaſt ſix or eight weeks, whether the patient lies, ſits, or walks; when doing the latter, compelling him to trail rather than lift the foot or feet; the external ſenſes remaining nearly perfect, but the internal involved in a degree of fatuity; and attacking perſons of both ſexes, moſtly the female, generally from ſeven to fourteen years of age.

From

From this character, together with the phænomena circumſtantially detailed in the preceding caſe, ſo good a diagnoſis of the malady may be acquired, that it would be ſuperfluous here to conſtruct a formal hiſtory. I ſhall only remark, that, although the Chorea is generally confined to perſons from ſeven to fourteen years of age, we ſometimes meet with it in advanced life; of which I ſhall give you an inſtance.

CASE II.

John M'Keon, aged about ſixty-three years, by trade a linen weaver, and a ſmart, hardy little man, without any apparent cauſe, on the 6th of January, 1792, was ſeized with convulſive writhing motions in the right arm and leg. He is ſenſible; and does not complain of headach. He ſleeps little; but when he does get any, the ſpaſmodick contortions ſubſide. Although addicted to much talking in his health, yet his loquacity is now greatly increaſed.

The convulſive geſticulations continued for ſome weeks with conſiderable violence, and very little interruption. His appetite failed; and he became weak and emaciated. At length, either from an effort of nature, or from bruiſes which the extremities ſuffered by almoſt inceſſant colliſions, ſuppuration took place in the thigh and at the knee, which diſcharged ſome pus, and ſoon healed. After this event, the geſticulations, particularly thoſe of the arm, grew moderate; he recovered ſtrength; and

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he remained in a comparatively quiet and ſupportable condition till February, 1793, when a typhoid fever, then prevalent in his family, laid hold on him, and put an end to his exiſtence.

Immediately ſucceeding this caſe, I find another ſtated in my regiſter, which, appearing to be of a ſpaſmodick nature, and to be attended with intereſting circumſtances, I ſhall here take the liberty of reporting.

CASE III.

Miſs ———, a child of four months old, thriving, and in general healthy, ſoon after birth was obſerved to take a kind of ſuffocation when ſhe fell into a violent fit of crying. The affection, however, did not ariſe to any alarming degree for ſome weeks; and ſhe paſſed through inoculation in a favourable manner, without an attack of it that was worth notice.

But on the 14th of February, 1792, early in the morning, whilſt taking ſome food, ſhe was ſeized with a paroxyſm, which began with a ſuſpenſion of reſpiration, followed by a lividity of the lips and under the eyes. To theſe circumſtances ſucceeded paleneſs, ceſſation of the pulſe, and other appearances incident in a delignium animi. In a ſhort time ſhe ſhowed ſigns of revival; but ſhe was not thoroughly reinſtated for two or three days, her eyes being

being during this ſpace of time dull, her countenance languid, and her ſtomach exhibiting ſome ſymptoms of indigeſtion.

Soon after that ſhe began to recover from this fit, ſhe vomited and purged a little, and ſeemed to ſuffer conſiderable pain, as indicated by writhings of the trunk and extremities. On this emergency, the open air was freely admitted into the chamber; the legs and feet were immerſed in warm water; to the wriſts, temples, and other parts, the volatile alkali was applied; a fœtid Injection and one of warm water were ſucceſſively adminiſtered; and a camphorated, anodyne Liniment was diligently rubbed over the abdomen. Againſt the friction had been uſed twice, ſhe got eaſe, fell aſleep, and awoke in a favourable ſituation.

She continued well until the beginning of March, when pain of the gums, heat of the ſkin, reſtleſſneſs, and muſcular foreneſs on motion, pointed out a paroxyſm of diſtempered dentition. Upon the increaſe of theſe ſymptoms, I was called to viſit the child on the fifth of the ſame month, and obſerved, during my viſit, a ſlight attack of the ſtrangulation. I ordered her to be forthwith purged; which was ſoon and briſkly effected; but without averting the aſſault of her innate and dangerous enemy.

For between three and four o'clock in the afternoon, I was called in an exceſſive hurry to revive the poor infant, who, the meſſenger aſſured me, appeared

peared to be abſolutely dead. In a very few minutes I arrived on the ſpot; and ſoon had reaſon to believe that the fact ſtood very nearly as it had been repreſented. I found the body lying motionleſs on a woman's lap; the countenance pale; the reſpiration ſuppreſſed; and the pulſe ebbing in its obſcure and final touches.

The body was inſtantly ſtripped and rolled in a warm blanket; heated flannels were applied to the trunk and extremities; ſtimulants were put to the noſtrils and thrown up the anus; frictions were employed; and endeavours were uſed to inflate the lungs, both through the noſe, and by introducing a pipe into the glottis. Theſe meaſures were purſued zealouſly and aſſiduouſly for more than an hour; after which, yet without hope, but as an act of humanity, the body was laid in fleecy blankets cloſe to the warm ſkin of an adult, where it was kept during ſome hours—all, however, without effect; *for the child is dead.*

Was this a caſe fit for the operation of electricity? I regret that circumſtances did not admit a trial of the experiment.

In referring to ſeveral reſpectable authors on the diſeaſes of children, I have not been able to find a deſcription of this malady. I muſt, therefore, ſuppoſe it to be, if not a *New Diſeaſe*, at leaſt a *Nondeſcript*, until I know when it was firſt noticed, and in what light it has been reviewed, by other practitioners.

At preſent, I ſhall apply only one or two remarks to this point.—Some modern chemiſts affirm that they can, in a very expeditious manner, teach the whole of their ſcience, by combining in the name of a *mixt* the characters of the ſeveral principles of which it is compoſed. In imitation of this plan, were Noſologiſts to conſtruct the name of every diſeaſe by introducing a certain number of the eſſential phœnomena that belong to each ſpecies, ſome benefit might accrue to diagnoſticks. On theſe grounds, I might diſtinguiſh the diſeaſe, repreſented in the above caſe, by the denomination of *Tetanus Trachealis Infantum.* It is not *Fainting;* it is not *Convulſion;* it is not *Aſthma;* nor is it *Croup;* the only diſorders to which it can be ſuppoſed to bear even a remote analogy: However, do the ſymptoms in this caſe tend to corroborate the doctrine of Goodwyn? Or, is it probable that water would have been found in the ventricles of the brain after death?

That convulſive diſeaſes occaſion a watery effuſion into the cavities of the brain, diſſection ſufficiently atteſts. But in this rapid caſe, it is not likely that water was collected, as there was not time for the veſſels to aſſume a tone fit for ſuch a morbid ſecretion. It is moſt probable, that death was cauſed by the ſame ſtate that takes place in drowning, hanging, and ſuffocation, which the ingenious Mr. Coleman maintains to be *mechanical obſtruction in the interior pulmonary veſſels from collapſe of the lungs, with a want of latent heat in the blood.*

With reſpect to the manner in which convulſive affections occaſion a watery effuſion in the brain, it may be obſerved, that perſons liable to thoſe affections exhibit a conſiderable degree of excitability, and that the principle of irritability is quickly accumulated and quickly diminiſhed in their conſtitutions. Hence are derived the periodical or repeated paroxyſms of thoſe diſorders, which, the innate nervous ſtimulus on the one hand, and the prompt renovation of the irritable principle on the other, will naturally conſtitute.

This habit is remarkably prevalent in childhood and in youth; periods which compoſe the ſpring-time of life. And, as in the vernal ſeaſon, the vegetation of plants, which alſo depends on the mutual effects of ſtimulus and irritability, is in the greateſt vigour; ſo in young perſons, the ſame principles have their higheſt power, and are the agents of growth which conduct the ſpecies to its ſtate of maturity. The principle of irritability is not confined to the fibre, or ſimple ſolid; but is alſo poſſeſſed by the fluids of the body, particularly by the blood. The heart, which contains ſo much of the fibre and is the fountain of the fluid, muſt be the centre of the principle; and the influence of this organ on the contents of the cranium is well known.

As in thoſe ages, in which this conſtitution prevails, convulſions likewiſe prevail, the increaſed action which they produce will augment the impetus of the circulation, eſpecially in the veſſels of the head;

head; which we see is actually the case, since a considerable determination to that part is observed in those disorders. The determination increases the action of the blood-vessels, and inflammation is the consequence. This consequence is forwarded by the plethora, particularly of the head, which exists in the early and advancing stages of life; and the whole train of symptoms, constituting *Febricula Hydrocephalica*, (the name which I appropriate to the disease) are then brought into view.

But how are we to explain the occurrence of effusion, where the accumulation of the irritable principle is not so vigorous, and yet the action of stimuli is assiduous? In these cases I would conjecture, that the nervous stimulus, acting, as I suppose, on a mass of irritability less moveable than in convulsive habits, excites a passion, which, if violent, suddenly destroys irritability, or the vital principle, and death ensues; or which, if moderate, engages only a part of the irritability, and the natural state of temper is regained for a time. To illustrate this reasoning by an example: In an account of the death of the celebrated Mirabeau we are told, "Un tempèrament ardent et trop exercè a abrègé le jours de cet homme célébre dont les talens faisoient l'espérance des amis et de la constitution." Upon the report of poison having been administered, the body being opened, "Ou a trouvé un épanchement dans un des lobes du poumon, et un amas de pus dans le pericarde de cœur; il y avoit aussi un petit épanchement dans *le cerveau*, tous les autres viscères étoient en bon état."

Does not this inſtance ſhow, that an irritable temper, almoſt conſtantly exerciſed, may be a cauſe of effuſions in different cavities, and of a watery effuſion in the brain; which conditions, in all probability, were preceded by more or leſs inflammation in the diaphanous membranes of thoſe parts? And muſt we not admit an irritability of temper in thoſe perſons peculiarly ſubject to hydrocephalus internus?

But however ſeaſonable we may ſuppoſe the theory, we ſhould not ſuffer it to engroſs our thoughts ſo much as to divert us from attending to any opportunity that may appear likely to advance the practice; eſpecially in a diſeaſe deluſive in its nature, alarming in its courſe, and too, too often fatal in its termination. To promote this end, namely, the extenſion of practical knowledge, an accumulation of facts is, undoubtedly, the apteſt means. I ſhall, therefore, give you another hiſtory of hydrocephalus internus; and then cloſe the correſpondence for the preſent.

CASE IV.

April the 12th, 1794, in the afternoon, I was made an aſſociate in attendance on Miſs H———, aged a little more than eleven years; and on approaching the bed, I perceived her labouring under great oppreſſion, as evidenced in particular by frequent heavy ſighs. Upon farther examination I obſerved the following circumſtances: The pulſe 92 and ſmall, but equal; the pupil of the left eye dilated,

lated, and inſenſible to the light of a wax ruſh; the pupil of the right eye alſo dilated, but a little ſenſible to the impreſſion of the light, and its viſion in ſome meaſure remaining; both eyes rolling, but without ſtrabiſmus; the left upper eye-lid depreſſed; the tongue moiſt, and a little furred; the ſkin dry and temperate; the bowels confined; thirſt moderate; and the patient lying, as for the moſt part ſhe has done, on the right ſide.

The head was ordered to be ſhaved, and to be frequently embrocated with camphorated ammoniacal liniment—three grains of Calomel to be ſwallowed immediately — a dram of ſtrong mercurial ointment to be rubbed in—and ſmall doſes of Tinctura Opii, with Vinum Antimoniale, (which ſhe had been uſing) to be continued.

At nine o'clock, P. M. I found the pulſe 115, ſmall, and in ſome degree unequal; the ſkin hot; and the countenance, which had been rather pale in the morning, now conſiderably fluſhed.

13th—(noon)—Reſted badly laſt night — moans much—pulſe too ſmall and fluttering to be numbered —right eye more inſenſible and viſion imperfect. Ordered a bliſter to the head; two leeches to the right temple; the mercurial ointment to be repeated; ſix grains of Calomel night and morning; and the ſtibiated Opium to be continued.

At night the pulſe was ſometimes too fluttering to be counted, and ſometimes eighty ſtrokes might by attention, be numbered in a minute. From an injection, which ſhe got in the morning, ſhe had a copious motion; and ſhe paſſed a quart of urine at one time. In the courſe of the day, ſhe got ſome ſlumbers, but in general was reſtleſs, moaning, and uneaſy—The leeches procured a plentiful evacuation.

14th—Very reſtleſs till two o'clock in the morning, after which ſhe ſeemed to get ſome compoſed ſleeps—called for bread and ate a little—left eye diſcharges ſebaceous matter — right eye waters and as inſenſible as yeſterday. At ten o'clock, P. M. the pulſe 115, and ſmall — thirſt moderate — tongue furred but moiſt — made little urine to-day—paſſed no excrements. No marks of mercury perceptible on the mouth — repeat the Calomel and friction—dreſs the head with cantharides ointment — and add milk to the drink.

15th—Reſted badly until five o'clock in the morning, when ſhe became more quiet, but continued moaning — pulſe 106 and diſtinct — eyes glazy and viſion ſeems quite extinguiſhed — both eye-lids depreſſed—leſs affected by external impreſſions, and leſs apprehenſive, than yeſterday — ſkin temperate. At night the pulſe was the ſame as it had been in the morning—face a little ſwelled—gums roſy, and ſaliva gathering in the mouth as if mercurialized—had a ſevere ſtrangulative fit, ſuppoſed to proceed from an accumulation of phlegm about the fauces—

could

could not be prevailed upon to ſwallow the Calomel in the morning, and, as the mouth appeared affected, it was omitted in the evening—friction and ſtibiated opium continued — takes lemonade, and gruel flavoured with wine.

16th—About eleven o'clock laſt night ſhe became much worſe, and could ſcarcely ſpeak or ſwallow. At eleven o'clock this morning, her pulſe unequal and ebbing—toſſes her limbs greatly—keeps her left elbow rigidly bent—no other ſpaſmodick affection as yet—reſpiration feeble and difficult — ſinking faſt— and about two o'clock in the morning of the 17th, ſhe died.

Some hours before death, ſhe voided a conſiderable quantity of urine, and of dark coloured, but not fœtid, excrement. During the ſinking period of the malady, ſhe had almoſt conſtant toſſing and writhing of the extremities, but no tonick or clonick convulſive ſtate, if we except the rigidity of the left elbow, which frequently occurred, and continued for a certain ſpace of time.

The account which I received of her ſituation previous to my viſit was, That ſhe had for ſixteen days a feveriſh illneſs, ſuppoſed owing to worms, until two days before I ſaw her, when the diſeaſe aſſumed different and alarming features. At the beginning ſhe loſt her appetite, vomited often, was frequently thirſty, complained of pain in the head and between

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the ſhoulders, and had a quick, ſmall, wiry pulſe—Permiſſion to open the head was ſolicited, but it would not be granted.

Having miſlaid, and but lately met with, ſome neceſſary notes on the diſeaſe that we are handling—quickened by the peruſal of certain recent papers upon the ſubject—and concerned at the repeated occurrence of melancholy inſtances, I am induced to addreſs you in that form, the epiſtolary, which admits of the eaſe and expedition needful in a purſuit of ſuch moment. And, in thus becoming rather haſtily your correſpondent, I have the honour of an earlier opportunity of ſubſcribing myſelf,

Your reſpectful humble ſervant,

WILLIAM PATTERSON.

LONDONDERRY,
AUGUST 8th, 1794.

POSTSCRIPT.

POSTSCRIPT.

SINCE the concluſion of the preceding letter, I have to lament the fatal termination of another caſe of hydrocephalus internus; the hiſtory of which I may publiſh at ſome future period; but in the mean time I ſhall remark, that the phœnomena ſeemed to favour the phlogiſtick theory, whilſt the march of the ſymptoms did not increaſe the credit of the mercurial plan.

Senſible of the advantages to be derived from ſynoptical views, I had conſtructed a table of ſeveral caſes, exhibiting the age, ſex, and treatment of the patients, together with the event of the diſorder; but this I defer publiſhing at preſent, in hopes to have it in my power to enrich it by adding a number of caſes at ſome ſucceeding ſeaſon.

ADVERTISEMENT.

DIFFERENT opinions have been long entertained, and ſtill are held, reſpecting the influence of the air upon the human body, as well in producing as in promoting health and diſeaſe. That a material connexion exiſts between theſe ſtates of our frame, and that element in which we live, and move, and have our being, is incontrovertibly proven by obſervation and experience. Could we trace this connexion, and obtain even a tolerable knowledge of its laws, what a delightful proſpect would it open to our view, and how valuable an acquiſition would it be for Medicine and for Mankind! If ever there was a time to attempt ſuch a reſearch, this is the conjuncture——*now when* Chemiſtry has unfolded the nature of aerial fluids; *when* theſe fluids are already applied to medical purpoſes; *when* the conſtitution of the atmoſphere is diligently explored; *when* the arts teem with ſuitable inſtruments; and *when* a more pure and rational philoſophy is known in the world.

Encouraged by theſe favourable circumſtances, the author of the preceding LETTERS has ventured to undertake, and has at preſent in conſiderable forwardneſs, a Work which he intends publiſhing under the title of "SPECIMENS OF PHILOSOPHICAL, MECHANICAL, AND MEDICAL INQUIRY, DESIGNED FOR THE PURPOSE OF TRACING THE RELATION OF METEOROLOGY TO MEDICINE."

This

This Work, which comprehends ſeveral correlative topicks, muſt conſequently embrace a variety of matter; and therefore the exertions of an individual, be them ever ſo ſtrenuous, cannot render it as uſeful and deſerving publick notice, as they might do by the help of an enlarged correſpondence. Not only the philoſopher, the phyſician, and the artiſt, but the private gentleman and the farmer, nay even the plaineſt obſerver, may contribute uſeful information on the ſubject.

The principal points demanding attention are, the topography of the place where the obſervations are made; the direction and force of the winds; the quantity of rain and number of rainy days; the degree and frequency of hail, ſnow, froſt, aurora borealis and auſtralis, lunar halo, and thunder and lightning; the appearance of clouds; the endiometrical condition of the air; and the ranges of the barometer, thermometer, and hygrometer. Theſe are the general objects; the particular ones are—in the provence of the phyſician, the ſtate of diſeaſes, eſpecially epidemicks; and in that of the farmer, the progreſs of vegetation. In the courſe of obſervation, in ſo extenſive a field, other things may occur, which might likewiſe be turned to advantage; and which, with INTELLIGENCE on the above heads, or on as many of them as can be noted, will be thankfully received.

Communications may be ſent, directed to Mr. J. JOHNSON, Bookſeller, St. Paul's Church-yard, London,

London, to Meſſrs. BELL and BRADFUTE, Book-ſellers, Edinburgh, to W. GILBERT, Bookſeller, Dublin, and to the Author in Londonderry.

☞ The London Medical Society having approved of the intention of the above Work, it is expected that an advertiſement, to the ſame purpoſe of the preceding, will appear along with the third No. of the Fourth Vol. of their Memoirs, already iſſued, or juſt iſſuing from the preſs.