

Remarks on the means of obviating the fatal effects of the bite of a mad dog, or other rabid animal : with observations on the method of cure when hydrophobia occurs : and the opinion relative to worming of dogs refuted : illustrated by examples / by R. Hamilton, M.D.

Contributors

Hamilton, Robert, 1721-1793.
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Publication/Creation

Ipswich : printed by Shave and Jackson. Sold by J. Shave ; London : T. Longman, Pater-Noster-Row ; Norfolk and Essex : By all the booksellers, MDCCLXXXV. [1785]

Persistent URL

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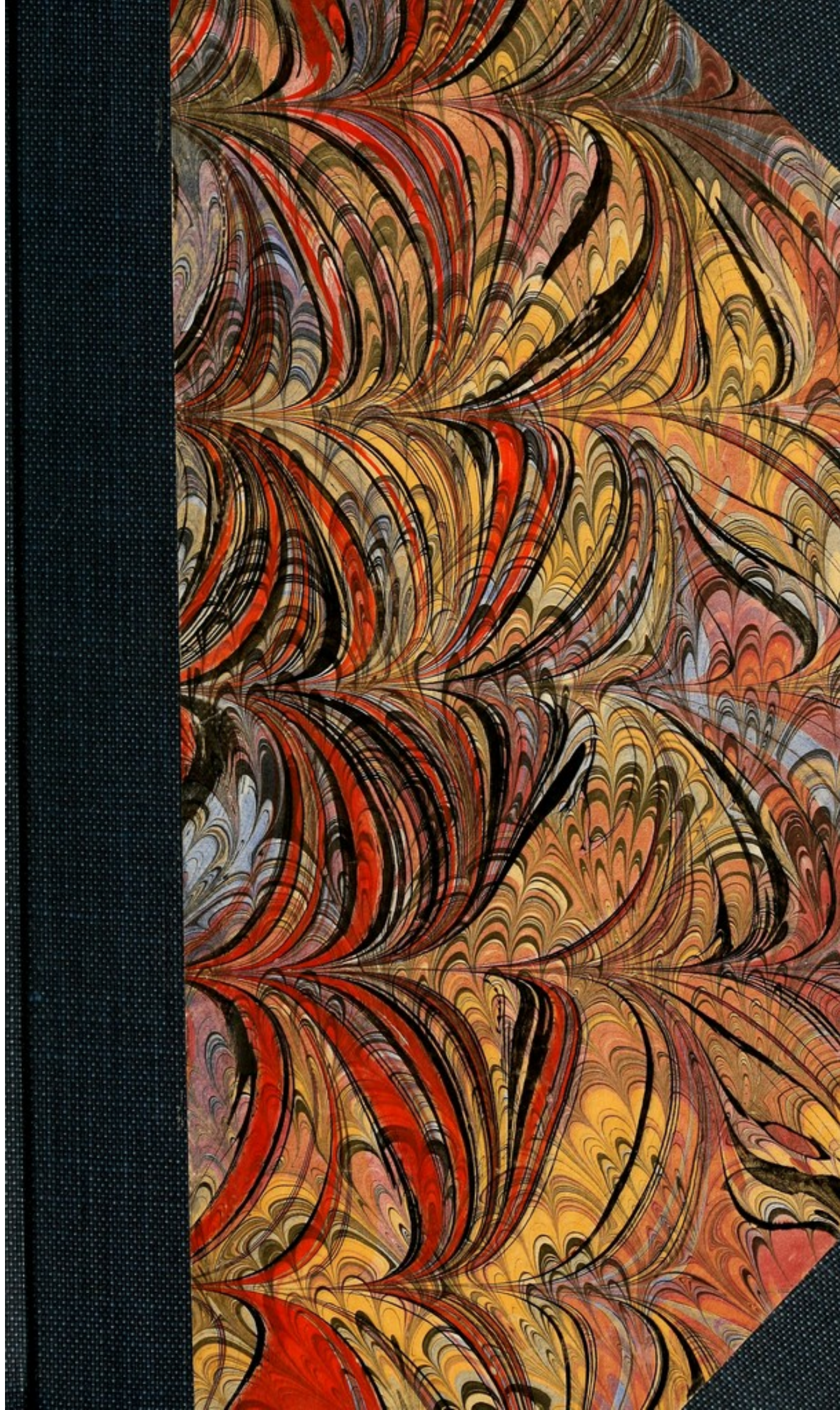
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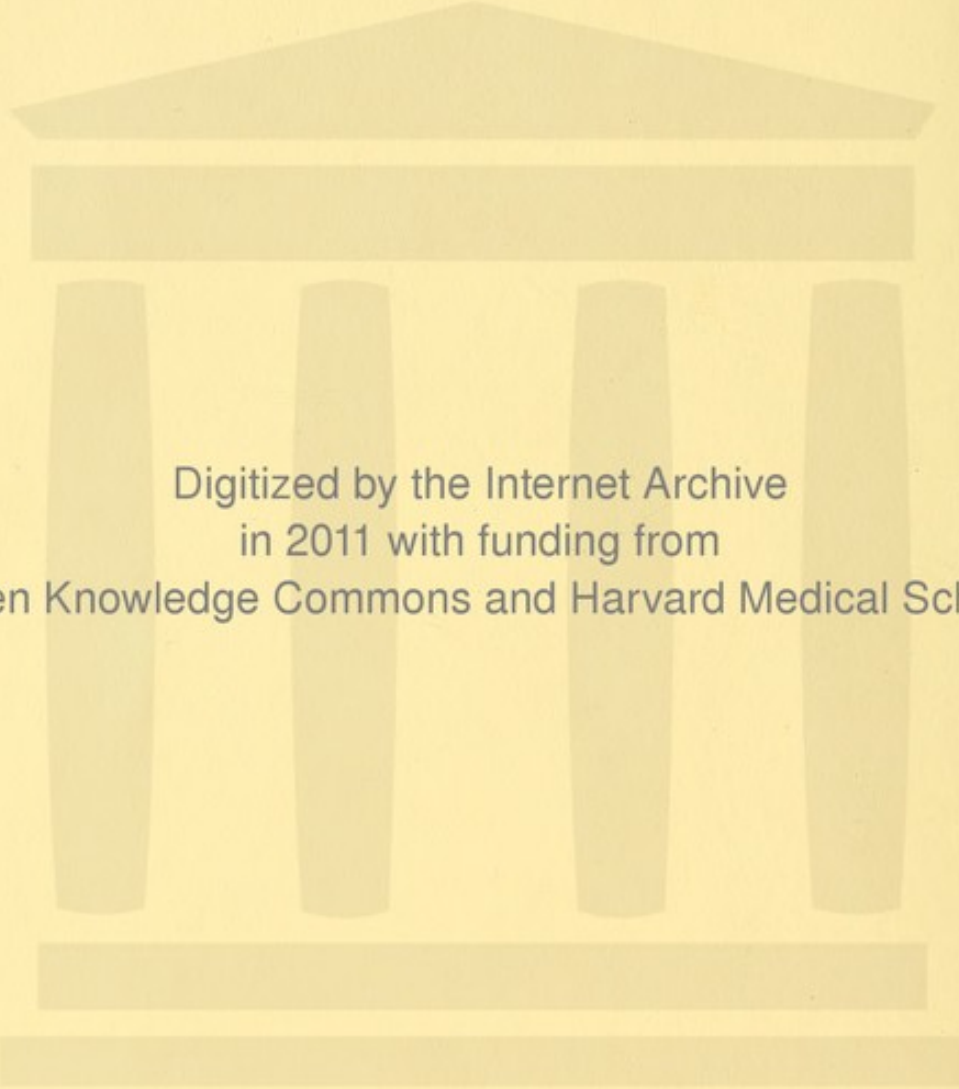
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REMARKS

Post ON THE *Buck*

Means of obviating the fatal Effects

OF THE

BITE of a MAD DOG,

Or other rabid Animal;

WITH

OBSERVATIONS

ON THE

Method of Cure when Hydrophobia occurs;

AND THE

Opinion relative to Worming of Dogs refuted.

ILLUSTRATED BY EXAMPLES.

By R. HAMILTON, M. D.

Of the Royal College of Physicians in London, and Member of the Medical, Physical, and other Literary Societies in Edinburgh and London.

MORSU VIRUS HABENT, ET FATUM DENTE MINANTUR.

LUCAN. PHARSAL.

ALIORUM FACTIS, NOBIS QUOD EX USU SIT ADMONEMUR.

CRATO.

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MDCCCLXXXV.

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Or other kind Animals

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Opinion relative to Wearing of Dogs collars

illustrated by Examples

BY R. HAMILL, M.D.

of the Royal College of Physicians in London, and Member
of the Medical, Physical, and Natural History Societies
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PRINTED BY TAYLOR AND FRANCIS, STATIONERS' COURT, LONDON.
1825.

1825 W I C H

PRINTED BY SHAW AND JACKSON,
10, ST. MARK'S LANE, LONDON.
IN CLOTH, 1825, AND 1826.

TO

WILLIAM HAMILTON, Esq. M. D.

PHYSICIAN to the SURREY DISPENSARY, LONDON,

THE FOLLOWING PAGES ARE GRATEFULLY INSCRIBED,

As an Expression of unfeigned Esteem,

AND OF

The Sense retained of his Friendship,

By his obedient, and obliged

Humble Servant,

The AUTHOR.

TO
WILLIAM HAMILTON, Esq. M. D.

PHYSICIAN TO THE GREAT BRITISH HOSPITAL, LONDON.

THE FOLLOWING TRACT WAS GRATEFULLY RECEIVED

As an Expression of unfeigned Esteem,

AND OF

The Sense retained of his Friendships,

By his obedient, and obliged

Friend, George

THE AUTHOR.

P R E F A C E.

IN consequence of an accident from the bite of a mad dog having lately happened, whereby a young gentleman of a respectable family in the county of Suffolk lost his life,* a few observations on the means of preventing Hydrophobia were then inserted in the Ipswich Journal for the perusal of the neighbourhood, to enable them, in some measure, to oppose the fatal effects of the bite of a rabid animal, should the like happen among them in future.

THOUGH

* Son of Admiral Rowley.

THOUGH drawn up in haste, and published incorrectly, yet they were read, and, in general, met with approbation; but, as the limits of a newspaper confined them to a very narrow compass, and forbade a more minute discussion, the author, who was soon discovered, was solicited by several gentlemen to enter more fully into the subject, and lay them before the public in form of a pamphlet.

WITH this he complied, yet not without hesitation, when he considered how many eminent men had trod the same path before him, whom he knew, he must be contented, *passibus inæqualibus*, to follow

follow at an humble distance, instead of expecting to surpass.

THOUGH the partiality of friends flattered him his remarks would be acceptable, yet the task was not undertaken from a presumption of his being able to convey much information, or throw more light on the subject than what authors had already done, but solely with a desire to be useful, as far as he was able, to that part of the community especially with which he was now more immediately connected, among whom the recent misfortune had spread considerable alarm.

BEYOND the limits of a pamphlet, at first, and a short one too,
it

it was not his intention to lengthen these pages ; but, in pursuing his plan, it was found impossible to furnish even a well digested outline, much less discuss the subject with any degree of perspicuity, within so narrow a compass ; hence it became incumbent on him to extend them.

HE has ventured throughout to deliver his sentiments freely, though with deference, and as freely canvassed those of men much his superiors in abilities, and consequence in the scale of science. For this, he hopes, however, the public will acquit him, by allowing him a right to offer his opinion, provided it be done with becoming modesty.

Here,

P R E F A C E.

Here, indeed, *they*, not *he*, must judge; and he trusts, he shall not be found, in the following pages, to have transgressed in this respect.

HE has collected observations from the works of authors both antient and modern, and endeavoured, as far as he was able, to distinguish between what could be supported on the grounds of rational induction, and what had only (as appeared to him) superstition and credulity to lean on.

THIS essay is not offered to the public as perfect. Far from it. The author is too conscious of its imperfection. Yet he hopes it will be found to contain, at least, an

outline of what is known on the subject. Hints, perhaps, may be gathered from it, as materials for men of greater abilities to work with, who may hereafter turn their attention to its farther investigation. With this view he subjects himself to the public tribunal, not doubting to meet with clemency; but that it will, at least, correct with lenity, where the candour of criticism cannot bestow approbation.

He would here also beg leave to offer his thanks to those gentlemen who favoured him with communications, and for the public use several of them so readily allowed him to make of their remarks. Among others, he holds himself
parti-

particularly obliged to the ingenious and indefatigable Mr. John Hunter, who not only honoured him with frequent correspondence, but, with a liberality of mind, allowed him a public use of the information conveyed, with the sanction of his name to corroborate it, a name which every cultivator of medical science must long hold in esteem. To Sir Thomas Gooch, Bart. he likewise returns thanks for the honour he conferred by his letters, and the satisfaction his answers afforded to some enquiries made by the author on the subject.

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I am indebted for the honour he
conferred by his letters, and the
facility with which he allowed to
publish the observations made by the author
on the subject of the Venereal Disease.

R E M A R K S

*On the Means of obviating the fatal Effects
of the BITE of a MAD DOG, or
other rabid Animal, &c.*

MANY authors, of respectable abilities, have attempted to investigate the nature of the disease occasioned by the poison from the bite of a mad animal. Much has been wrote, and various remedies proposed, almost from the earliest annals of the study of diseases; yet it still remains,

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in a great measure, the reproach of the medical profession.

PROPHYLACTIC means, however, are in our power; for though we have hitherto failed in our attempts to cure the Hydrophobia, as it is generally called, though perhaps with some impropriety, or that spasmodic affection of the organs of deglutition, which, for the most part, take place, yet, by timely care and perseverance, we may, I am persuaded, with tolerable certainty, obviate it.

THE first question that naturally occurs here, is, What are the signs by which we can discover the first stage of madness in the canine tribe? This seems a necessary inquiry, since many are so ignorant on this subject as to rush precipitately on their own ruin, either by attempting to fondle, or shew marks of rash kindness to dogs almost in the last stage of their illness.

THE

THE dog is an animal that, in a particular manner, attaches himself to man. He forsakes his own tribe, and adheres, with a strict fidelity to his master. This gives an opportunity for our observations. Those much accustomed to this animal, can tell when he is disordered, from observing his manner now and before this, and comparing them, with as much ease as they can when any of their family are indisposed. In the early stage, however, it is not so easy to distinguish it with certainty from other diseases, as it has several symptoms in common with them. We find this the same, indeed, in several of those incident to the human body. In the first day, the fever that precedes the irruption of the measles or small-pox, it is a difficult matter to say with precision, what it is, except from the presumptive proof of one or other of these diseases being frequent in the place. A little time longer, however, puts this beyond a doubt; we then observe some symptoms peculiar to the respective disease

disease with which the individual is affected. The same may be said of madness in dogs.

WE shall mention, nevertheless, the following, as those which both observation and the authority of the best authors allow to be founded in fact. :—1. A disinclination for his food : he does not, it is true, refuse it, but he takes it with an evident indifference and listlessness. 2. He is melancholy. It is as easy to mark this symptom in the dog, as in the human species. In health he is frolicksome and playful ; but now he hangs his tail, and, at the approach of his master, or any other members of the family, shews none of that joy with which he was wont to welcome them at their return home. 3. His eyes appear mixed, and less clear than formerly. This may be called the first stage ; yet there is scarce any thing pathognomonic here.

THE second is more distinctly marked : for in a day or two more he refuses both
meat

meat and drink ; shuns other dogs, and is equally shunned by them. Lo ! here, the wisdom of the Creator, who has endowed these animals, commonly called irrational, with an instinctive knowledge for their own preservation. Observation, I think, does not prove they shun one another in other diseases, to which, in common with other animals, they are liable.

Now comes the last stage : he quits the house ; runs forward, he knows not where, or without any particular design ; snaps, in his fury, or, perhaps, through the pain he suffers, at every animal that comes in his way ; and, in the space of two days after, or perhaps less, dies convulsed.

SUCH is the common progress of his sufferings : and such symptoms, we think, will be found invariable. Many others, indeed, might be added, as related by those who have treated more amply on the subject,

ject, but these may be sufficient to distinguish the disease.

FROM this view of the stages of the malady it will appear, that a very little attention might prevent any accident from his bite: for, in the early stage of his illness, when he only lowers and seems heavy, he shews almost no marks of a change in his temper; he neither snaps, nor bites at any person near him; and hence, in dubious cases, where prudence raises suspicions, he might be easily tied up, till time should determine the event. Nor would this be found long; for, perhaps, less than ten days may bring the whole scene to a conclusion, or sufficiently convince us that our fears were groundless.

BUT suppose, now, that this has been neglected; or that the rabid animal has unexpectedly come in the way, and unhappily exercised his fury, too successfully, on one of the human species: what then is to be

be done?—As I am not writing for the information of the faculty, but for the utility and safety of my neighbours, and common readers in general, who may think it worth their pains to peruse this short essay, it may be necessary to inform them, that by the successful, though elaborate researches of anatomists, a set of vessels have been discovered in the bodies of animals, as well human, as others, of the highest importance in their œconomy, called *Lacteals*; sometimes, nay, indeed, more commonly, *Lymphatics*, from the colour of their contents; and possessing some peculiarities not necessary here to be mentioned.

THESE are dispersed plentifully over every part, as well external as internal. Their uses are to separate the nutritious parts of our aliment from the feculencies with which it is united, when taken into the stomach, and convey it to the blood, where it is again farther elaborated into flesh, bone, cartilage, tendon, ligament, &c. by the different organs

gan's adapted by nature for making these new combinations. They drink up, in like manner, the superfluous lymph left in cavities, and other parts, where it had been deposited by another order of vessels, named likewise from their offices, *Exhalents*, and brought hither by them for several useful purposes of nature; among others, for defending the more solid parts from too much friction on one another.

As we cannot wound the smallest part of the skin without opening some of these, whatever comes in their way, so minute as to circulate in them, is drunk up, or, in the language of anatomists, absorbed, and carried, by the assistance of innumerable valves with which they are furnished, onwards with the rest of their contents to the general receptacle, or duct, where they all unite, forming a large canal, which ends under the clavicle on the left side, where it is inserted into a large vein (the Subclavian

vian) that empties itself into the heart, mixing its contents with the whole mass.

IT is by the intervention of these we can ingraft diseases, such as the small-pox ; it is by these the venereal poison, that just tax on illicit pleasures, is received, contaminating the body, and enfeebling the constitution ; and by the intervention of these, the fatal poison in the saliva of rabid animals is conveyed to the organs of life.

FROM this short sketch of the offices of these vessels, so curiously and wonderfully adapted for their purposes by the Author of our being, it will readily appear, that if we can intercept their contents in their passage to the heart, the effects, whatever they may be, whether for nourishment, or for communicating poisons, and the seeds of diseases, must be prevented. Here, then, we have found a clue to guide our way : here, then, reason bids us commence our work.

IT is no easy task to determine, *à priori*, how soon this poison may get beyond our reach. This depends on a variety of circumstances. Among others, on the state of the habit at the time, to receive it; but chiefly, perhaps, on the nature of the poison itself.

WE find from experience, which is here an unerring guide, that different poisons require different lengths of time to exert their force; but these periods, allowing some variation for different habits of body, are found pretty regular with respect to the same poison. Thus, the small-pox, for the most part, appear from the eighth to the tenth day after inoculation; the poison absorbed from unclean embraces has likewise its period, allowing, as above, for the state of the body at the time it is applied; and the same may be said of the poison from a rabid animal (I mean the dog) which, generally speaking, appear about the fifth or sixth

sixth week : some, however, which I would call anomalous, or irregular cases, have gone to as many months, before they discovered themselves by their effects ; but we recollect no well authenticated cases where years have intervened.

To these poisons, too, under different circumstances, we may allow different degrees of virulence ; which, united to the state of the body, and the peculiar idiosyncrasy, or constitution, may assist in forming the variations we observe relative to the propagation of their respective diseases. There is a period of the small-pox which is found more infectious than another, as is well known to those accustomed to ingraft the disease : matter taken from a pustule at this time more certainly communicates its effects. There is a time, perhaps, likewise, when the saliva of an infected dog is tainted with a higher degree of virulency, and this would appear to be, from the histories of cases, the third, or last stage. It is

is then the viscid flaver is secreted in largest quantities; throwing the infected organs into more inordinate and preternatural actions.

To prove that the virus is absorbed in the manner we have endeavoured to describe above, we need only, some days after inoculating the variolous matter, cut out the part, and no small-pox shall appear; no fever shall be excited in the system: it is nothing now but a local complaint, unconnected with the habit at large. Experiments have been instituted for this end, and the event has corresponded with the doctrine of absorption. It is difficult, however, to say, exactly, at what time after inoculation this can effectually be done, because absorption takes place sooner or later from the varieties, and peculiarities of temperament, &c. already hinted at.

WE frequently find the patient, some time before, or about the eighth day, complain of a pain in the course of the lymphatics,

phatics, and in the axilla, of the the inoculated arm; or, if it be in the leg, in the course of the thigh, and in the groin, where we know lymphatics, and lymphatic glands lie. The same may be observed of the venereal disease; and the same remark has been noted in the absorption of the poison from rabid animals.

THOUGH this constantly precedes the febrile symptoms in the one, or the peculiar symptoms that constitute the other relative diseases, yet, were we to make our experiment now, it would not be decisive; it would not prevent the progress of the malady: for, enough of the poison having got beyond the reach of the knife, to propagate the respective disease, our taking away what might remain in the part where it was first inserted, would not answer the end in view. Our experiment here would fail, and it would prove nothing. But when this is done at an early time, when, from the inflamed appearance of the little scar, we
might

might with certainty conclude the disease would be communicated, we may rest assured our experiment shall be decisive.

WHETHER the poison of the mad dog multiplies itself by a sort of fermentative, or assimilating process, as some of the latest and best writers assert of the variolous matter, and that absorption does not take place, to infect the system, till after this new combination is effected, is too obscure a question to enter into here; nor would the readers for whom this short tract is chiefly drawn up, profit from the discussion.

IF this be allowed, however, we may be enabled to prevent the disease at a later period than we shall venture to recommend by the means we are about to mention. But, should accident prevent us from putting those means in practice, which we shall by and by call effectual, it will give a chance, and some, though slender, grounds for hope.

THE girl that was brought to the Edinburgh Royal Infirmary, in 1765, had her arm seared with a hot iron over the scar where she received the bite, as soon as she was examined by the faculty who attended. It proved then ineffectual. It was at too late a period. Some symptoms of the Hydrophobia had already appeared for the two preceding days. This was between the fifth and sixth week from the accident, the most general period at which hydrophobic symptoms begin.

As this case has never appeared in public, as far as I know, I shall lay it before my readers, having been obligingly supplied with it by an ingenious gentleman* who attended

* Mr. R. RHODE, Surgeon to the First, or King's regiment of Dragoon Guards, to whose friendship I am indebted for this case, assures me, he attended punctually from the time she came in till she died. He remarks, that she gave pertinent answers till within a few hours of her death, when delirium ran high, to all such questions as she was asked,--Vid. Appendix:

attended lectures at the time, and extracted it from the hospital books as noted down by the late learned Dr. Drummond, then one of the Clerks, and who was afterwards chosen Professor. Having mentioned his name, the medical reader will give full credit to the fidelity and accuracy of the relation.

THE same means, then, ought to be used in cases of poison from rabid animals, as we have shewn would be effectual in preventing the small-pox. Let the part bit be destroyed: let all be cut away. And from the most rational grounds, and our knowledge of the *modus operandi* of the absorbing system, we may be well satisfied of the improbability of the Hydrophobia afterwards appearing.

To accomplish this, various means may be put in practice, as the surgeon may think fit, or the part where the bite is inflicted may seem to require. But, in what ever way

way it is done, I have little hesitation in asserting, it is the only sure means, yet known, to obviate death.

SOME authors have recommended sucking the wounded part with the mouth, and affirm, no ill can follow from the poison to the person who sucks, as it must be ejected with the saliva with which the internal parts of the mouth are constantly bedewed, and which, as a farther security, may be washed out afterwards with water.*

D

Exam-

* Dr. Berkenhaut is of this opinion : and the same has been entertained by the chief of the Latin physicians, speaking of the poison of serpents, &c. I mean Celsus.—Vid. l. 5. c. 27. “Homo,” says he, “adhibendus est, qui vulnus exsugat.” And he adds, that experience confirms the practice. Then gives his opinion : “Nam venenum serpentis, ut quædam etiam venatoria venena, quibus Galli præcipue utuntur, non gustu, sed in vulnere nocent.” But, at the same time, he cautions them to beware lest any ulcer be in the mouth. “Illud interea ante debebit attendere, ne quod in gingivis, palatove, aliave parte oris ulcus habeat.” It might almost be affirmed from this, that he understood the laws of absorption, were

we

Examples are adduced to prove this succeeded in the bite of other poisonous animals, such as the viper.

DR. BERKENHAUT seems positive the virus may be sucked without danger. Speaking on the subject, and of the bite happening in a part of the body where the person cannot reach it with his own mouth, he says, “Possibly he may prevail on some friend to do him this kind office; especially when I assure him, positively assure him, that it may be done without the least danger.—“My son,” adds he, “then about eight years old, in returning from school, was bit by a dog in the thigh. My eldest daughter being informed of the accident, without the least hesitation immediately
“sucked

we not certain that it is a much later discovery. Some may dispute this; and attribute it to the ancients, when they call to mind Galen's expressions, viz. “*Si fitiens balneum ineat, illi fitis sedabitur.*” Yet I still think the moderns deserve the honour of having pointed out the proper uses of the lymphatic system: and here Doctors Munro and Hunter seem to stand first:

“ sucked the wound. She had heard me
 “ say it might be done with safety.—The
 “ dog,” the Doctor adds, “ was certainly
 “ not mad ; but I relate the story in justice
 “ to her affectionate intrepidity, which, in
 “ a young girl, was somewhat extraordi-
 “ nary.” I perfectly agree with him in
 this ; and give due praise to the lady for her
 affection to her brother.

BUT, nevertheless, some doubts may re-
 main on this subject. Some of the venom
 may stick about the tongue, or fauces, or
 about the gums, &c. and be afterwards
 swallowed ; nor is it yet clear how far
 the poison may be innocent in the stomach ;
 or it may be absorbed from these parts. And
 should any ulcer be in the mouth at the
 time, the certainty is therefore greater.
 Since the possibility of this cannot be de-
 nied, I am of opinion, that no unnecessary
 risque should be run, but all doubt pre-
 vented, as our purpose can be even more
 certainly answered in another way.

BE-

BESIDES, the analogy of the viper may not, in this case, be altogether in point. The *modus operandi* of the poison of a rabid animal, and the manner the poison of the viper, and some other substances arrest the organs of life, do not seem to be the same. We are certain the one acts in consequence of absorption, as already explained : we are not so certain that either the poison of the viper, the rattle snake, or some other noxious animals, who kill by their sting, or their bite, act in this way. Absorption does not appear to be performed so quickly, as to produce the effects of the poison conveyed to the system. The bite of the rattle snake, we are told, proves fatal, in some instances, in a minute—that of a viper in a very few hours.

SOME pigeons which Dr. Areskine exposed to a female viper were dead in so short a time after the bite as half an hour ; others in about two hours. It would appear from this,

this, that these poisons seize on the living principle at once, and deprive it of its powers of action.

IN this way opium acts, though we allow it also acts by absorption. According to the experiments of Professor Munro, it affects those nerves to which it is primarily applied, and brings the rest of the nervous system to sympathize, independent of its absorption, and mixture with the blood.*

IN this way, likewise, the distilled water of the Laureo-Cerasus acts. Dr. Nicolls found it kill a dog in less than half a minute; much sooner than any absorption could convey it to the system at large. Dr. Madden, likewise, found it prove fatal in a very few hours; and this was the case whether it was thrown into the stomach, or up the rectum in form of clyster.† As its

* Eff. & Obs. Crit. & Liter. Vol. III. p. 338.

† Wilmer's Observations on poisonous Vegetables.

its effects appear so speedily either after being swallowed, or injected *per anum*, its powers must be exerted on the nervous system immediately, without the intervention of a set of vessels to carry it to the general mass of fluids.

WITH respect to what may follow from incautiously taking the poison of a rabid animal into the mouth, I may mention a case which was lately related to me on very good authority. A young woman had her apron tore and flattered by a mad dog leaping on her and attempting to bite. Fortunately she received no other injury whatever from him, by the timely assistance offered, and the loose part of her cloathing he caught hold of. But imprudently, and without proper reflection, she began to mend the rent in her apron before the part was either sufficiently washed, or well dried; and as imprudently, to save some trouble, we shall suppose, or through habit, instead of cutting off the thread with scissars, when

when finished, she bit it off with her teeth. Lo, what followed ! In a few weeks she was seized with Hydrophobia, and died in the usual manner of it !

SIMILAR cases have been observed by authors. The following, from Cælius Aurelianus, is almost a copy, as it would seem, of what we have now related.—“ A certain sempstress having undertaken to mend a cloak tore by the teeth of some mad animal, wetted the seams with her tongue, and laid the edges of the rent even with her mouth, as she sewed, in order that the needle might pass with more ease. In the space of three days afterwards she fell into canine madness, and died.”*

THE

* “ Sartrix quædam, quum chlamydem scissam rabidis morsibus sarcendam sumeret, atque ore stamina componeret, & lingua pannorum futuras lamberet affluendo, quo transitum acus faceret faciliorem, tertia die in rabiem venisse memoratur.”—Vid. Cœl. Aurel. de morb. acut. l. 3, c. 9. p. 219.

THE following, which Hildanus affords, appears still a nearer copy.—“ A mad dog” he says, “ tore its mistress’s gown with “ its teeth, but wounded no person. The “ woman, ignorant that the dog was mad, “ mended her garment, and bit off the “ threads with her teeth. Three months “ after she died of Hydrophobia.” *

WE are told by Palmerius of a peasant, who having the canine madness, and knowing he soon must die, desired leave of those about him, who had confined him with chains, to kiss his children. He kissed them, and died soon after. All the children, we are assured, died in the space of seven days after of the same disease. †

WE have also another similar example given us by Schenckius. This author tells
us

* Hildan. Obs. Chirurg. Cent. I. No. 86. p. 62.

† Vid. De Morb. Contagios. p. 266.

us of a Mr. Patric, who kissed his mad dog before he sent it to be stifled, and perished afterwards from Hydrophobia. All this is analogous to what we know of other seeds of diseases communicated to the habit by the absorbent system. The epithelion on the lips, inside of the mouth, fauces, and tongue, is extremely thin ; the poison can be most readily, and even speedily taken up by the lymphatics of these parts.

BUT Areteus, and Boerhaave following him, go farther, and affirm, that it may even be communicated by the breath of the mad animal. Aurelian is of the same opinion, and quotes us an example of it. Here, however, some room for doubt may remain. The person must be almost in contact with the animal, as it would seem to me, before he can be in much danger this way. Yet I hope none of my readers, for the sake of their own safety, in placing themselves so near its reach, will ever make the experiment to ascertain the fact.

IT is affirmed, also, that an instrument which has been used for killing a mad dog, if left unwiped, will retain for many years enough of the virus to communicate the disease. There seems much reason in this observation. We have here, also, the analogy of the small-pox to support it. We know that an infected lancet has given the disease long after it had been touched with the variolous matter.

BUT we are not allowed to rest barely on analogy. An example of this is also afforded us. Schenckius relates the case of a young man who unfortunately cut his finger in wiping a rusty sword which had been, some years before, employed to kill a mad dog, and died hydrophobic.

IN the bites from serpents, where the antients have recommended sucking the wound, we find that experience teaches those where such bites are frequent, not to
trust

trust the poison in their mouths without first moistening them, as a safeguard, with oil.

MR. GOODYEAR, in his account of a Mr. Burdet, an English merchant, at Aleppo, who was bit by a serpent, and who died five hours after, tells us, “ that
 “ the people of the country say, that if,
 “ as soon as one is bit by a serpent, they
 “ shall suck immediately the wound, they
 “ may be saved. But they must rub first
 “ their gums and teeth with oil, that none
 “ of the poison may touch any place where
 “ the skin is broke, and spit out immedi-
 “ ately what they suck ; every time washing
 “ the mouth, and taking more oil.”*

ARE not these examples, then, besides what has been advanced, sufficient, from the nature of the thing itself, to leave doubts on our minds relative to the innocence

* Vid. Philos. Transactions Abridg. by Lowthorp. Vol. II. p. 814.

cence and impunity of taking the poison into the mouth by sucking the wound? and may not a cupping-glass or a narrow-mouthed phial, where the cupping-glass cannot be had, answer as a substitute? * Here no suspicion of danger can remain. Dr. Berkenhaut himself very properly advises something similar: “ If no surgeon
 “ be present,” he says, “ take a pretty large
 “ piece of paper; twist it gently, so that
 “ it may easily be thrust into a narrow-
 “ mouthed jug; light the paper well, and
 “ having put it into the vessel, fix it tight
 “ over the wound, and let it remain in
 “ that position till it may be easily taken
 “ off. Repeat this operation three or four
 “ times.” †

I SHALL

* We are told of a man in London who was bit by a rattle snake brought from Virginia, and that by sucking the wound he recovered. The Indians, it is said, cure it the same way. We have shewn, however, how cautious the people in the East are; their using oil is a presumptive proof that the omission was attended with danger.

I SHALL, without hesitation, then, recommend, and would enforce it, were I able, a piece to be cut out round the part wounded, making the incision at the same time pretty deep, to prevent any accident from leaving any of the animal's saliva behind. I can see little cruelty here, when we compare short temporary pain to the dire scene that we have reason to expect.

THE antients recommend a similar treatment, which Boerhaave, and other authors, in a great measure, copying from them, adopt. Prestwick, no doubt, following them, advises as we have already done. "The wound should immediately," says he, "be enlarged, or entirely cut out; then
 "apply a cupping-glass, with scarifications; after which cauterize the wound,
 "washing it daily with salt water and vinegar, or salt dissolved, and keep it open
 "with escharotics." *

DR.

* Prestwick on Poisons, &c.

DR. MEAD readily assents to this method; telling us, “The cure of this poison
 “is either immediately upon the wound
 “made, or some days after, before the fear
 “of water is discovered”—then quotes the
 antients in support of his opinion—“As in
 “other venomous bites, so in this, Galen
 “very wisely advises” proceeds he, “to
 “enlarge the wound, by making a round
 “incision about it, to cauterize it with a
 “hot iron, and apply drawing medicines,
 “so as to keep it a running *ulcer* at least
 “forty days. Scarifying and cupping may
 “answer where this severity is not al-
 “lowed.”*

DR. CULLEN, whose judgement is
 not, as will be readily allowed, inferior
 to the most celebrated authors who have
 treated on the subject, coincides with me
 in this opinion. “I am, in the first place,”
 says he, “firmly persuaded, that the most
 “certain

* Mead on Poisons, &c.

“ certain means of preventing the conse-
 “ quences of the bite, is to cut out, or
 “ otherwise destroy, the part in which the
 “ bite has been made. In this,” he goes
 on, “ every body agrees; but with this
 “ difference, that some are of opinion that
 “ it can only be effectual when it is done
 “ very soon after the wound has been made,
 “ and they therefore neglect it when this
 “ opportunity is missed. There have been,
 “ however, no experiments made proper to
 “ determine this matter; and there are
 “ many considerations which lead me to
 “ think, that the poison is not immediately
 “ communicated to the system; and, there-
 “ fore, that this measure of destroying the
 “ part may be practised, with advantage,
 “ even many days* after the bite has been
 “ given.” †

SEVERAL

* In p. 14 of this Essay a similar opinion was hazarded.

† Vid. first lines Vol. IV. p. 109.

SEVERAL authors mention the actual cautery, *i. e.* burning the part with a red hot iron. This must likewise, I should think, be effectual, if enough be destroyed. Yet excision would appear preferable, if we consider the time that must pass in the operation of the iron, and, consequently, the augmentation to the sum of pain, which must be in proportion.

THE part being thus destroyed, in either of these ways it may be judged proper, and the patient submits to, the wound must be kept from healing, either by issues, blistering ointment, or other escharotics, for several months; at least six; but still the more certain if longer.

I HAVE seen three cases where this method was followed. These persons were all bit by the same dog (he was certainly mad) in about ten minutes from each other; and in less than a quarter of an hour the operation

tion was performed in the hospital where I then attended. No Hydrophobia ever appeared.

THREE other cases, as shall be related hereafter, were treated in a similar manner by gentlemen of the faculty in this county.* The dogs that bit the persons were also most evidently mad, as appeared from their effects.† I do not go so far as to declare that they absolutely owed their lives and preservation to the judicious treatment that was pursued, because it is impossible to assert whether the poison would have ever become active in them; but, allowing the certainty of this, they surely deserve credit, and the patients acknowledgments, as, in these cases, where so much is at stake, we should act as if we were sure of the poison taking effect.

DR. FOTHERGILL tells us of two persons, the master and the maid servant, who

F

were

* SUFFOLK.

† Vid. Appendix No. 2 and 3.

were bit by a mad cat. In the maid, the wound would not heal up, though endeavours were used for that purpose, till after a considerable time. The little scratch which the master received, soon healed. He became affected with Hydrophobia, and died: the servant escaped. Hence, in his case, absorption took place, and the poison was conveyed to the general mass; in the other, the running of the sore prevented this.

It is probable that dry cupping, and afterwards scarifying the part, might succeed in the prevention of absorption; but it is best to be on the safe side, and extirpate at once, where the part will admit of it.

THE same may be said of a caustic; though I think it more certain than cupping, provided it be long enough applied, and an eschar, sufficiently large and deep, formed; the part, in like manner as in extirpation, to be kept from healing.

SOME-

SOMETIMES it happens that the part wounded is unfavourable for extirpation; nay, for being even long kept open. This will be found the case when either the lips, or parts about the face are bit. In any of these, long running sores prove very troublesome; and are such as few people will submit to. Extirpation of part of either the upper or under lip, has likewise many other inconveniencies: a scar must remain altogether unfeemly, rendering the countenance extremely disagreeable.

THIS, unluckily, happened to be the part where the bite was inflicted in a late case, alluded to in the beginning of this essay. Caustics, however, were applied, and other proper means used, soon after it was received, by a gentleman learned and eminent in the medical world, then called to the patient's assistance. That they did not succeed, might in part arise from the caustic not being applied to every part of the wound;

wound; but with as much, nay more, probability, from some of the dog's saliva getting into the mouth, and adhering about the gums or inside of the lip, from whence it was afterwards absorbed; for "the lip" "was torn a good deal. The teeth" (of the dog) "had gone through and through, and had tore out a piece."*

IN such cases the physician has a most difficult part to act. If he pays too great an attention to appearances, he may fall into the opposite extreme, and lose his patient from lenity and regard to his looks. If he boldly advises extirpation, and his patient survives, he may not escape blameless, but incur his displeasure as long as he lives for disfiguring him, as he will call it.

THE most unfavourable places are those about the face; and of these, the cheeks, nose, and lips, are most so. The fore part of

* Mr. Hunter's letter to the author.

of neck, also, is not without inconveniencies. Yet it is better to act on such occasions, than to run the hazard of suffering the patient's life to fall a sacrifice without attempting so rational a prophylactic. Should the worst take place, we have discharged our duty, without leaving our patient to chance for an escape.

WHERE the wound has been made in the cheek, and has penetrated through, by which some of the poisonous saliva must touch the inside, and thus escape the knife, the caustic, or other such means as is used, we should direct the patient, provided we see him soon after, to wash and scour the inside of the mouth with detergents; salt and water, a weak solution of the vegetable alkali, and such like. And this should be often repeated, using a piece of sponge to absorb all the moisture, and carefully washing it every time it is used, while the knife or the caustic is externally employed to destroy the adjacent lymphatics.

CUPPING may likewise be used here, but I can conceive little advantage that is to be obtained by scarifications; yet, should the surgeon, or medical man called in, think them material, I have no objection to the practice

IF we confide in these means which reason approves, should they not succeed, we know the obstacles, and can pronounce them beyond the power of human skill: for if an active particle gets a little forward into the mouth of a lymphatic, what human skill can tell the part where it lies? and where is the specific that will overtake, and arrest it in its flight?

AMONG other directions which Dr. Fothergill gives, is that of enlarging the wound by gunpowder; this is to be moistened and a little put on the part, and then set on fire. This he considers as a good way of discharging the poison suddenly:

we suppose this is brought to pass by the shock given to the part, while at the same time it forms such a kind of wound as is not readily disposed to heal. In such circumstances as we have already mentioned, where the wound cannot be enlarged with safety, he recommends a blister, and this to be kept open as long as conveniently may be done.

LET no faith whatever be put in those medicines called specifics, and certain preventatives. It will be trusting most certainly to a broken reed. Experience has shewn them not only fallible, but really trifling; and as we now know the composition, it is no difficult matter to prove that such ingredients as compose them are, singly or united, altogether inadequate successfully to oppose the evil.

WE shall pass over that of Aesculapion, composed of burned crabs, as mentioned by Galen and Oribasius; the famous opi-
ates

ates of Scribonius Largus ; the boasted powder of Palmerius ; that of Turpeth mineral, so much extolled by Dr. James ; the tin and mithridate, on which Myern and Grew bestow so much praise ; also the root of the dog-briar, or rose,* said to be discovered in holy visions ; the liver of the mad dog, broiled and eaten ; the pimpinella, (Burnet) of Henry II. King of France, which he is said to have discovered on his death bed to his physician Fernelius ; with several others ; and only take notice of two or three now in common use, and high estimation with the public ; and some of them extolled, even at this day, by physicians of abilities and learning.

ONE that seems to claim our special attention is the Ormskirk medicine. Since its reputation has stood so high for many years,

* *Spongia Cynnorhodia* : P. Boccone wrote a treatise on its virtues. The Scicilians call it *Sanatodos* ; All Heal.—It is called by us Dog-rose, because celebrated in the cure of *rabies canina*. The part used is an excrescence growing about its root.

years, and still is looked on as infallible by many, especially in the northern districts of England.

DR. FOTHERGILL is amongst those who began to doubt its virtues. The melancholy case of Mr. Belamy, which he attended, and for which it had been bought of the person authorised to sell it, and used strictly according to the directions, gave grounds for doubts, which its fallibility since has served to confirm.

LET us now enquire what this celebrated nostrum is. According to the analysis it underwent some years ago, we shall find, it is not composed of a single active ingredient.

IN the year 1777, Dr. Heysham, then a candidate for a degree, who wrote his inaugural dissertation on *rabies canina*, instituted five experiments, in order to find out its component parts. These were made with

the addition of water, the nitrous and vitrolic acids. They were repeated by Dr. Black, Professor of Chymestry, with the same result; and, consequently, there can remain little room for suspicion of their accuracy. From these it appeared, that the basis of the medicine was chalk; and, relying on its powers, a theory was hazarded, relative to the nature of the poison of the rabid animal, which it is not our business here to examine.

IN a word, from the analysis of this eminent Professor, and his ingenious pupil, the whole composition appears to be as follows, viz. Half an ounce of powdered chalk; ten grains of allum; three drams of Armenian bole; one dram of the powder of elecampane root; and six drops of oil of anise. Such is the medicine on which the public have placed such high hopes, and implicit confidence!

I NEED

I NEED not tell my medical readers, if any of them should think these pages worth a perusal, that chalk is a mere absorbent; that allum is an astringent; that Armenian bole, likewise possesses a degree, though a small one, of astringency; and that the root of elecampane is considered as such an inactive, insignificant substance, that our reformed pharmacopoeias have long ago rejected it from the number of the articles of the *materia medica*; and as to the addition of a few drops of oil of anise, they can be of no other use than to warm the medicine a little, and give it a more grateful flavor.

NEXT, in order of celebrity, comes the Tonquin medicine, a nostrum not less noted some time ago, and even now exhibited, than this one. What, then, shall we say, of it?—very little more than of the former. We owe it to the well-meant, though mistaken endeavours, of Sir George Cobb, who, near forty years ago, brought it from Tonquin, whence it derives its name, as of
inefti-

inestimable value, and as constantly infallible among the Chinese; but experience, in many instances, shews the contrary with us, and proves its inefficacy.

LET us now examine its composition; and we shall find it to be only twenty-four grains of native, and as many of factitious cinnabar; with sixteen grains of musk, powdered, and mixed together. Few comments farther, we apprehend, are necessary on the subject. The bare mention of the articles seems enough. We may, however, take notice of what several eminent chymists have done before us, that native and factitious cinnabar are one and the same thing; and we may also add, with some of these, that all the cinnabars are inert, and possess no active powers whatever.

NATIVE cinnabar is the ore of mercury, being a compound of sulphur with this metallic substance. And is there a person of the least chymical knowledge, or experience
in

in its exhibition, and observation of its effects, that does not know this, and that sulphur has the peculiar property of rendering mercury inert?

THE other ingredient, viz. musk, is an antispasmodic. So far it may seem useful in a disease, such as Hydrophobia, where so violent spasms take place in the throat; but it has not sufficient power to oppose and remove the malady. Yet, we must own, that it appears a better medicine than the Ormskirk, since it has at least a small part of one active ingredient in it.

WITH respect to Dr. Mead's famous powder, I shall only mention that it was a composition of ash-coloured ground liverwort (*lichen cinereus terrestris*) and black pepper; the former, the ingredient which he depended on, and to which the virtues of the powder were attributed. Materia medica writers tell us, this lichen is a warm diuretic; but, from the taste, little or no warmth

warmth can be discovered in it; and it is a general rule, which, we believe, will be found to hold good in the vegetable kingdom, that where little or no sensible qualities are discoverable, little or no virtues for the removal of diseases shall be found to exist.*

IN the Transactions of the Royal Society, No. 237, we find a Mr. Dampier communicating to the members, some remarkable effects that had been attributed to a vegetable substance, which was called Jew's-ear,† in the disease we are now considering. In the year 1721, a powder, composed and named as above, was inserted into the London Pharmacopoeia, at the desire of an eminent physician, who put great confidence in its virtues.‡

IN

* *Insipidæ & inodoræ vim medicam vix exercent.* Lin.

† *Tremella Auricula* of Linnæus.

‡ Dr. Mead, on Sir Hans Sloane's authority, changed the *Tremella* for the *Lichen Cinereus Terrestris*, supposing that Mr. Dampier must have been mistaken, and used the former for the latter.—Vid. Berkenhaut.

IN 1745 a new edition of a treatise relative to the mechanical account of poisons was laid before the public. Here the same medicine and method of cure is recommended, viz. V. Section, and the cold bath, which was to be used every morning fasting for one month, in addition to the powder; and on the pompous authority of its success in thirty years practice: but an addition of nearly forty years more proves, beyond a doubt, its insignificance. It is only to be observed farther, that this did not escape the penetration of Boerhaave, who ranks this among those insignificant trifles that must deceive whoever place their trust in them.* To collect, and relate the cases wherein this has failed, is needless: they are many; and the public have at length consigned it to merited neglect.

IF we examine the accounts of hydrophobic cases, we shall likewise find several,
where

* Lewis's New Dispens.

where the Ormskirk has been attended with no better success : enough, in my opinion, to induce us to hold it in a very different light, from what many continue to view it in. Had we only that of Mr. Bellamy, it should lessen our faith, as one positive proof of its failure, is worth an hundred negative proofs of its success, since it becomes impossible to tell, whether the person bit, and who takes it, would have been affected with the disease, consequently, whether it had any share as a prophylactic. But we have three others by Dr. Vaughan ; and I am sorry to add, that a recent instance of its failure in this county* makes another.

IN this last case, both it and the Tonquin, as also mercury, were administered, with strict attention, from a few hours after the accident till symptoms of Hydrophobia made their appearance, which was not till six weeks after.

“ ALL

“ ALL the means recommended were
 “ used in Master R-----’s case. I saw him
 “ a few hours only after the bite.—He
 “ took the Ormskirk medicine by the di-
 “ rection of Mr. Barry, who sells it, there-
 “ fore we must suppose it was properly
 “ given. He also took the Tonquin me-
 “ dicine, viz. musk, cinnabar, &c. as also
 “ rubbed in mercurial ointment till his
 “ mouth was sore.”—My respectable and
 learned correspondent adds, “ My whole
 “ dependence was on the *caustic*, but did
 “ not object to the others being given.”*

THIS case proves more, indeed, than we
 intended. It proves that mercury is like-
 wise useless as a preventative, since it had
 here so fair a trial, and yet Hydrophobia
 took place.

BUT my opponents will say, perhaps,
 it proves more than we wished; since it

H

shews

* Mr. John Hunter.

shews that the use of the caustic, one of those very means we have ventured to recommend, was, in like manner, ineffectual. This, however, I refuse to admit; because, the part was unfavourable: for it was the lip—and this also, cut quite through, where some of the dog's saliva must have fallen on the gums, or been scattered to some distance over the inside of the mouth, or cheeks, or both. “The lip was tore a good deal. “The teeth had gone through and through, “and had tore out a piece.”*

THOUGH the part had all been destroyed, since some of the particles of the infected saliva must have been thrown beyond the part bitten, and, of course, beyond the reach of either knife, or caustic, &c. it was not in the power of man to say where to find it.

THIS being so, as is a rational induction, it proves no more than what has been
already

* Mr. Hunter's letter to the author.

already admitted, and even pointed out, that there are some parts of the body, more than others, unfavourable either for excision, caustic, or cautery ; and that these are about the face ; and chiefly the lips and cheeks. Hence the objection must fall to the ground, and can militate nothing against our general doctrine, with respect to other parts of the body not liable to such inconveniences. The legs, the arms, the thighs, the trunk of the body, and even the fore part of the neck, or the face, will admit of excision, &c. as will also the nose, though the danger in this last is somewhat greater. The cheeks and lips, then, are the chief places where excision may be doubtful ; and the reasons we have given above.

YET these are by no means such as should discourage us. Let us apply the preventative means in our power, I mean the rational means already pointed out ; and let us be careful to touch every surface where the dog's teeth have gone, if we use
the

the caustic, and let several sloughs be thrown off. Let us wash out the mouth with salt and water, or a solution of the vegetable alkali, and then with oil, as already recommended, and we have reason to hope for the best.

NEXT comes the cold bath. From almost the earliest ages of medicine, this has been practised as a cure; and in later times as a preventative of Hydrophobia. The limits we have prescribed to ourselves will not allow of a minute discussion of this point; but since, at this day, it is celebrated, by many learned physicians, as a certain prophylactic; and since cases are adduced in support of its efficacy, I find myself under the necessity of touching a little on the subject. All I can do, it is true, is to give my own opinion; this is incumbent on me; and, in a word, is, that after an impartial consideration of all circumstances, for and against the practice, I am free to confess a disbelief of its virtues.

IN the first place, I can find no rational grounds to rest on. The effects of sea-bathing, which reason bids me expect, are by no means adequate to the destroying, or rendering the poison inert. I see but two ways in which it can act, viz. First, as a purgative ; and yet it must be here a very gentle one. In the manner of suddenly throwing the patient into the sea, &c. a small quantity of the water may be swallowed—but dissections of drowned people shew, that very little descends into the stomach in this act. Death here takes place from suffocation. But we shall allow a little to get beyond the cardia, enter the stomach, and then the alimentary canal, from the observation above, the case is nothing altered. Secondly, it acts as a general corroborant of the system.

BUT all this is little to the purpose. Though we purge, we cannot purge away the poison, which is far removed from our reach

reach here; and though we strengthen the fibres of the body, we cannot stop the process of absorption. Nay, the powers of the lymphatic system would seem thence to be encreased, and the poison the more readily, and effectually, carried to the general mass.

I AM happy to find eminent men adopt my side of the question. Dr. Fothergill, Dr. Flack, and Dr. Berkenhaut, all concur with me in it.—The last, in a judicious review he has taken of this, and several of our noted prophylactics and specifics, is particularly pointed on this part of his subject.*

IN the Philosophical Transactions, No. 445, a case is related by Mr. Nourse, of a lad bit in the thumb by a mad dog. He was ten times dipped in the sea, and took also, we are told, the famous specific
of

* Vid. Eff. on the Bite of a Mad Dog. p. 56 & seq.

of that day, the pulvis antyliffus, for no less than forty days.—Was he cured thereby? No; for it is added, he died hydrophobic nineteen months after: in the interim, however, he was cut for the stone, and perfectly recovered from the operation.*

CELsus, I know, recommends it strongly; not, however, as a prophylactic, but as a remedy for the removal of the Hydrophobia itself. He observed the patient's inability to swallow liquids, and saw, at the same time, his great desire for them: in order, then, that his thirst might be quenched, he directs the sufferer to be thrown headlong, and unexpectedly, into a fish-pond, and there ducked several times, that "his thirst,
" and

* In the Philosophical Transactions, No. 191, Sir Tho. Myern, describing different compositions, which he calls Cures for the Bite of a Mad Dog, mentions sea-bathing. "Let the party," says he, "be nine times plunged in the sea, while he is fasting, as soon as may be after the bite."—I need scarcely take notice of the superstitious regard paid to the number nine.

“ and dread of water, might be cured at
 “ one and the same time.”*

It is needless to make any comments on this treatment. The reader will easily perceive it was founded on a mistake. Though some of the water might get into the stomach, yet the inability of swallowing could not be removed, nor the *aquæ horror* become less thereby. From this, however, the practice seems to have slid down to posterity, and the original intention, mistaken
 as

* —“ Miserrimum (Hydrophobia) genus morbi :
 “ in quo simul æger & siti, & aquæ metu cruciatur.
 “ Quo oppressis in angusto spes est. Sed *unicum tamen*
 “ *remedium est*, nec opinantem in piscinam non ante ei
 “ provisam projicere, & si natandi scientiam non ha-
 “ bet, modo mersum bibere pati, modo attollere ; si
 “ habet, interdum deprimere, ut invitus quoque aqua
 “ satiatur. Sic enim, & sitis, et aquæ metus tollitur.”
 —After this half-drowning, to guard against the debilitating effects of such rough treatment, the patient is directed to be thrown into warm oil, immediately on coming out of the fish-pond.—“ A piscina protinus in
 “ oleum calidum demittendus est.”—Cels. de Medicin.
 l. 5. c. 27.

as it was, exchanged for one on no surer a foundation, viz. that of a prophylactic.

WE find, that in the days of Van Helmont, who lived so late as the sixteenth century, it was only used in the Hydrophobia. This author relates, that he saw a patient ducked in this manner in the Netherlands, near Ghent, at a place on the sea coast, called *Sluce*. Weights were tied, we are told, to his feet, so that he could be kept under water, or hauled up by the rope fastened under his arms, at any time they pleased.

HE was thrice ducked. The first time they let him down, he was suffered to remain under water *ad spatium miserere*, which is about a minute and half; a sufficient time, I think, to suffocate him, though not irrecoverably. At the second and third times, he was allowed only to remain *ad spatium salutationis Angelicæ, i. e.*

I

about

about ten seconds.* This man was a cooper from Ghent. It is added, he was cured by this treatment.

THE case of a girl is related in the History of the Academy of Sciences at Paris, said there to be cured in the same manner; and a gentleman now living, of respectable medical abilities, thinks he saw a person prevented from Hydrophobia by the same means. Two were bit—one used the sea-bathing a considerable time, and escaped; the other did not bathe, and died. But there is the greatest reason to conclude, from reflecting on the matter, that had the sea-bath never been used in this case, the person would have escaped, because he was not really infected; and, had the other bathed with all the diligence recommended, he

Vid. Berkenhaut on the Bite of a mad dog. Psalm 51 begins with the word *Miserere*: Dr. B. counted his stop watch while a friend read over this prayer—he found the time one minute and thirty-five seconds; and the *Salutatio Angelica* only ten seconds.

he would have died, because he was really infected.

MORGAGNI mentions two cases where the patients died, though the cold bath had been used. In the one, the patient died the night following; and in the other case, a little after being taken out. On the whole, to use the words of Dr. Berkenhaut, “ the instances in which it has failed, as a prophylactic remedy, are innumerable.”

SEVERAL, even of the antients, put but little faith in it, no doubt, from the little success they saw attending the practice. Cæsar Aurelianus reprobates it, as injurious; Sallius and others, from their experience, declared against its utility; and, from what Morgagni saw, we may easily conclude what must be the degree of his faith.

DR. MEAD expressly tells us, that he knew many die raving mad, who had undergone this treatment. Default, who has
wrote

wrote on this disease, tells us, he has seen several proofs of its inefficacy in one year. Four men were bit by a mad wolf; two of them were dipped, yet died within the space of one year. Choisel, who has also wrote on the subject, gives his testimony against it, saying, “not one of those who depended
“solely on this remedy survived the bite
“more than thirty-three days.”—It is needless to quote examples; we find but too many on record of its failure.

I SHALL rest, then, with the mention only of one more; I mean the gentleman whose case is related to us by Dr. Munckley in the Medical Transactions.—The afternoon of the same day on which he was bit, he set off for the sea side; this was the 11th of July, 1760.—He stayed there ten days, during which he bathed constantly; yet, in the space of about six weeks after, he became hydrophobic, and died. The words of an eminent gentleman, deservedly high in the public esteem, may be quoted on this
occa-

occasion.—“ I knew,” says he, “ where
 “ there were twenty-one people bit by one
 “ dog. Nothing was done for any of them,
 “ and only one was taken ill. If they had
 “ all taken medicines, then it would have
 “ been said, that they only lost one out of
 “ twenty-one.”—Now, had all these people
 bathed in the sea, it would have had the
 character of a preventative in no less than
 twenty cases out of twenty-one ; sufficient,
 surely, as it would seem, to make us rely
 on its virtues.

SEVERAL authors have insisted largely
 on the use of mercury. Among these are
 to be reckoned Dr. James, the Baron Van
 Sweiten, and Sauvages ; and later still, Dr.
 de Laffone, First Physician to the King of
 France.* Dr. Cullen, likewise, is inclined
 to think well of it, and says, its utility
 seems to be more supported by experience,
 than

* Vid. Methode éprouvée pour le Traitement de la
 Rage.

than most other medicines.* But, I apprehend, we have no right to determine any thing with certainty in favour of the practice. On the contrary, it has failed in so many instances on record, where it was not only tried, but its use pushed to a considerable length, that we have great reason to suspect its virtues; and, perhaps, might be justified in consigning it to the same oblivion with other noted specifics.

WE are told by Dr. de Laffone, that it was tried in eleven out of fifteen persons who were bit, and tore by a mad wolf on the 8th and 9th of December, 1775, within twenty-four hours of each other. Three of these, it seems, trusting to powdered oyster-shells, (a remedy, it is to be observed, somewhat similar to our Ormskirk) died in a few days raving mad. Also a fourth, a young woman, who did not apply for relief till two days before her death, and after Hydrophobia had commenced.

DR

† Vid. First Lines of the Pract. of Physic. Vol. IV.

DR. BLAISE, a Physician of Cluny, had the care of the remaining eleven. They began a mercurial course. One man, after using it for ten days, became hydrophobic, and died forty-eight hours after; and, it is added, he died placidly, and in his senses. A second used it near a month, then became affected, was furious, and died in two days comatose. A third, a boy, who used it, as also some antispasmodic medicines, for eighteen days, was then removed home by his friends, who supposed him safe, but who, three weeks afterwards, died. A fourth was discharged, likewise, apparently well, after using the mercury a considerable time; but, lo! six weeks after, he, also, became hydrophobic, and died. Here, then, are eight out of the fifteen, lost; four of whom were treated with mercury: the remaining seven have their cure attributed to it; but, is it not as reasonable to suppose, they never were infected?

IF we draw a comparifon, it will be found, that a much larger proportion than feven out of fifteen, bit by animals really mad, efcape the infection. “ Twenty-one “ were bit,” fays Mr. Hunter, “ by a mad “ dog ; nothing was done for any of them, “ yet only one fell ill.” This is, furely, a convincing proof of what we now advance. It is added, in Monf. Blaise’s account, that all thofe who recovered had ufed the mercury above a month.

IN the cafe of Abraham Palmer, who was bit in 1783, as lately laid before the public,* we find mercury had a tolerable fair trial ; but it was with equal bad fuccefs. I fhall give my readers an abstract of it in the appendix.

DR. HOULSTON† has given us an extract of a letter from a friend of his on the
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* Vid. Med. Commen. Vol. I.

† Vid. Lond. Med. Journ, Vol. V. No. 4.

continent, wherein, among other information, an account is given of nine persons, in the same prison, bit by the same dog; yet only one of them became hydrophobic. And, it is added, that he was neither the first nor the last bit, nor yet the most wounded. He fell sick, it seems, more than four months after the bite, was under Dr. Houlston's correspondent's care, and died, it is observed, convulsed, but without delirium.

THE case we have several times had occasion to allude to, as giving rise to these remarks, and still so fresh in our memory, was treated, among other things, with mercury.—“ He also rubbed in mercurial ointment till his mouth was sore,”* but with no better success than those we have pointed out.

WHILE Dr. de Laffone and Dr. Blaise extol so much the use of mercury, behold

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the

* Mr. Hunter's letter to the author.

the auxiliary they call in to their aid ! nothing less than the very means I have been endeavouring to establish as the most certain and rational prophylactic. His words (Dr. de Laffone) are, “ It is most certain, that
 “ the remedies we have employed, have been
 “ very successful ;” (is it because seven out of fifteen escaped ?) “ but they would have
 “ been much more so, had they been used
 “ early ; and particularly, if, *almost immedi-*
 “ *ately* after the bite, those external means
 “ had been made use of, which appear to me
 “ indispensably necessary, viz. deep scarifications, cutting away the lacerated parts,
 “ and those adjoining to the wounds ; the
 “ cautery ; applying cupping-glasses ; and
 “ establishing copious suppuration, for a
 “ long time, in the part bit.”—Then he gives his reasons, which are as follows :—
 “ Because, it sometimes happens, that the
 “ saliva is lodged in the cellular membrane,
 “ where it remains, as it were, fixed, and
 “ inert, till, brought into action by some
 “ cause, it enters into the circulation, af-

fects

“fects the nerves, and produces the train
 “of symptoms of this most terrible of
 “diseases.”*

ON the whole, we have several proofs positive of its failure, though it was diligently and properly applied; and, as already remarked, one of these alone, is of more weight in forming an opinion, than an hundred proofs presumptive, since we had no certainty whether or not there was any infection communicated, that would have ever become active.

IT

* Among some remarks by Mr. Odoardi in the Memoirs of the Paris Royal Soc. of Med. Vol. II. we are told of nine persons, bit by a mad wolf, all of whom were treated by mercurial friction, and escaped, except one, who was put under the care of another surgeon, and was not treated with it. He died hydrophobic on the forty-sixth day after.—Vid. Med. Com. Vol. VIII. for 1782 and 1783.—Are these the same we took notice of, as mentioned in the Lond. Med. Journ. for 1784?—It is not said in this last, that any treatment had been pursued.

It is needless to enquire who was the first proposer of this remedy. We may only take notice, that it appears to be of no very modern date. Among others, we find Palmerius directing it to be applied to the wounds inflicted by a rabid animal. But it was in the form, and for the purpose only of an escharotic, viz. sublimate, and red precipitate; that the wound might be enlarged, and the discharge thereby increased.

DESAULT afterwards arose, and advanced a theory, or rather an opinion (for he did not endeavour to prove it) that canine madness was owing to minute vermicles. And as mercury was well known to be a powerful anthelmintic, he proceeded, on this supposition, to administer it.* And, like other gentlemen, who wish to celebrate, and establish their favourite specific, he proceeds to relate cases of its success, as he calls them.

He

* Vid. Default Sur la Rage. 1734, in 12mo.

He also applied it in form of unction to the wounds. To this he joined the use of Palmerius's powder, which, for the curiosity of such of our readers as do not know it, we have added in the appendix.

THOUGH Van Sweiten is inclined to speak favourably of mercury, yet he is ingenuous enough to confess also its failure, and hints at a case in the Medical Effays, which we hold as a very convincing proof of it. For we are told there, of a youth bit by a mad dog, who was then troubled with a gonorrhœa, and who took at the same time his dose of *mercurius dulcis*, and every following morning his purge; yet the frequent use of this medicine did not prevent him from perishing; for, a month after the wound was inflicted, he died hydrophobic.* Here, as we generally find is the case, the wound soon healed up.

DR.

* Vid. Med. Eff. Edinb. Vol V. part 2. p. 590.

DR. DICKSON likewise tried it, without effect. In the beginning of January, 1767, John Brown, thirteen years of age, was immediately carried, after the bite of a mad dog, to the London hospital. The parts affected were the right cheek, and shoulder. These were scarified, and allowed to bleed freely; then mercurial ointment was rubbed on them, twice a day, for ten days, without, however, producing foreness of the gums. Having no other complaints, the Doctor adds, he was dismissed the hospital at the end of three weeks, and continued well for three months; when he suddenly felt a pain in the bitten part, and, in a few days after, died hydrophobic.

It is argued, by several who think well of it, that though it has failed when the body was saturated therewith, and this kept up even for a long time, yet it is not sufficient to condemn its use; for, if a salivation should be raised, and continued for a sufficient

ficient time, they are of opinion, there is great reason to hope for success. Dr. Cheyne is among those who wish to inculcate this notion.—“The cure cannot be certain,” says he, “unless it be brought to rise to a quick salivation.”—His reasoning is as follows:—“For, as the effect of this poison is quick, so must that be of its antidotes.”*—I shall offer nothing against this opinion, but the want of support from experience.

OTHERS who favor this remedy, applied in this way, argue, with respect to its utility, on the grounds of analogy, from the increased flow of saliva occasioned by it, and the same increased discharge from the salival glands, always observable in persons under Hydrophobia. It is supposed, that nature makes efforts to throw off the poison by these outlets; and that if it be assisted by mercury, which is well known to exert

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* Vid. Diseases of Body and Mind. p. 103.

a peculiar power over these, there seems to be ample reason, it is thought, to hope for success ; yet, experience, as we have endeavoured to point out, by no means confirms the practice.

ANOTHER reason for giving mercury, is built on the analogy of its specific powers over the venereal disease, where the poison, like that of the rabid animal, is drunk up, and carried into the habit by the lymphatics. But it surely does not follow, that because it may be a specific over one sort of poison, it is so over others entering the body by the same channels. The small-pox is an apposite example. Mercury was never found to kill the variolous poison, nor prevent the appearance of the disease, when once the habit was tainted. This, then, is a weak argument, and totally unfit to give support to the cause for which it is produced. Besides, we found that saturating the body failed ; but saturating the body with mercury cures the venereal disease, equally well,
 nay

may better, than when salivation is raised; therefore, if it was a specific for killing the poison of a rabid animal, it should prove effectual in this way, as well as in the other. The arguments drawn from this source, I think, are not tenable.

DR. BERKENHAUT, mentioning Default and the Jesuit Choisel, relative to their supposed success with mercury, and telling us, that as he finds where it was thought to be successful, it was always applied in form of unguent, that in several cases it was, at the same time, internally administered, concludes, that the cures attributed to it, must have depended solely on the fat, with which the mercury was united.—“For, evidence” he says, “is wanting to prove, that the
 “ internal, without the external application
 “ of the ointment, will prevent the Hy-
 “ drophobia—May we not, therefore, ha-
 “ zard a conjecture,” he goes on, “that
 “ the lard, or fat, of which the mercurial
 “ ointment is made, is the real preserva-
 L “ tive?”

“tive?”—Here the Doctor seems to allow, that cures have been made by it, which appears to me to want sufficient evidence.—“Is not this conjecture powerfully supported,” he continues, “by the analogy between the canine poison, and that of the viper, which is effectually destroyed by the viper’s fat, or oil of any kind applied to the part.”—He acknowledges, however, that this is mentioned merely as a conjecture, to be determined by future experiments.

In the first place, we ventured it as our opinion, in another part of these observations, that there is little, if any, analogy between the poison of a viper, and those poisons that become destructive from entering the habit by the lymphatics, on account of the suddenness of death attending the bite of the viper, which seems to take place, not by absorption, but by a peculiar power it exerts over the principle of life.—Secondly, that the oil does not prevent Hydrophobia, appears

appears from its failure in a late case, already alluded to, not to mention others on record, where the ointment had also a trial—for, “ he rubbed in mercurial ointment till his “ mouth was sore” *—yet his disease, as the unhappy event proved, was neither protracted, nor cured by it.

THE ingenious Dr. Houlston, it is true, reasons very speciously for it: “ Is the inference just,” he says, “ that because the “ action of mercurials applied, for three, “ or four days at most, will not cure the “ disease in its last hasty stage, the same “ remedy would have been of no avail in “ the interval between the bite and the attack?—During that period, a gradual and “ sufficient action of the mercury might “ have been excited; whereas, when the “ Hydrophobia has appeared, there is scarcely “ ly ever time for any such effect.” † The cases

* Mr. Hunter's letter to the author.

† Vid. Med. Comm. Vol. VIII. p. 306:

cases we have already mentioned would seem to set this entirely aside; yet I shall still be desirous to see farther experiments, either to condemn or confirm its use; though, upon the whole, from these now related, without troubling the reader either with quotations of more, or farther reasoning on the subject, it would appear, that mercury is as feeble an aid to trust to, as others taken notice of.*

I AM

* Among others, we must not omit some mention, of Mr. Douglas, a surgeon, who was a great advocate for mercury, and who wrote some observations on the subject.—Dr. James presents us with a paper of his at large.—Mr. D. in a postscript, takes notice of a dissertation he had then in the press, wherein he considers, it seems, both antient and modern antidotes.—“ From
 “ whence,” we are told, “ it will evidently appear,
 “ by fair analogical reasonings, and various experi-
 “ ments, that, that antidote (mercury) which most
 “ effectually expels the malignant and deadly poison
 “ conveyed by *the sting of a h-rl-t's tail*, must also
 “ be the best antidote against the sting of the scorpion,
 “ the bite of the viper, rattle snake, and all the ser-
 “ pents in the East or West Indies.”—We have refused
 already to admit reasonings drawn from such analogy.—
 Vid. Dr. James on Canine Madness. p. 130.

I AM inclined, also, to believe, much mischief has been done by the injudicious exhibition of this mineral substance, in every disease in which it has been used. How many ruined constitutions do we almost daily behold, from the injudicious use of it for the cure of complaints proceeding from unclean embraces ! Few know its powers over the human body, compared to the numbers who rashly undertake to prescribe it. For, this not only depends on the knowledge of the substance, in all the combinations in which it is used, but on an intimate acquaintance with the structure, and uses of the various parts of the machine (and a complicated one it truly is) together with their pathology, whose irregular motions they pretend to rectify.

It requires nicety to distinguish, how far we should proceed in its exhibition, even in those complaints, where its use is plainly indicated, and where the cure may chiefly depend

depend on it. All these things we call medicines, are extraneous substances, *i. e.* foreign to the body; not being useful in supplying nourishment, or other deficiencies from the waste it undergoes; or, in other words, they are poisons of various degrees of strength, according to their various natures; some of them highly deleterious, and speedily and powerfully active, and lethiferous. According, then, to their powers, and the particular habit they enter, they exert their force, always exciting inordinary commotions. They cannot, therefore, be exhibited with absolute innocence and impunity. In order, however, to prevent a greater evil, a smaller must be sustained. Here is their utility; and here it should stop. To overcome this evil, *i. e.* the disease, without injuring the constitution, and leaving other complaints as the consequence of their exhibition, lies the difficulty. Here, then, we see the necessity of much study, and no less experience, before we take on us the important office of regulating health.

BUT,

BUT, to return ; with respect to the use of mercury, in the disease which is the subject of these pages, an instance might be adduced, which is given me on good authority, where much mischief has been occasioned by throwing it into the habit, and carrying it to too great a length, under the idea of a prophylactic. The person alluded to was bit by a dog ; this medicine was exhibited ; the consequence, as I am informed, is, such a state of debility, as will take a long time, and much circumspection in the physician, to remove.

THE limits we wish to prescribe to ourselves, will not allow us to enter farther on the subject of specifics, else much might be said to prove, that all hitherto known have but little claim to infallibility in removing, or preventing Hydrophobia.

SOME, we must observe, from a peculiarity of constitution, never are affected with
Hydro-

Hydrophobia, though really bit by a rabid animal.* Or the body may happen to be in such a state at the time of the bite, that it becomes able to resist the powers of the poison. We know, that for the reception of several of those poisons that produce disease, especially the class of fevers from infection, when the body is predisposed for their reception, they become more readily infectious, and the more readily exert their force. If the body be in a more tonic state, and not thus predisposed by any debilitating causes, rendering it more than commonly irritable, the poison seldomer takes effect. And hence it comes to pass, that the same poisons of the same strength, acting chiefly upon the nervous system, shall produce, or not produce their peculiar effects, according to the state of the body at the time of their reception.

WHEN

* Dr. Vaughan relates, that between twenty and thirty were bit by a mad dog, and only the one whose case he lays before the public was affected.

WHEN one of these poisons is received, we shall suppose it that of a rabid animal, and it either meets with this peculiarity of constitution, or with a body not predisposed easily to receive it, by which means the person escapes the infection; should some of these specifics be administered, it will be affirmed, the escape was to be attributed to the nostrum. And I have little scruple in declaring my belief, that many a specific owes its reputation solely to this circumstance, not to any virtues it possesses in destroying the poison.

WE find the same peculiarity of constitution, of which we have been treating, resist the variolous virus. Many have been repeatedly inoculated for the small-pox, without effect—Others have purposely frequented the company of persons in the disease, with a desire to catch it, but in vain. To enquire into what this peculiarity consists, is foreign to our present purpose:

pose: it is enough for us to know the fact; and is such as several of my readers, no doubt, have themselves observed.

THE saliva of a rabid animal appears to me to be among the weaker poisons, and, for the most part, to require a length of time to shew its effects, greater than any other with which we are acquainted. From this cause it is, then, that so few of those that are bit, become infected. This is a wise precaution of the Creator, for our good, since its effects, when the poison does take place, are so dreadful, and so much removed beyond the power of medicine, as far as we have yet been able to discover.

A MAN bit by a mad cat did not become hydrophobic till the following May, which was between the eighth and ninth month after the accident.* But this, we own, very rarely happens. We have a second example,
where

* Vand. Wiesel Obs. Rar. Cent. I. No. 100. p. 400.

where the person was bit in December, and did not become hydrophobic, till the beginning of the following May : this was about five months after the accident. And even a third case is taken notice of by Van Swieten, where the effects did not take place, till after five months and eleven days.

SOME are also bit through various thick substances, as folds of cloth ; stockings ; gloves ; perhaps even boots. Here the teeth of the animal must have been so clean wiped, that no saliva adheres to them, and, consequently, no infection can be communicated. This is another case in which, if specifics should have been administered, they would have obtained a degree of credit, which they by no means deserved.

WHEN persons, however, are bit in this manner, to know that the danger is less, may relieve their minds from much anxiety, and from the misery always created by apprehension. Yet, though much be in favour
of

of non-infection in these circumstances, I would not wish, by what I have said, to give a fatal security. It will still be safe to act as if we thought the poison would appear, and either extirpate, or have recourse to some of those means already recommended.

THOUGH I have thus been using endeavours to dissuade from a reliance on nostrums, yet it is not wantonly done. Few men, I am confident, can take pleasure in deceiving; and few would wish to take away that support of hope the miserable lean on, did they not foresee that this security drew after it fatal consequences. Men of undoubted professional knowledge, candour, and humanity, have of late stood forth to destroy this ill-placed confidence. But it is from a thorough conviction of the inefficacy of such means, joined to an ardent zeal for the sake of truth; and when I follow their footsteps, and endeavour farther to enforce their doctrine, it is solely with the same view.

A QUES-

A QUESTION of no small magnitude, in my opinion, comes next to be discussed, *i. e.* at what distance of time from the bite may all dread and apprehension of danger be laid aside? This may be difficult to determine with certainty. We have already taken notice of the difference of constitutions, and the varied degree of virulency of the poison in propagating the disease, and determining the time. But I am inclined to believe, that the period of its appearance is not so distant from that of the bite, nor so indetermined, as some have supposed.

It appears to me extremely doubtful, whether it ever shews itself after lying latent for several years, as some cases of which we read would persuade us. I am not without suspicions relative to their authenticity. I do not at present recollect any on which I can confide, where it shewed itself at a later period than on the nineteenth month, and this only in
one

one case ;* and, till I find more reason to change my opinion, I hold, that all fear and apprehension may cease after one year, or fifteen months at farthest ; perhaps I might mention a much earlier period.

THE man bit by a mad cat, as related in the *Oserv. Rarior. Cent. 1. No. 100. p. 400*, became hydrophobic on the following May, *i. e.* between the eighth and ninth month after.

ANOTHER case is given, of a person bit in December, and who, in May following, became hydrophobic, *i. e.* about five months afterwards.

VAN SWIETEN relates another, where the effects appeared at the end of five months and eleven days.

MR.

* I am not without suspicions of the authenticity even of this case. Mr. Hunter writes me—"The greatest distance we have yet ascertained is eleven months:" and adds, "I cannot suppose, that the time is so vague as is advanced."—Letter to the author.

MR. CHARLES BELAMY was bit on the 14th of February; about the middle of April he felt a pain in the part, resembling the rheumatism, which he had experienced for two or three years before. On the 7th of June following, he took some pills for it.—On the 13th he felt a contraction of the scrotum, a symptom often found on the approach of Hydrophobia—on the 17th he died.—This was five months after the accident.

ABRAHAM PALMER was bit on the 9th of June, 1783.—On the 17th of July he came to the hospital, with symptoms of the disease.—He died on the third day after.

JOHN BROWN was bit in the beginning of January.—On the 30th of April following, *i. e.* three months after, he came to the London hospital.—He died the same day.

THE gardener's servant, who was bit the same evening with John Brown, continued well till the 28th of April; or, in other words, was affected two days sooner.—He died the 1st of May.

THE old man of sixty-nine, bit also on the same evening, by the same dog, became affected about twenty-six days after: but it was twelve days from this till he died; or, about five weeks from the time of the bite.

MASTER R. was bit on the 5th of December, 1784.—He continued without any symptoms of disease till the 11th of January following.—On the 13th he died.

THE poor French woman, who was bit by the same dog a few minutes before, remained well till Friday the 16th of March, and died hydrophobic on the Tuesday following, at Two o'clock in the morning,*

i. e.

* Mr. Hunter's subsequent letter to the author.

i. e. three months and eleven days after the bite.

THE girl Chrifty, who was brought to the Edinburgh Royal Infirmary in 1765, continued well till within a day or two before she came there, which was five weeks from the bite.—She died on the second day after.

THE boy whose case is related by Dr. Mead in the Philosophical Transactions, was bit on the 20th of April.—On the 22d of May he became affected.—He died on the 24th, *i. e.* two days after.

A SECOND patient under Dr. Mead's care, aged forty-five, was bit ten weeks before he saw him, which was on the 11th of November.—He died the same day; but, we must observe, he became affected on the 8th, *i. e.* three days before.

IN a third patient's case, with which the Doctor favours us, the symptoms began to discover themselves on the third month after the accident.—He continued three days under Hydrophobia before he died.

DR. MUNCKLEY's patient [vid. Med. Transf.] was bit on the 11th of July, 1760.—On the 19th of August he felt a difficulty of swallowing—on the 21st he died.

JAMES PATTON was bit on the 18th of November, 1774.*—On the 9th of February following he became affected, *i. e.* very near three months after; and on the 12th, *i. e.* three days from this, he died.

IN one of the cases related by Dr. Vaughan, the symptoms began to appear about a month after the bite.†

IN

* Med. Comm.

† Both the sea-bath and the Ormskirk medicine were used here.

IN a second case, by the same author, the symptoms did not shew themselves till nine months from the bite.

A THIRD was attacked with Hydrophobia in the space of a month after.

OF three cases related by Hildanus, two of the patients became affected at the end of three months; the third, at seven.

DR. LISTER's patient fell ill five weeks after the bite.

DR. HAMMOND's became hydrophobic in six.

WILLIAM BLAND, near Daventry, who was Dr. Adams's patient, became affected four months after.

THE only patient of the nine, who were bit in prison by the same mad wolf, and who

who became affected, died hydrophobic on the fourth month after the accident.*

THE patient alluded to, as related in the fifth volume of the Edinburgh Essays, said to be affected, when bit, by a venereal complaint, died hydrophobic in the space of a month after.

DR. BERKENHAUT's patient was bit by one of his father's hounds, six or seven weeks before he saw him, which was at ten in the morning.—He died hydrophobic at twelve the same evening.

MR. NOURSE gives us a case in the Philosophical Transactions, of rabies, where the patient was not affected till nineteen months after: he then died hydrophobic.—This is the boy, of whom it is said, that between the bite and his death, he was cut for the stone, and recovered.—This case runs to a later period than what we mentioned; but those

* Vid. Lond. Med. Journ. Vol. V.

those from four weeks to three months, are, by much, the most frequent.

WILLIAM KNIPE, a farmer, near Kirby Stephen, remained in health after he was bit, as the account before me says, till about the eleventh month.—This is likewise a later period than, for the most part, we find, takes place.*

CÆLIUS

* In the Whitehall Evening Post for Feb. 12, 1785, we have the following relation :—“ About eleven
 “ months ago, William Knipe, a farmer, near Kirby
 “ Stephen, was alarmed in bed by a noise in his byre ;
 “ when he lighted a candle, and went in, and found a
 “ cow of his in fierce contest with a fox.—He at-
 “ tempted to seize the fox, and received a very severe
 “ bite in his hand.—After three weeks, the cow, some
 “ swine, and several other animals which had been bit
 “ by it, became mad, which alarmed him much ; and
 “ he went to Ormskirk, and took the medicine.—Till
 “ Monday se’nnight he felt no inconvenience from the
 “ bite ; when, in Kirby Stephen market, he com-
 “ plained of a pain, from the wounded hand up to his
 “ shoulder, and went home.—On that evening the
 “ Hydrophobia took place, which held him, at in-
 “ tervals ; and on the Thursday following he died
 “ raving mad.”—Here, then, is another case of the
 failure of the celebrated Ormskirk medicine.

CÆLIUS AURELIANUS places the period of attack at forty days. Galen is much of the same opinion ; as are likewise Paulus and Actuarius.

CHOISEL's patients died hydrophobic in thirty-three days.—Speaking on the subject of bathing, and reprobating the practice, he says, “ Not one of those who depended
“ solely on this remedy, survived the bite
“ more than thirty-three days.”

ON the whole, from these now mentioned, without troubling the reader with any more, I am authorized, I think, to say, that if a period, such as I have already ventured to name, elapses, and no symptoms appear, apprehensions of danger may, with reason, be laid aside.

Books have told, and tradition has kept it alive, that the poison may remain latent for years, and may appear at any time after.

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This notion multiplies fears, and magnifies the idea of danger to such a degree, as to imbitter the whole period of life : this, surely, is a great evil.

As an example, the reader may take that of a person in this place.* The story is told me by a gentleman whose authority I cannot dispute, from his opportunities of knowing.

THE gentleman, it seems, was bit by a dog that he apprehended to be mad. Fear seized him for the consequences. It hung on his mind, and clouded every enjoyment. And though he lived upwards of twelve years after, without experiencing any injury from the bite, yet he was not able to throw his fears aside. It was his constant request to his family and friends, all this time, that if he went mad, he might not be smothered between two beds, but be bled to death in his own garden.—We have little reason to doubt, but many others have laboured under

* IPSWICH.

der the same fears, equally groundless, from a similar cause.

IT is my wish, then, to point out the fallacy, as it appears to me, of this doctrine, and render confidence to any of my fellow-creatures thus unfortunately circumstanced, in the hopes of their security, after a determined time, which, from the cases collated; I have marked as already mentioned,

THE disease itself, which is the consequence of the bite, comes next to be considered. This we shall not promise to do at any great length; as it has already been well described by several ingenious and learned authors, and as little is left to add to the descriptions they have given us.

WE shall pass over all the disputes relative to the antiquity of the disease.—It is of little moment, whether it appeared in the days of Asclepiades, as Le Clerc alledges; or was known in the time of Homer, as Cælius

Cælius Aurelianus labours, by quotations from the Iliad, to prove.

It seems superfluous, likewise, to run over all the variety of symptoms that we find mentioned in different cases, when this dreadful malady manifests itself. They are various in various subjects; perhaps diversified chiefly by the difference of constitution, the age, and the habit at the time. This, we likewise find, is the case in other diseases. The pathognomonic, and peculiar symptoms, whereby it is distinguished from others, are but few.

THE Hydrophobia, or *aquæ pavor* (dread of liquids) has been held, by some, as its characteristic mark: by others, it has been refused, and examples quoted to support this opinion. This, on the authority of several authors, I likewise, till of late, doubted; and thought with them, for that reason, the name, Hydrophobia, improper. Names, however, do not change things;

and since we find a difficulty of swallowing, with a horror at the approach of liquids to the lips, or when they touch the *gula*, a constant attendant, we cannot be wrong in giving this as one of the chief distinguishing symptoms of the complaint.

WE see a dread of water, it is true, attend some other diseases :—the patients refuse, peremptorily refuse, to take liquids. But, I believe, from a comparison of these with those from the bite of a rabid animal, a material difference shall be discovered. I have conversed with many who have attended the complaints: I have seen one which I shall ever remember, though, at that time, I had no medical reading, nor for several years after, being then a boy, which has left such an impression on my mind as can never be obliterated.—The horrors, the tremors, the convulsions of the breast, throat, eyes, and the whole upper parts of the body, at the approach of the cup—the hasty manner its contents are thrown into
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the mouth, when the patient has resolution enough to attempt to swallow, with the scene that immediately follows; are such, as, I am persuaded, have, in no other disease, said to have an *aquæ pavor*, any existence:—and I am confirmed herein by the testimony of many with whom I have conversed, and whose experience in it gives them a right to decide.

I. THE first symptom is generally a pain in the part where the bite has been received, stretching in the course of the lymphatics towards the heart, or where they unite with the sanguiferous system. We might quote many examples to prove this; but, we apprehend, it will be thought superfluous.

THEN come lassitude; inactivity, and torpidness; sensation of a weight; disturbed sleep (sometimes none at all till death closes the scene); terrifying dreams; convulsions; starting of the tendons; perpetual

petual restlessness; sighing; dejectedness;* with a desire of solitude.—External organs of sensation extremely sensible; the smallest motion of the air producing most painful sensations; the light offensive to the sight; great thirst; tongue dry; eyes quick and penetrating, with something not easily expressed in the countenance, yet is what cannot be mistaken, and which differs from the appearance of the countenance in all other complaints.† Cannot bear a recumbent posture; cannot bear to look at any transparent body, such as a looking glass;‡ cannot bear a person in scarlet clothes—or in white

* “Whatever he wanted to obtain, whether to
 “ have some disagreeable object removed, or some re-
 “ quest granted, it was implored in the most piteous
 “ manner.”—Dr. Vaughan.

† “The singular appearance of his eyes, was very
 “ striking; and is, I believe, peculiar to people la-
 “ bouring under the Hydrophobia.—The iris some-
 “ times changes to an orange colour.”—Dr. Vaughan.

‡ “He could look at his own urine in a dark co-
 “ loured chamber-pot, but could not when put into
 “ a glass.”—Dr. Vaughan.

white clothes.—Pulse unsteady, and rather hard; changing frequently; sometimes every minute.—Aspect likewise various, which is easily observed, by different changes, even while one converses with the patient.*—Urine small quantity.

II. SECOND.—The pain in the bitten part now vanishes; muscles of the *gula* now convulsed, as soon as water or other liquids touch them, producing the utmost uneasiness in swallowing; a great sense of suffocation; pain about the *cartilago ensiformis*; sense of a boiling heat in the stomach; strong palpitations of the heart; unusual titilation of the urethra; urine forcibly expelled by spasms; with *scroti, et penis contractio spastica*, to a degree of great pain; after making water, *seminis emissio*.† Great dilatation of the pupil; blind-

* Dr. Fothergill.

† Both Mead and Lister, as well as later authors, take notice of the *venetri frequens erectio cum seminis involuntarii*

blindness, sometimes temporary only; sometimes for two or three days; sometimes continual: and this of either one or of both eyes. Copious flow of viscid saliva.—Reachings to vomit—not always vomiting—yet often regurgitations of the stomach.—The spasms of the cremaster muscle at length cease; at length the eyes lose their fierce, threatening appearance, and become more fixed.

As the disease advances, the pain from swallowing encreases; and liquids are totally

voluntarii jactu—as also Cælius Aurelianus. Van Swieten likewise relates more than one instance of it: among others, he mentions the case of a porter, as given by Hermandes in his *Thesaurus*, who breathed out his soul, as it is there expressed, for the last three days of his life, in this way; and, in Bonetus's *Sepulchra Anatomica*, the case of an old man of seventy is mentioned, who, from the priapism that attended the disease, was urged to converse with his wife. It is observed, however, that some of those said to be so affected, had large blisters on them at the time; and it may, in part, perhaps, be attributed to the irritation given by them—yet, only in part, as we so frequently find it where none have been applied.

tally refused.—Hands and feet become cold : pulse intermits, and is irregular.—The paroxysms of the convulsions return at shorter intervals—are more violent.—Now a constant talking—yet, when questions are asked, rational answers are received from the affected.—Pulse now becomes more frequent.—At length constant delirium—horror—and extreme anxiety.—Sometimes, in the fits, a desire to bite ; but, for the most part, none.—*Risus sardonius*.—Spasmodic affections still encrease, and become so strong as to toss the patient out of bed, if not forcibly held in it.—Death.—This takes place variously—not unfrequently as if strangled with a cord ; sometimes placidly, and without the least struggle ; and, sometimes, even with a smile on the countenance.*

FROM

* —“ He fell back in the bed, and died with a countenance as much opposed to that of the minute before as it is possible to conceive ; the scene being closed with several of the most beautiful smiles.”—Mr. Babington, on Palmer’s case.

¶ Vid. cases in the appendix for a proof of the symptoms.

FROM the first appearance of Hydrophobia, till death finishes the patient's miseries, at a medium, it is about three days.* In one of the foregoing cases, we found it continue twelve days; but this is a rare occurrence.

MR. BELLAMY became affected with the first symptoms on the 13th.—He died on the 17th—*i. e.* on the fourth day.

ABRAHAM PALMER felt some symptoms on the 17th.—He died on the third day after.

JOHN BROWN fell ill on the 30th.—He was brought to the London hospital on Monday, May 4th.—He died the same night at eleven o'clock.

THE

* Dr. Boerhaave places the final period of the Hydrophobia on the fourth day; Dr. Mead, on the second. Perhaps, on an average, we shall be nearer the truth by saying, that the third day from the first symptoms of the disease, is that which closes the melancholy catastrophe.

THE gardener's servant continued well till the 28th of April.—He died on the 1st of May, at noon.

THE old man (Bean) of sixty-nine, continued twelve days, as already taken notice of.

MASTER R. became affected on the 11th.—He died on the 13th.

THE poor French woman grew ill on Friday the 16th.—She died on Tuesday following, at two in the morning.

CHRISTY came to the Edinburgh infirmary ill.—She died on the second day after.

DR. MEAD's first patient became affected on the 22d of May.—He died on the 24th, —i. e. two days after.

HIS second patient became affected on the 8th.—He died on the 11th,—*i. e.* three days after.

HIS third patient continued three days from the time he was affected.

DR. MUNCKLEY's patient grew ill on the 19th.—On the 21st he died,—*i. e.* on the third day after.

JAMES PATTON became affected on the 9th of February, and died on the 12th,—*i. e.* three days after.

WILLIAM KNIPE felt himself ill on Monday, when at Market.—He died on Thursday following.

DR. VAUGHAN's first patient began to complain on Sunday evening.—He died on Wednesday morning.

HIS second patient became first affected on Tuesday June 6th, in the afternoon.—He died about ten o'clock on Thursday evening.

HIS third patient began to complain on the 28th of August, about noon.—He died four days after.

THE period which the disease takes to finish its career, seems to be nearly the same in the human, and in the inferior animals.

IT would appear, however, that the virus takes less time to become active in the canine tribe than in the human race.

WE find the hydrophobic symptoms made their appearance in a dog, bit at the same time with John Brown, the gardener's servant, and the old man Bean, about the seventh day after.

IN several other cases we might quote, where animals were bit, the symptoms came on in the space of three weeks.

FROM the symptoms of Hydrophobia now enumerated, it is evident, beyond a possibility of doubt, that the disease belongs to the spasmodic class. That the affection begins first in the part bit; then proceeds to the throat, and other parts of the body, most of which are, perhaps, affected by sympathy, and consent. We find the stomach, the fauces, external and internal, and the *scorbiolus cordis*, affected in a special manner with a preternatural sensibility. The diaphragm is convulsed; the abdominal muscles are forcibly contracted; hence proceeds the involuntary expulsion of the urine sometimes observable. The priapism likewise, and affection of the cremaster, occur where no blisters have been applied to the body; though, on other occasions, this symptom has been attributed to them.

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BOERHAAVE must undoubtedly be wrong, when he calls the disease *Summè Inflammatorius*: for, surely, neither the symptoms, nor the dissections of such as have died in consequence of the bite of a rabid animal, in the least, authorize us to draw this conclusion. On the contrary, if we consider the symptoms as related by all who have had opportunities of seeing genuine hydrophobia, it must appear evident, that the disease is as truly spasmodic, as any to which the human body is liable.

IF this be allowed, an indication of cure immediately presents itself. The first thing, without doubt, we are to attempt, is, to allay the inordinate affection of these parts. If there be any cure, it must proceed in this line. Here, however, all practitioners have found insuperable difficulties. The time for acting is short; the disease runs its course most rapidly; while the symptoms every moment encrease in violence. The
avenues,

avenues, through which we might expect to combat it, are, almost at once, shut up. The patient can neither swallow food, nor medicine. Yet, let us endeavour to act, and to act also with vigour, while the least possibility remains. It would be cruel—it would be inhuman, to forsake the patient under these melancholy circumstances.

IN most of the cases I have perused, where I consider the disease really had been present, and where the warm bath had been tried, I find it a remedy that gives the greatest, and most speedy relief. All express the comfort they receive from it; and, notwithstanding the reluctance with which they enter, and the horror produced from the very touch of the water, which seems to arise from a morbid sensibility of the nervous system in general, and of the nerves of the cuticle in particular, the benefit and ease they experience, give them courage a second time to surmount the dread they feel, and go into it in hopes of similar relief.

WE

WE find, that after coming out of it they swallow with more ease; and now is the time to administer both food and medicine. One of our chief endeavours should be to protract the disease, and gain as much time as possible for farther action. And this seems to be best done by keeping up the patient's strength. Hence the propriety of some easy digested aliment; and if this cannot be administered by the mouth, nutritive clysters must be had recourse to as a substitute.

ANTISPASMODICS, of the strongest nature, should be applied externally to the throat, and given in as large quantities internally as possible. If we give opiates with the hopes of inducing sleep, we should remember, that as the disease is violent, the dose should be in proportion. We are not to trifle away a moment of our time. It is now most precious. Six or eight times the common quantity may be administered

at once ; and repeated after some interval, if we find the intention not yet answered.

THOSE who are acquainted with the doses of this medicine that have been exhibited in some other violent spasmodic affections, as the locked jaw (*trismus*) tetanus, and a few others of this class, with safety and the happiest effects, will not censure this opinion.

As we wish our medicine to produce its effects in the shortest space of time possible, we must make choice of the fittest form for this purpose. Hence pills are exceptionable, because they do not dissolve, or diffuse themselves speedily enough ; and liquid forms, if it be at all practicable to employ them, are to be preferred. But the irritability of the fauces, highly beyond what we experience in any other disease, and which hardly admits even of the touch of a fluid of any kind, opposes here, most powerfully, our endeavours. I say the irritability of
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the fauces ; for, if the substance could but get into the œsophagus, experience points out, that deglutition, or the pushing, by the force and contraction of the muscles of these parts, the substance into the stomach, is performed with little or no inconvenience.*

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FROM

* “ It was curious to observe, what pains he took
 “ to swallow the medicine, and what perseverance he
 “ shewed in getting it into the œsophagus. He fixed
 “ his eyes stedfastly upon it [Musk scr. j Extr. Theb.
 “ gr. ij in a bolus] for some time, and having applied
 “ it to his mouth, he crammed it as far back into the
 “ fauces as he could reach, which seemed to be the
 “ superior part of the gullet ; after which, deglutition
 “ was performed with little or no difficulty.—This
 “ lack of difficulty in swallowing, when the substance
 “ was conveyed into the œsophagus, I desired some
 “ of the faculty who were present, to remark ; as it
 “ contradicted an opinion universally received, respect-
 “ ing the disorder.”—Dr. Vaughan. Case I. p. 7.

—“ He could chew bread ; but seemed very atten-
 “ tive in keeping it from touching the back part of the
 “ fauces ; and, whenever he attempted to swallow it,
 “ the same symptoms were brought on that ensued
 “ from his seeing water (but in a less degree) until he
 “ had got the substance into the œsophagus, when it
 “ was

FROM the cases on record it appears, that the region of the stomach is much affected. We find a boiling heat, as it is expressed, at the pit of the stomach, in those Dr. Vaughan

“ was transmitted to the stomach without difficulty.”
—Dr. Vaughan. Case II. p. 24.

—“ It is generally believed,” says this author, in his remarks on the disease, subjoined to the case, “ that
“ a considerable difficulty in swallowing is joined to
“ the dread of water ; and that the œsophagus, with
“ the muscles subservient to deglutition, are especially
“ concerned in this disease. The attentive observer
“ will find the matter misrepresented : the principal
“ foundation of the evil seems to rest upon a *morbid*
“ *sensibility* both of the *external* and *internal fauces*. For,
“ the sight of a liquid, or the application of any substance to the internal fauces, but more especially of
“ a fluid, instantly excites the most painful feelings.
“ Nay, the same symptoms are produced by touching
“ the *external fauces* with a fluid; or by the contact of
“ cold air with these parts ; and nearly in as great a
“ degree. But a solid, or a fluid substance being conveyed into the œsophagus, the transit into the stomach is accomplished with little or no impediment :
“ so that, in fact, the difficulty is surmounted before
“ the patient is engaged in the action of swallowing.”
—Dr. Vaughan. p. 46.

Vaughan attended; a symptom that produced great uneasiness, and proves this viscus to have been affected. From this, and the large quantities of viscid saliva secreted in the last period of the disease, a quantity of which must necessarily pass down the œsophagus, notwithstanding the efforts made to eject it by the mouth, the stomach must be rendered more irritable. This cannot fail to prove another great obstacle to the internal use of medicine. The vomiting so frequently observed, must, I apprehend, proceed, in a certain degree, from this vitiated secretion, in addition to the irritability mentioned.

IF we attend to the laws of derivation, and retain a belief, that the encrease of certain discharges, will produce the diminution of others, we may find a second indication; which is to endeavour to open the perspirable pores, and excite sweat. This, if brought about, which will likewise have its difficulties, may dissipate, perhaps, some
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of the poison, and lessen the inordinate action of the salivary glands. It is also well known to be powerfully antispasmodic.

THE skin would appear to be the natural emunctory of many of the violent poisons producing diseases. We find it so of the small-pox; the measles; the poison that produces the white miliary eruption; the poison that excites the scarlet efflorescence in the disease named the *Scarlatina Anginosa*, and a few others. If we may be allowed to reason from analogy in this case, it would appear, that these analogies are not unnatural.

MEDICINES, properly chosen, should cooperate with the warm bath; and a proper attention should, at the same time, be paid to the other natural discharges, I mean urine and stools. For the one, perhaps, clysters will be sufficient; for the other, if occasion requires, we must have recourse to those articles of the *materia medica* adapted
to

to the purpose, and known to every practitioner.

How far bleeding is indicated I dare not venture to say. Dr. Fothergill, and other eminent practitioners, used it with freedom. It is also powerfully antispasmodic ; but it is, at the same time, powerfully debilitating. Here, then, seems to be as much against it, as for it ; and the pro and con so equally poised, that we are at some loss which side to espouse.

To lessen inflammation is out of the question. We have seen, from the symptoms, there is almost none : dissections confirm it still farther : nor does a hard pulse at all times indicate V. S. Irritation (and it is here of the most forcible kind) will give a strong degree of vibration to an artery. A proof that the pulse is affected by irritaton is, its frequent and almost momentary change from soft to hard ; feeble to strong. From the violent degree
of

of excitement in the brain, patients bear bleeding, however, to a greater quantity, without fainting, than in most other diseases. Doctor Fothergill directs them to be bled standing, as they will faint the readier, an indication, with him, to desist.— I dare determine nothing in so critical and nice a point. I must leave it to those of greater discernment, whether it is to be done at all, or how far it ought to be prosecuted.

BLISTERING certainly is more easily determined. Its use is indicated in almost all spasmodic diseases. It seldom, if ever, produces debility; and it often removes irregularity in the distribution of the fluids, &c. But it acts, perhaps, too slow in this case. We cannot have its effects in less than several hours: nor fully, perhaps, in less than from twelve to twenty-four; and, in this time, the disease may have arrived at its utmost extreme. I should not, however, hesitate to apply them over the whole scalp,

scalp, and to the nape of the neck. I am doubtful whether we should blister the throat, as it might prevent our use of stronger antispasmodics. Here, too, it will require sagacity to determine. The comparative power of these must be carefully weighed, that we may not trifle, and the practice commence accordingly.

To administer mercury now, I am fully persuaded, will prove useless. Let us remember the short period that is allowed for life, from the commencement of the hydrophobic symptoms. We cannot raise a salivation, and obtain its effects, in so short a time as two, three, or four days. Besides, in all the cases in which it has been tried, either as a preventative, or for a cure of Hydrophobia, we have already endeavoured to make it appear, that it has failed of success. If we are to be guided by reason, by the pathology of the disease, our chief, and sole hope seems evidently placed in antispasmodics. Musk, castor, camphor, opi-
ates,

ates, zinc, preparations of copper, and such like, ought, then, to be administered. The most powerful should be applied first, to obviate, if possible, that violence, which otherwise must speedily be expected.

I HAVE no new remedy to propose. No boasted specific to amuse the reader with. In place thereof, I have endeavoured, and I think, on good grounds, to shake his belief in all such panaceas; the *inanis jactantia multorum specificorum*, as Boerhaave justly styles them; and to awaken the patient to a sense of his duty for the preservation of his life, while there is an opportunity for it. If his credulity is removed, he has it in his power to apply what reason points out for his safety, and experience, in many well authenticated cases, confirms to be effectual.

HE deserves, we think, some credit, who points out a defect, though he may not be able to supply it. To be sensible of
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our ignorance, to be convinced we have hitherto acted wrong, is one step towards acting right, and towards knowledge, since we then, and not before, turn our thoughts to another direction in search of it. He that can remove an error in so essential a point as this we have been considering, though he may not be able to supply a remedy, may thus be the indirect agent of its accomplishment, in as far as it opens a field for investigators of greater capacity, who may be more fortunate in their researches.

NOTHING is so fatal in medicine as a blind security. Nor should we pronounce any species of disease absolutely incurable. All we have a right to say is, that we cannot accomplish it. For, though the present, and antecedent ages have failed in finding a remedy, we act rashly in concluding the same of succeeding generations. The mind is progressive, and the knowledge of one link in the great chain of causes and effects, serves as a key to the next; this,

again, to another; and so on. A disease may arrive to such a point, that from viewing the ravages it has already made in various parts of the machine, and the comparative strength of the whole, we may justly, and with little hesitation, conclude it incurable in that particular individual; but, at a certain time of the disease, our conclusions ought to have been very different.

I AM unwilling to call any disease, to which the human body is liable, not even Hydrophobia itself, absolutely beyond the reach of medicine. This notion would encrease indolence, idleness, and put a fatal stop to an industrious search after knowledge.

I MAY, however, venture to give it as my own opinion, that no real case of Hydrophobia, well authenticated, has to this day ever been cured. I read of many cures, but I doubt the authenticity of them—*i. e.*

I doubt,

I doubt, whether the disease arising from the bite of a rabid animal really existed in those persons, on whom the cures are said to be performed.

WE all know the power of the imagination over the functions of the body. We all know the effects of fear. If a bite from an animal, suspected to be mad, is received, it instantly awakens apprehension for the consequences. This disturbs the mind, and induces a train of symptoms, in many respects resembling what would have really taken place, was the true disease present.

ONE of the most noted cures we have on record appears to me to be that related by Doctor Nugent of Bath, on which he built an ingenious treatise, at one time considerably read.—His patient's name was Elizabeth Briant. And even here, I think, from a careful perusal of the case, it may be discovered, that imagination, and an apprehension of danger, formed the chief of the

the symptoms which the Doctor attributed to real Hydrophobia.

FROM the time her apothecary advised her to use prophylactics, and go into the cold bath, which was a fortnight after the accident, we find her under considerable agitation of mind. We cannot doubt of her apprehensions being raised by his suggestions. These encreased, till Hydrophobia, it is said, actually appeared. She trembled at the very sight of a dog; nor could she touch one without the greatest emotion. The Doctor tells us she was well, and could again swallow, and continued well for some time, till a person came and told her, that, though she thought herself cured, she might be sure to die, and desired her not to feed herself with vain hopes of an escape. At this, as might be expected, she was greatly moved; and, instantly, all her symptoms returned as violent as before; nor was it without much care, and the exhibition of the same antispasmodics, that they were

removed.—She must, by this alarm, have been thrown into violent hysterics, and, no doubt, had both a dread of liquids, and difficulty of swallowing, symptoms which this *proti*-form disease may, and has, occasionally, put on.

THE Doctor seems, however, to have followed a judicious enough plan of cure.—He saw her disease was to be ranked among the spasmodic class; he therefore administered the most powerful antispasmodics internally, and applied them externally.—He pursued his plan; kept her mind as much at ease as possible, and succeeded in restoring her to health. She was seized, indeed, on the thirty-second day after the bite, which is much about the common time when symptoms of Hydrophobia first shew themselves; but, it was not till after being alarmed at a dog's going mad, that was bit by the same animal which bit her.

IN a case, called Canine Madness, treated successfully by M. Wrightson [vid. Med. Transf.] the disease made its appearance much earlier than we generally find. The boy (Thomas Agar) was bit on the Sunday; on Tuesday the dog was hanged, it is added, with all the symptoms of madness on him.—Next day, *i. e.* Wednesday, symptoms of Hydrophobia, we are told, appeared in the boy.—On Friday, when Mr. Wrightson first saw him, he was tied down to the bed with cords.—The symptoms related seem more like phrenzy, than Hydrophobia; and, from their commencing so early, it inclines me to think, they proceeded entirely from fear. We have few cases of true Hydrophobia on record, where the symptoms shewed themselves at an earlier period than five weeks.—Mr. Wrightson informs us, he pursued Dr. Nugent's Method of cure, viz. the exhibition of antispasmodics, as musk, opium, V. S. and the like.

IN another case, related by Mr. Falkener [vid. Med. Transf.] where the disease was also said to be present, Hannah Moore, which was the woman's name that was bit, felt no inconvenience, till two horses, bit by the same dog, fell ill and died.—All the dogs bit by this mad animal were then hanged.—These things could not fail to alarm her greatly. We are not told at what distance this was from the bite; but a train of symptoms are given, resembling Hydrophobia, and a method of treatment, which proved successful, added.

A GENTLEMAN of veracity informs me of a person bit by a dog, and who, from terror and apprehension lest he should become affected with Hydrophobia, though he had no certainty of the dog's madness, really grew ill, and believed himself already under the disease. A Physician of character was sent for; this was even some weeks after the accident. When he arrived, he
found

found the patient affected with symptoms, which a superficial observer would immediately have called hydrophobic. He treated the case as a nervous affection, using, at the same time, arguments to confirm the certainty and safety of the method pursued; whereby the person soon recovered.

THERE was even a seeming *aquæ pavor*; with some other symptoms, which, at first, made the Physician doubt, whether it might not be real Hydrophobia.

THE story got abroad, that he had cured a case of *rabies canina*, and for some time it was the current conversation of the neighbourhood. This induced my revered friend, who relates me the case, to enquire of the Doctor, with whom he was on terms of intimacy, concerning the truth of the transaction. —The Doctor, however, freely confessed to him, that he believed all the symptoms might be explained on the principle of fear alone, without having recourse to Hydrophobia,

phobia, which, it was his real opinion, never existed.—We know that convulsions, and many other evils, have been induced by fear, and, for years, exercised such force over the patient as to produce much misery.

It has been generally thought, that those affected with this unhappy malady always die mad. This is a mistake. No madness attends it. The patients can converse as rationally as ever, during the time they are ill. This may be proved from almost every case of the disease. All authors who have seen it, confirm this, and generally note it down in their relation of the symptoms.

In the last day, or so, of illness, delirium, and ravings, for the most part, come on, with great violence—continue some time, when they yield, and there is a lucid interval, when the patient discovers his rationality, answering with propriety such questions as are put to him, and shewing no desire whatever to do mischief. These paroxysms of

delirium cannot be called madness; they bear no relation to what we generally understand by this term.

FROM this mistaken notion proceeded that cruel practice of smothering the unhappy patient between two beds, or stopping his breath between two pillows.—I hope, for the sake of humanity, it will never again be practised.—We have pointed out, that the period of the disease, at most, is but short—and though we may despair of curing it—we may, and ought, to administer every degree of comfort to the afflicted which can be done.—Should this notion prevail, all will forsake him; and it will then be considered as expedient to cut short his life.—This has, indeed, too often happened.—Van Swieten tells us, “ Even
“ this severity has been practised by direct
“ permission from the superior magistrate.”
—But he very justly adds,—“ ’Tis, however,
“ cruel to kill a man because we cannot
“ cure him.”—The same barbarity is also
repro-

reprobated by Tulpius,*—and ought, in the strongest language to be reprobated by every man who has attended to the nature of the disease.

I AM not sure how far even their saliva is dangerous; I should, however, be afraid of a bite from a person under the disease, though I can give no direct proof that it can be communicated by the human race. I read of some dissections, where the operator scratched his finger while he inspected the body, and where much more inflammation and pain followed, than is generally found from trifling wounds with an instrument not infected or besmeared with saliva, or other fluids from the corpse of an hydrophobic. But this does not reach far enough for
a proof

* “ Opus non fuit, nec huic, nec aliis ægris (quos
 “ equedem vidi satis frequentes) mortem maturare, sive
 “ per stragula, sive per culcitram (uti loquitur vulgus)
 “ ore impositam. Pereunt quippe per se satis celeriter:
 “ ut pote raro superstites, cum aquæ formidine, in diem
 “ vel tertium vel quartum.”—Vid. Obs. Med. l. 1.
 cap. 20. p. 42.

a proof that the disease may be communicated in this way.

WITH respect to the canine tribe, we find, from the authority of authors, that instruments used in killing mad dogs, and left unwiped, can, after a long time, like a lancet infected with variolous matter, communicate the malady; as also threads wetted with it. We have adduced examples of all these in a former part of these pages. Yet it has been known, that persons have, without injury, put their fingers into an hydrophobic's mouth, and, unhurt, drawn out, from time to time, the viscid, ropy saliva from thence, that gives so much uneasiness. This was the case with the keeper of Dr. Munckley's patient.* Here he not only escaped free from danger, but had not the least apprehension from his biting.—Yet all this was done in the very last stage of the disease.

WHILE

* Vid. Appendix.

WHILE I say this, however, I do not mean to give a decided opinion on the subject ; neither do I wish to dissuade persons from a proper regard to their safety, who attend such patients.—As to the noise, resembling the barking of a dog, which is so often talked of—it is nothing more than the patient's endeavours to get rid of the viscid saliva, which is now preternaturally secreted, and which excites the same uneasy sensations as water itself.—The voice is indeed changed from its natural tone by the disease ; the other is a mere hawking up of something irritating, and troublesome in the throat.—A heated imagination may, on some occasions, call it barking ; but, accurate observation, and rational induction, will always draw a very different conclusion.

WE proceed next to a part of our subject, that, of late, has been the occasion of some public animadversions between the author of these pages, and an ingenious anonymous writer,

writer; I mean the WORMING OF DOGS.— Though this be a matter of less moment, yet, having a near connection with canine madness, in as far as it has been, almost time out of mind, practised, it behoves us to enter a little more minutely into its consideration.

I DOUBT not but it must have been a common practice much earlier than the days of Pliny the Second, though it is from his writings the commencement is generally dated. In a great part of his Natural History, he only collects together things he had either read of, or seen; and, among these, it is but natural to conclude, he had seen the practice of dog-worming, and that it was common in his days, and, perhaps, kept up, by custom, from a much earlier date.

HE has been, however, but short on the subject: but here, as in many other parts of his work, he has been decisive in his opi-

opinion, though erroneous.—“ Est vermiculus in lingua canum, qui vocatur a Grecis Lytra, quo exempto infantibus catulis, nec rabidi fiant, nec fastidium sentiunt.” *

HERE is the whole passage, to which not only our forefathers, but ourselves, have paid, even almost to the end of the eighteenth century, and in the face of physiology, and improved philosophy, implicit obedience, and given to it a stupid belief.

SOME few, however, must be exempted from this charge of simple credulity, who have ventured to assert its insignificancy.—Among these, Dr. James is first to be reckoned. The Doctor was a professed Dog Doctor, and was consulted on the subject from all parts of England, by sportsmen, and others who bred this animal. He spoke, no doubt, from experience: he must have

* Vid. Plin. Nat. Hist. lib. 29. c. 5.

have seen many run mad who had been wormed, and bite likewise; yet he has omitted to give us any examples; and hence, what he has said has generally been looked on as a matter of opinion, and little regard paid to it.—Dr. Berkenhaut, lately, in some observations on the subject, has also treated it with the contempt it deserves.—And, on weighing the subject, in like manner, I could not avoid seeing its absurdity, and being fully of their opinion.

I SHALL quote what Dr. James says on the subject. About to reprobate several prophylactics, the Doctor says,—“ The first
 “ I shall endeavour to set a mark of infamy
 “ upon, is that operation which is called
 “ *worming a dog*; and the rather, because
 “ the notion many people have, that no
 “ dog can go mad after it; and of others,
 “ who firmly believe, that a dog thus
 “ treated cannot bite, though he should be
 “ afterwards mad, may have very untoward
 “ consequences, by lulling those of this
 “ opi-

“ opinion into a fatal security, whilst they
 “ are conversant with the domestic animals
 “ that have suffered this ridiculous cruelty.

“ I HAVE frequently seen dogs wormed,
 “ as they call it, and find it thus: there is
 “ in almost every town, or village, in Eng-
 “ land, some cobbler, or farrier, or hunts-
 “ man, that boasts a dexterity in taking a
 “ worm from under the tongue of a puppy.
 “ Their fee is usually from a shilling, for
 “ dogs of the more genteel sort, to a
 “ penny, or a mug of ale, for curs.—They
 “ elevate the tongue, and with an awl, or
 “ a pen-knife, or some pointed instrument,
 “ make a puncture under it, and draw out
 “ a very slender filament, which I take to
 “ be a *nerve*; and this contracting when
 “ recently taken away, the idiots fancy it
 “ stirs, and believe it a worm, to which it
 “ bears no manner of resemblance.

“ BE that as it may, I am *certain* from
 “ *experience*, that dogs thus treated, run
 T “ mad

“ mad equally with those who have never
 “ suffered this absurd operation. There is
 “ no worm in the part, I firmly believe,
 “ and, consequently, none can be taken out.
 “ All that this can do is, to prevent puppies
 “ from biting or gnawing every thing they
 “ meet with ; and for no other reason, than
 “ because it makes their mouths sore, and
 “ gives them pain when they take any hard
 “ thing in their mouths ; and this breaks
 “ them of the habit.”*

HERE, however, it is to be observed, the
 Doctor is mistaken when he calls it a nerve.
 More accurate observation would have taught
 him, that it wanted even similitude to a nerve.
 Nerves are soft and pulpy substances, and do
 not contract on being cut. On the contrary,
 they elongate themselves a little. This,
 without going farther, ought to have pointed
 out the improbability of this organ's being
 a nerve. To deny its being a worm, is al-
 together superfluous ; I believe, the most
 stre-

* Vid. Dr. James on Canine Madness.

strenuous advocates for *worming* have given up this idea.

DR. BRODIE differs from others in his opinion of it. He thinks it is a gland. On this supposition he has imagined, that there may be truth in the common notion, that wormed dogs do not run mad; or, if they should go mad, as observation proves has been the case, as much as if they had not been deprived of it, they are thereby rendered incapable, it is thought, of communicating the disease.

THOSE who support the idea of its being a gland, argue, that it is necessary for the separation of the poison at the mouth; and hence this gland is given to the animal. Therefore, if it be extracted, the poison cannot be communicated, because the organ necessary to make the separation does now no longer exist.

THIS,

THIS, no doubt, would have been found reasoning, had the foundation been firm. But this happens not to be the case; the thing itself is not true. It is no gland. This part of the argument should have first been well examined; and then there would have been more certainty of the security of the building; which, unluckily, for want of this precaution, tumbles at once in a ruinous heap.

IN the first place, it is not like any other gland in the body. No duct has yet been discovered going out from it, by which, like all other glands the excreted liquor is to be carried away. The parotids, the sublinguals, and all other conglomerate glands, have a canal running from them to the place where the contents are to make their exit, or be deposited, for the purposes of nature.

THE conglobate, or lymphatic glands, as they are more generally called, have their respective lymphatic vessels, or ducts, to carry the contents to the great receptacle, or thoracic duct, which pours its contents again into the blood. It becomes, indeed, the very essence of a gland to have a duct; but no such thing has been discovered here. This alone might convince us, it was no more a gland, than a worm.

MORGAGNI, who has taken some pains to investigate its nature, and whose opinion in what respects anatomical researches, the public place just confidence in, on most occasions, tells us, it is composed of ligament and tendon; and gives it the term of tendinous-ligament.* Had he found reason to suppose it a gland, he would have told us on what grounds he had founded his opinion.

BUT

* De Caus. & Sedib. Morbor. l. 1. c. 8. art. 35.

BUT the naked eye can most distinctly and evidently trace these two substances, separately, of which this eminent anatomist tells us it is composed, in a longitudinal direction, and parallel to each other. The one appears clear, and semi-transparent; the other, dark in its colour. The tendon ends with the body or bulky part; the ligament grows smaller, and leaving the tendon behind, runs out alone, in length near an inch, in one now in my possession, and small, like a fine thread, or rather hair, to connect itself with the substance of the tongue towards its root. What may be the real use of this little organ in dogs, I must leave to more able and accurate physiologists to determine; but, that it is for a different purpose than what many attribute to it, appears to me not only probable, but a rational conclusion.

SOME, who have given up the idea of its extraction on the grounds of preventing
dogs

dogs from going mad, have yet maintained, that such dogs, though they might go mad, never attempted either to bite, or to run away, but died fullen, or sleepy mad, as they express it. This is the opinion of the gentleman who wrote some remarks on the subject, addressed to me.* He thinks wormed dogs cannot bite when mad:— “ Experience having shewn,” he says, “ time out of mind, that by taking
 “ out the tendon that grows under the
 “ tongue, not one single instance has ever
 “ happened of any person being bit by a
 “ dog so wormed. And it has been ob-
 “ served,” he goes on, “ that out of several
 “ packs of hounds, and many other dogs,
 “ that have been mad, those wormed have
 “ fallen off their meat, refused water, and
 “ always died fullen, or sleepy mad, not
 “ one of them ever offering to bite any
 “ thing; when other dogs, part of the same
 “ pack of hounds, which were neglected
 “ to be wormed, though bit at the same
 time

* Vid. Ipswich Journal for Feb. 1785.

“time by the same mad dog, have acted as
 “usual, biting every thing that came in
 “their way.”—The account here given
 seems to have been taken from some hunts-
 man, incapable of distinguishing phænomena,
 or one disease from another: for he
 does not give it as his own, though he
 builds reasoning on it; as appears from his
 saying, “It has been observed,” &c.*

I WAS aware, that his easiness of belief,
 and confidence in the accuracy of others,
 led him to produce these as proofs in favour
 of worming, though reason started up in
 opposition to them. Truth, however, not
 the love of victory alone (for which, inde-
 pendent of truth, no man should ever con-
 tend in philosophic investigations) led me
 to enquire farther into the subject; when
 I was fortunate enough to procure examples
 sufficient to establish my first opinion, and
 to leave no pretence hereafter for the prac-
 tice of dog-worming.

It

* Vid. appendix for the dispute at large.

It should, however, be remembered, that madness is not the only distemper to which dogs are liable. Many have, no doubt, been called mad, that were affected with other diseases.—Dr. James, whose authority in these cases has, indeed, much weight, says there are two sorts of madness; one which he calls *raving madness*; and is attended with delirium: the other, *dumb madness*, accompanied with a sort of *coma*. These are the terms, he says, used by the huntsmen. In the last, the dog lies stupid, and, as it were, senseless, “taking no manner of notice of any body, or any thing, till he dies, never attempting to bite.”* According to the gentleman quoted above, these would have all been wormed dogs. But had they been so, Dr. James would not have omitted to mention it. For then it would have been a sufficient, and cogent reason for his recommending worming;

U

whereas

* Vid. Dr. James on Canine Madness.

whereas, he takes pains, as we have already seen, to reprobate its absurdity.—It would appear, that this last is a sort of fever incident to the animal, and materially different from the other, which is termed *rabies*.

THERE is an evident disproportion between the cause, and the effect which is said to be produced, in attributing to the extraction of the little substance already taken notice of, to the prevention either of madness, or of the animal's incapability of biting when rabid. This cannot fail at once to strike an unprejudiced mind. I wished ardently to put the matter to the issue of positive proof by experiment, the first opportunity, as it appeared to me to carry with it a glaring inconsistency.

MRS. RIPSHAW, keeper of Ipswich gaol, however, afforded me ample satisfaction on this head, sooner than I expected.—He had read in the Ipswich Journal what had been said on the subject, both for and
against

against it.—He has himself wormed many hundreds of dogs; and is a considerable Dog Doctor.—He has often also dissected this animal: therefore, his testimony in a case of this kind, as his veracity cannot be disputed, must appear decisive.

HE relates, and is ready to attest, when called on, that, among others, he wormed a dog for one Cutting, a butcher in this town (Ipswich). That the dog not only went mad, but bit a cow, a gander, and a spaniel of his own, on which he set great value. The cow and the gander went, soon after, mad; and, to prevent the same event in his own dog, he shot him; and adds, that the loss gave him great uneasiness.

AT another time, two other dogs he had wormed also went mad, and both ran away —(the dog we have already mentioned likewise ran away)—but he cannot assert whether they bit other animals.—He wormed also another, when it was a puppy of about
four

four months old. It remained well till about three years after, *i. e.* till about half a year ago; when it went mad, ran away from its master, and bit a great number of other dogs, several of whom went mad soon after. All this can be attested by different people in this place, so that the facts are established on the surest foundation of accurate observation, and faithful relation.

THUS far of worming.—Though, for the most part, the disease is communicated by the bite of an infected animal, yet it may not always proceed from this source. Peculiar circumstances may generate it, independent of a bite. Long continued heat; and, authors say, also long continued cold, may predispose, in a certain measure, to its production: if to this be added putrid flesh meat, want of water, and of proper exercise; these will be other powerful concomitant causes. It is likewise to be considered, that the dog is a species of animal that nature has not endowed with perspirable pores; hence no
per-

perspirable matter can pass off from the body, as in other animals, the whole passing off by the lungs alone. This may, in like manner, contribute its share towards rendering the fluids more acrid, and become an additional occasional cause, while the whole uniting, may produce a *fever sui generis*, and beget a *poison* dreadful in its consequences to every species of animals that receive it into their system.

THE mastiffs which we keep to watch our houses, and which are, perhaps, the most useful species of this domestic animal, are, for the most part, confined to the treatment mentioned here. Their food consists chiefly of putrid horse-flesh, and offals of the animals killed for our own sustenance. It is by this means we give them that fierceness and boldness for which they are valued. This is often kept so long after we purchase it for them, that it becomes almost a mass of corruption itself before it be finished. We may judge what changes it is then capable of

of making on the fluids. We, for the most part, chain them up. Hence it is impossible they can get sufficient exercise, without which no animal can be healthy. Servants are but too often negligent in what is required of them as their duty, and should the task of giving them water be entirely left to their care, there is but too much reason to suppose they will be but very indifferently supplied. As they are chained up all day, they cannot relieve themselves. It would be well, if better attention were paid to these circumstances.

BOERHAAVE is wrong when he tells us, dogs in the first stage of madness refuse all meat and drink. The cases we quote prove the contrary. And this ought to be the more attended to, as it is a common, though very erroneous notion, almost universally received by all ranks. But, as it is fraught with danger, I think it incumbent on me to warn the public of the fatal security that may proceed from it.

Many

Many cases might be quoted to prove the fallacy of this opinion. Dogs so infected as to produce the disease, as experience on too many occasions has pointed out, will fawn on their master or others, fly up and lick their hands in good nature, will take food when offered, without any perceptible change, and appear nearly as in health, only their temper is somewhat more easily ruffled. This, however, constitutes an early stage of the disease. And now, in cases of any suspicion, they should constantly be tied up.

It is a bad method to kill a suspected dog : for then it is not easy to ascertain the fact ; and should it so happen, that persons are bit by him, it leaves them ever after under the dread of apprehension.

In the Academy of Sciences we are furnished with an experiment to prove whether a dog was really mad, who may thus prematurely be killed. How far it is a test

I dare

I dare not say. We are directed there to rub a piece of boiled meat on the teeth and gums of the animal killed on suspicion; and then offer it to another dog. If he was affected with madness, we are assured, the dog to which this piece is offered, will fly from it with fear and horror, barking and howling: if not mad, he will devour it instantly.*

If this test be found good, it cannot fail to prove very useful; especially as many a dog is hunted down, and falls a martyr to the blind zeal of the injudicious populace, and the hue and cry raised by ignorance and precipitate outrage.

A FAR

* Sir Thomas Myern directs, that the feathers may be plucked from the breast of an old cock, and applied bare to the bite. This is to be done on every wound given. If the dog was mad, we are told, the cock will swell and die, and the person bit, do well; but, if the cock dies not, the dog was not mad.—A most accurate and effectual method, truly, of distinguishing *rabies* in this animal!—But it accords with the superstition and ignorance of the times.

A FAR different treatment should, on suspicion of madness, be followed. If the animal be killed, the truth can never be ascertained; and should persons be bit by him, their apprehensions must continue; whereby they must feel all the horrors of their supposed dangerous situation, and all the anxiety that doubt can create.

BUT, should he be instantly tied up, till time had ascertained his real state, either their fears would be removed, or the danger they stood in demonstrated, whereby they might have it in their power to use such precautions as may be judged most proper and expedient in these circumstances.

IT has already been taken notice of, how seldom persons become affected with hydrophobia, even though bit by animals really rabid. We may say, that, on an average, perhaps, not one out of twelve to sixteen, ever suffer any injury.—Mr. Hunter knew

where no less than twenty-one were bit by a mad dog, and only one of them took the disease. Dr. Vaughan tells us, that only one, whose case he relates, took it, though between twenty and thirty were bit by the same dog. Many other observations tend to confirm it. This, surely, is the kind interposition of the Deity in our favour, that a disease so destructive, and, as yet, beyond human sagacity to remove, should so seldom occur, in proportion to the numbers that receive injury from infected animals.

AND here arises another question, worthy, perhaps, of being ascertained, *i. e.* whether as Dr. James will have it, dogs fly from persons actually infected? If so, it would appear to be a strong proof of the salutary instinct of the canine tribe. They shun one another when infected; the acuteness of their olfactory organs, it would seem, gives them notice of some baneful change in the fluids, by the disagreeable effluvia which

which now taints the air, and is offensive to them.

MAY not the same be reasonably supposed of their sagacity, and acuteness of smell, with respect to the human race? There appears nothing unnatural in the supposition; nor is the analogy, by any means, distant.

SEVERAL authors who have wrote on this disease, have talked much about the new and full moon; and the effects of their medicines when given at these times, in preference to any other; and also, that these were the most likely times for Hydrophobia to shew itself.—No regard is to be paid to this,

WHEN Mr. George Dampier recommended his Jew's-ear [vid. *Philos. Trans.* No. 237] on which Dr. Mead afterwards, placed so high a value, under the name of *Pulvis Antylissus*, he tells us, that after a
dog

dog hath bitten man or beast, the effects do not begin to appear till after the new, and full moon. This, in part, however, is true; but true in a different sense, from that in which it was then generally understood. We have both new and full moon in the space of a month; and we know, the disease seldom makes its appearance sooner.—Hence, in this sense, it may be true; and now the observation becomes a farther proof of what has been already pointed out, that few cases of the disease appear at an earlier period after the bite:—but, in the other sense, it is advanced on superficial observation; is fabulous; and without foundation in truth.

ANOTHER period, besides the new and full moon, has been held, by some, as more than commonly ominous; this is the anniversary of the unhappy accident. Persons who have been bit, have had their apprehensions kept alive, and encreased about this time.—They thought, that if the disease

ease was to appear, it would begin its attacks on this day, in preference to any other.—This is a vulgar error; yet it has caused much uneasiness, not only to those who come more immediately under this denomination, but to persons of no mean understandings.

WE have touched already on the effects of imagination, and the power it has in producing disease. A proof of its powers, as well as of this error, may be given from a popular publication, now almost in every one's hands.—Mrs. Belamy tells us, she suffered much from this:—"I had" says she, "discharged my lodgings in town, " (London) together with my footman and " maid-servant; I had sent my Black to " Mr. Woodward, and kept only my old " Grace, a blackbird, and a favourite *dog*."

"THE latter had for some days appeared " to be ill, and refused all food; when, " upon calling him, in order to induce " him

“ him to eat, the little animal flew to me,
 “ with seeming fondness, and fixed his
 “ teeth in my upper lip. Mr. Woodward,
 “ who happened to be present, instantly ex-
 “ claimed,—“ I hope you do not bleed !”—
 “ This, with my observing affectionate ap-
 “ prehensions in the looks of every person
 “ in the room, made me conclude the dog
 “ to be mad, and that I should partake
 “ of this malady.—I was consequently sei-
 “ zed with inexpressible horrors ;—and, if
 “ I did not fear death itself, yet I could not
 “ help being shocked when I imagined him
 “ (Death) to be approaching with unusual
 “ terrors.

“ It is well known,” she goes on, “ that
 “ dangers appear much more alarming in
 “ apprehension than in reality. My feel-
 “ ings, on this present occasion, confirmed
 “ this truth ; for Mr. Bromfield, who had
 “ been sent for as soon as the accident hap-
 “ pened, declared, that I felt infinitely more
 “ than if the salival infection had operated
 “ in

“ in its full force. Such a deep impression
 “ did this event make on my mind, that,
 “ for several years after, I was in *agonies*,
 “ upon the *aniversary* of the day on which
 “ it happened.” *

IT will be to me infinite satisfaction, if
 I can become the means of removing, from
 the minds of any of my fellow-creatures,
 the dread occasioned by a belief in these
 erroneous and hurtful notions.

I WISH, for the safety of individuals, we
 bred fewer of these animals than is now in
 fashion. We seem to be multiplying the
 breed without end—and this also without
 any good whatever in view. We throw
 away on our dogs what might be of great
 service to the poor—in this, I cannot help
 thinking, we are criminal. A tax on dogs,
 I am sincerely of opinion, would prove of
 public utility, as well in regard to the pre-
 vention

* Apology, Vol. IV, p. 137.

vention of Hydrophobia, as in a political view.—With politics, however, I have no business.—But, surely, the accidents happening from these animals becoming rabid, must bear some proportion to their numbers.

I SHALL now, to save my readers some trouble in turning over the works of authors, collect the principal parts of the practice followed in a few cases of the malady. I shall begin with Dr. Fothergill's patient—Mr. Charles Belamy of Holborn.

AFTER giving us the symptoms, with an account how the accident of the bite took place, the Doctor says, “ To gain a
 “ little time for reflection, on a case so sudden and so dangerous, and that nothing
 “ which seemed reasonable to be done,
 “ might in the mean time be omitted, I
 “ ordered six ounces of blood to be taken
 “ from the arm ; that a scruple of native
 “ cinnabar, and half a scruple of musk,
 “ made into a bolus, might be given every
 “ four

“ four hours; and that as much nourish-
 “ ment, fruit, or any thing he chose, might
 “ be got down, as possible.”—Dr. Watson
 was called in to the Doctor’s assistance—
 they met at five the same evening.—He
 had taken only two of the boluses, a few
 bits of bread moistened with wine, some
 strawberries, a few bits of pudding, but had
 not attempted to drink any liquor. They
 begged him to drink some liquid for their
 satisfaction:—he consented.—“ He threw
 “ it hastily into his mouth, and swallowed
 “ it with difficulty, and extreme pertur-
 “ bation. The moment the liquor touched
 “ the *gula*, all the muscles concerned in
 “ deglutition appeared to be convulsed.”—
 No evacuation by stool to-day.—“ Upon
 “ maturely considering this very hazardous
 “ state of things, we agreed on the follow-
 “ ing process :”—“ That he should then be
 “ carried to the warm bath, and remain in
 “ it, so long, and to such a degree of heat,
 “ as was most agreeable to himself. Next
 “ a glister of a pint of milk and water to be

“ administered : This to be repeated as of-
 “ ten as it could be conveniently done. In
 “ the last of these clysters a dram of Dover’s
 “ powder was to be given.”

“ THAT two drams of strong mercurial
 “ ointment should be rubbed by himself on
 “ his legs and thighs, as soon as he returned
 “ from the bath, and that he should endea-
 “ vour to get down all the sustenance he
 “ could.” Next day, the report received,
 was, “ the laxative clyster had produced a
 “ proper effect. The warm bath relieved
 “ him greatly whilst he was in it, so that
 “ for a time, as he expressed it, his sufferings
 “ were suspended.” Slept none all night—
 great distress—copious flow of saliva—
 pulse hard and quick.—They agreed, “ that
 “ he should be blooded standing, according
 “ as his strength would bear ; that he should
 “ be conveyed to the warm bath, and re-
 “ main as long as he could, agreeable to
 “ himself ; that as soon as he returned from
 “ it, the clyster, with a dram of Dover’s
 powder

“ powder, should be administered ; and that
 “ half an ounce of mercurial ointment
 “ should be rubbed on his legs and thighs as
 “ soon after as might be done conveniently ;
 “ and also on coming out of the bath, three
 “ grains of Theb. Extr. to be given ; and
 “ two every hour after.” This visit was in
 the morning.—At five this evening also
 they again visited : he received them with
 the utmost transports of joy ; and “ de-
 “ scribed in very strong terms the pleasure,
 “ and the benefit he received from the warm
 “ bath, and the hopes he now conceived of
 “ a speedy recovery. He had not slept a
 “ moment from the time he was seized with
 “ the dread of liquors. He repeatedly ex-
 “ pressed the satisfaction he received from
 “ the bath, and wished to go into it again.
 “ They consented.” This was the third
 time ; but he now felt himself consider-
 ably more agitated at the sight of the wa-
 ter—his resolution almost forsook him—
 putting in, on much intreaty, one foot—
 then hastily withdrawing it, &c.—at length
 he

he went in, and remained in it half an hour.
He died two hours after.

*Dr. Vaughan's patient, a boy of eight years
of age. The accident happened in 1778.*

THE DOCTOR tells us, he began with the
warm bath—" the sight of which occasi-
" oned some commotion, and produced
" marks of disgust and fear. These were
" overcome by persuasion, and he was pla-
" ced in it. The moment he touched the
" water, his painful sobbing and disgust to
" it were encreased. These subsided in a
" few seconds, and he then told me he felt
" easier; but it was observable, that these
" symptoms were renewed as oft as a fresh
" surface was touched by the water. He
" was kept in the bath near three-quarters
" of an hour, during which time he fre-
" quently said, that he felt less annoyance
" from his disorder."

ON coming out of the water, a plaister was applied to his throat, of which Sachar. Saturn. was the basis. The Doctor now tried what could be done by the metalline antispasmodics, and he prescribed the following :

R. Flor. Zinc. gr. j.

Cupr. Ammon. Semigran.

Mosch. opt. gr. x.

Syr. Simpl. Q.S. ut fiant pilulæ duæ molles ; Sumantur hor. tert. vel quart. quoque.

A LINIMENT, consisting of three drams of the strong mercurial ointment, with the same quantity of oil of amber, was to be rubbed on the shoulders and back ; and a clyster, made of five ounces of fresh broth, with thirty drops of laudanum, was to be injected soon after going to bed. To these the Doctor added a medical atmosphere, made by burning G. Ammon. in his room.

BETWEEN

“ BETWEEN nine and ten o'clock this evening, he took some bits of bread soaked in milk, but with difficulty.”

AT eleven o'clock the pills were repeated. At twelve the symptoms encreased greatly. He was again put into the warm bath; and after coming out, a broth clyster, with a dram of Tinct. Theb. was ordered to be injected; and the mercurial liniment to be repeated. He continued now near two hours in the warm bath, “ feeling himself much “ more comfortable the whole time.” Both the clysters he had got come away, bringing with them some hardened feces.

EACH dose of his pills were now ordered to contain two grains of Cupr. Ammon. the same quantity of Theb. Extr. three grains of Fl. Zinc. with ten grains of Ass. Fœtid. which was substituted for the musk; whilst a solution of that Fœtid Gum, with a dram of Tinct. Theb. was administered as a clyster.

ter. The above pills, though repeated every four hours, afforded not the smallest relief; “ nor did they shew the least action upon “ the frame.”

AT eight o'clock in the morning he expressed a strong desire of going into the warm bath again. “ This was complied with, a “ temperate one of *milk* and *water* being “ speedily prepared. He went into it, but “ with perturbation—though temperate, yet “ he complained greatly of its heat: in a “ quarter of an hour he was weary, and desired to be taken out of it. A purgative “ clyster was afterwards given to remove “ some little fullness that was in the “ bowels.”

“ SEEING of how little avail every thing “ had hitherto proved, and being clearly “ convinced of his inevitable fate,” says the Doctor, “ I was at length determined to put “ in force the remedy which Helmont “ speaks of in terms so favourable; but let
me

“ me add, not with much expectation that
 “ this would prove more successful than
 “ those powerful ones, which hitherto in
 “ every case had been so fruitlessly em-
 “ ployed.”

A large tub of cold water, well saturated with common salt, was made ready, into which this patient was suddenly plunged over head and ears, and there held until he ceased to struggle. He was then taken out, and the same operation again repeated, until he became so quiet, that it was apprehended a total extinction of life would actually have taken place.

He was then wrapt in a blanket, and put to bed, where he remained more quiet than he had been any part of the preceding night, and so continued for near two hours. He now repeated his medicine; all his bad symptoms returned with added force. At eight o'clock he took some pills of camphire and

and nitre, with two grains of opium. He died a little before two.

A second patient treated by Dr. Vaughan.

—He was twenty-five years of age, and the accident happened in 1775.

THE warm bath was used as in the other; also the purgative clyster: this procured a stool.—A second was to be thrown up, consisting of four ounces of oil, with half an ounce of Extr. Theb.—Four grains of Ung. Cærul. Fort. were to be rubbed on the fauces, and the part to be covered afterwards with the cataplasm. e Cymino; to which was added half an ounce of Extr. Theb.

AN embrocation was applied to the region of the stomach, with continued friction, consisting of Sp. Sal. Ammon. half an ounce—Ol. Olivar. ten drams; six drams of oil of amber; and ten drams of laudanum.

STRONG mercurial ointment, to the amount of two ounces, to be rubbed on the back and shoulders; and, as a farther means to induce a speedy salivation, he was to receive the smoke of cinnabar into the mouth, by throwing a dram of that substance now and then upon a hot iron—thus of external means. The internal were as follows:—R. Mosch. opt. gr. xv.—Mercur. Emet. flav. gr. iij.—Extr. Theb. gr. iv.—Syr. Simp. q. s. f. Bol. Mollis.

WHILE in the warm bath, he felt himself easier also—under the application of the ointment—but the plan did not succeed—he died.

A third patient treated by Dr. Vaughan.

AFTER the Doctor relates the symptoms, which are not to be repeated here, he tells us, “ In this situation he (the patient) was

“ or

“ ordered to go to bed ; having first swallowed a scruple of musk, with two grains of Extr. Theb. made into a soft bolus.”—He was fourteen years of age—his name, Thomas Nourse.

AFTER reflecting on the nature of the disease (it is to be observed, this was the first of his three patients) he gave a composition of fifteen grains of musk ; one of Turbeth mineral ; and five grains of Extr. Theb. made into a soft bolus ; and this to be repeated every three hours :—an ounce of strong mercurial ointment was likewise directed to be rubbed on the cervical vertebræ, and shoulders ; and the following embrocation ordered to be applied to the throat, renewing it as often as the part grew dry :—R. Tinct. Theb. unc. du. — Acet. Saturn. semiunc. M. —He could not bear this to touch him without being thrown into convulsions ; therefore, the following was substituted, which he bore very well :—R. Extr. Theb. semi-

femiunc.—Camphor. sp. vin. in pulv. redact. drachm. tres.—Confect. Damocrat. drachm. sex—M. f. Empl. faucibus externis applicandum.—The warm bath was kept in readiness, but he could not bear the touch of water.—Before he came under the Doctor's care, he had taken the celebrated Ormskirk medicine, and had bathed in the sea: this process was entered on the day after he was bit.—He was bled on the Tuesday morning, and took another dose of the Ormskirk, which was the day the Doctor first saw him.—At two o'clock he repeated the musk medicines mentioned above, with less hesitation than he had done before; and, “was more comfortable to himself, “and, with tolerable ease, got down some “mouthfuls of bread and butter.”—His medicines were again repeated at five; and he took them with as little difficulty as the last—“Matters, therefore,” says the Doctor, “wearing a less terrible aspect, I could “not help flattering myself with hopes, that “this dreadful disorder would at length be
“con-

“conquered by the combined powers of
 “musk, opium, and mercury.—My expect-
 “tation was of short continuance.” For
 in two hours after, it seems, every symptom
 recurred with greater violence.

AT eight o'clock in the evening his medicines were again repeated:—he took them now with reluctance.—An hour after, every thing wore a worse appearance.—He took five grains of opium without musk—and Turbeth mineral; but with great difficulty.—Another ounce of mercurial ointment was rubbed on his shoulders; and half an ounce of Tinct. Theb. mixed with six ounces of mutton broth, was given by way of clyster.—The disease still encreased—at eleven o'clock, every thing was worse.—In the next paragraph the Doctor gives us a melancholy picture:—“He had also all his
 “complaints aggravated by the improper
 “conduct of his attendants; who, prompted
 “by their fears, had almost persuaded them-
 “selves, that the opinion universally re-
 “ceived

“ceived by the common people, of *smo-*
 “*thering* such unfortunate objects was not
 “only justifiable but expedient. For I
 “found them confining the poor creature
 “under the bed-clothes, by the united force
 “of half a dozen strong assistants; whose
 “countenances bespoke the terrible appre-
 “hensions they were under.” The Doc-
 tor’s humanity immediately set him at li-
 berty.—“Being sensible of the ill treatment
 “he had received, he became suspicious of
 “his attendants, and less attentive to my
 “instructions.”—Dr. Vaughan severely re-
 primanded them for the treatment they
 used, and, at the same time, soothed the
 patient, using mild persuasion, by which
 means he had his instructions again obeyed.
 —“I had scarce” says the Doctor, “left
 “the room, before a loud scream bespoke
 “some unexpected change. Upon turning
 “my head to discover what this meant, the
 “boy was at my shoulders, having sud-
 “denly quitted his bed with an intention
 “to follow me. To this he immediately
 “re-

“ returned at my request, without having
 “ shewn the least inclination to bite, or be-
 “ traying any thing farther than an ill opi-
 “ nion of those by whom he had been so
 “ improperly treated.”—A larger dose of
 opium was given to him—it proved ineffec-
 tual.—His strength failed him from this
 till about two in the morning—when he
 died.

*Mr. Bathie's patient, James Patton,
 about fourteen years of age.—The acci-
 dent happened in November, 1774.*

I SHALL relate how it took place, as the
 truth of an assertion I have made in these
 pages will thence appear.

PATTON was a shepherd boy; and “ in
 “ the field, in company with two of his fel-
 “ low-servants, who observed a small sheep-
 “ dog make up to the unfortunate lad, using
 “ the ordinary demonstrations of *tameness* and
 “ affection peculiar to that species of animal
 “ in

“ in a state of health. Far from exhibiting
 “ any appearance of madness, he deceived
 “ the boy by *fawning upon him*, and, *with-*
 “ *out reluctance, eat bread*, which he threw
 “ down to him. One of the men desired
 “ the lad to tie a cord about the dog’s neck,
 “ to secure him from running away, whilst
 “ the other, suspicious of hazard, by ob-
 “ serving his *eye* very much *inflamed* and *dull*,
 “ called out to the boy to let him alone;
 “ but he was not attentive to this caution,
 “ and attempted to fasten the cord round
 “ the neck of the dog, in which act the
 “ dog turned and bit the back of his right
 “ hand, between the small and ring fin-
 “ gers.” He ran off, we are told, and, four
 or five days after, was killed as a mad dog
 in a different parish, by people who had not
 heard of this accident.

I THOUGHT it necessary to give this part
 of the history of the accident, because it is
 generally believed, that if a dog either
 fawns, or eats, he cannot be mad:—but
 this

this is a most dangerous tenent; and, I doubt not, is the means of lulling to a fatal security, till the time for prevention of the evil consequences has elapsed.*

A a

He

* An accident happened to two persons in this neighbourhood, one on the 7th, the other on the 9th of April last: one a boy of about fifteen, the other about forty.—It was not without considerable difficulty I could persuade some gentlemen who then conversed with me on the subject, that the dog was mad, because he “*eat his food, &c.*” I knew, from the experience of authors, the fallaciousness of this opinion, and thought it my duty to oppose it.—The dog had been bit some weeks before by a mad dog—he was tied up on suspicion—and had only been a few days liberated when he bit the above people. I requested he might be again tied up, if he returned (for he went off immediately, and, they added, without his dinner, which he had never done before). He returned the same night. He was again tied up—this was on Friday.—By Sunday evening he became so furious, that he was declared mad by all who saw him, and they became so alarmed lest he might get loose, that they knocked him on the head.—When he was first tied up, he bore the chain very well; but it was very different now.—So great was his fury, that he wounded his mouth considerably in biting at the chain which held him, and deeply impressed the marks of his teeth in it, tossing and raging about at the same time. It was
 twenty-

THE lad had been three days under Hydrophobia before Mr. Bathie saw him.—His pulse at this time was from one hundred and twenty-five to one hundred and thirty.—A pound of blood was immediately taken away—nothing remarkable in its appearance.—The disease had now got to a great height, and no hopes of a cure. To satisfy the patient's friends, however, Mr. B. gave him a grain of T. Emet.—he had a propensity to vomit—Mr. B. thought this might assist it a little. A clyster had been
or-

twenty-four hours after the lad was bit, before I saw him; and about two from the time the man received his bite. I had the wounds treated as I have directed in this dissertation by an ingenious surgeon at Woodbridge (Mr. Page) leaving directions to keep the wounds open as long as it might be thought necessary; by which means, I hope, they will experience no other inconvenience than what may arise from the keeping a sore open.—But, should it turn out otherwise, I shall think it incumbent on me to lay the whole before the public.—Two swine were likewise bit at the time with these persons—these were also ordered to be tied up, to see what the result might turn out.—It is now seven weeks since, and all is yet well.

ordered, but it was not given.—He died about eight in the evening.—The following is worth mentioning :—“ When an uncle
 “ of his was offering him a bit of bread, a
 “ little before he grew quiet, *i. e.* a little
 “ before he expired, he made a snatch, and
 “ bit his thumb; but the man luckily
 “ had the prudence and resolution to cut
 “ out the part that was bit, and so remains
 “ free from any apprehension of hazard.”

*Treatment of Mr. Babington's patient,
 Abraham Palmer.—The accident hap-
 pened on the 9th of June, 1783.*

NEITHER excision nor caustic was had re-
 course to.—“ As there was no particular rea-
 “ son for supposing that the dog was mad,
 “ and as excision, or the application of the
 “ caustic, would have been painful, if not
 “ dangerous, and perhaps with difficulty
 “ submitted to, it was judged sufficient to
 “ direct, that the hand should be well fo-
 “ mented with milk and water, to get it soft
 and

“ and clean, and that about a dram of strong
 “ *mercurial ointment* should be rubbed in
 “ every day for four or five days, dressing
 “ the wounds afterwards superficially, with
 “ a little lint and cerate.” It is worthy of
 remark here, that “ there was no *particular*
 “ *reason* for supposing that the dog was
 “ mad.”—Hence the prudent suspicion that
 should be entertained on receiving a bite
 from any dog—and the necessity of speedy
action accordingly:—to trust to chance, is
 sporting with life. Nothing more was
 heard of the boy (he was about fourteen
 years of age) till Thursday the 17th of
 July, when he returned to Mr. Babington.
 He had felt some symptoms the day before
 —the case was evident.—“ The period was
 “ now past when any advantage could be
 “ expected from local applications, yet hu-
 “ manity required that something should
 “ be attempted.”—He was ordered the
 Tonquin medicine, or something like it,
 viz. every two hours he was to take a bo-
 lus, consisting of musk and factitious cin-
 nabar,

nabar, each fifteen grains—and one grain of opium. At eight o'clock this evening (Thursday) he had no unusual secretion of saliva—but he could not bear water. At nine the musk was encreased to a scruple.—The cinnabar and opium were given in the same doses as before. A clyster was directed—it had no effect. He suffered his hands and feet to be put into warm water—yet with great reluctance.—“ At one o'clock
 “ (Friday) his countenance and manner
 “ were strongly marked with *horror* and
 “ *anxiety*.—His sight was disordered—he
 “ thought there were numbers of flies
 “ about him, and this made him uneasy.—
 “ Why don't you kill these flies?—he would
 “ cry, with a great degree of impatience—
 “ and then he would strike at them with his
 “ hand, and would shrink in the bed, as if
 “ he were afraid of their getting to his face.”
 —As the remedies used had been of no service, it was proposed to bleed him. This was done, to the amount of twenty ounces and upwards, in a full stream, and without

out producing the least disposition to faint, or encrease sickness—though the pulse became thereby low, fluttering, and unequal.—After V. S. the opiate was encreased; and it was proposed also to bathe his head with vinegar, and towards evening, if he was not better, to put him into the warm bath.—But every symptom soon became to such a height as left no room to do any thing—he became highly delirious—he got a clyster with half an ounce of laudanum, but it came away almost immediately.—Convulsions strong—he died a little after—with “a smile on his countenance.”

Treatment of Dr. Lister's patient.

JAMES CORTON of York, was bit on the right hand. Between five and six weeks after, the hydrophobic symptoms appeared. Dr. Lister first saw him on Monday, about one o'clock, March 12th, 1682-3.—The morning before, he took some diascordium—some cordial water was ordered by his apo-

apothecary, but he could not swallow it. The Doctor caused a vein to be opened in the arm that was bit, and directed “the wound
 “*to be scarified, and drawn with vesicatories,*
 “and the same plaister to be applied to the
 “neck and legs, and inside of the arms.”—
 The antidotes of the day were next had recourse to.—“I ordered the usual, and famed
 “antidotes to be given him, as of *theriaca,*
 “*cinis cancrorum, ruta, agaricus, &c. in*
 “*boluses.*—Of these boluses he took a dram
 “every hour, for at least a dozen of times.”

TUESDAY “he had a violent fever upon
 “him.”—He refused drink in every shape offered, whether through a quill, or otherwise—he soon after fell into a convulsive fit—after it was over, “he took an *elleborism*
 “in a bolus, very willingly; it wrought
 “about three or four times very plentifully,
 “and he declared himself wonderfully relieved by it.”—Four hours after, the Doctor returned; he found the Minister with his patient, who prayed very earnestly
 —talked

—talked with the Minister *very sensibly*—
and desired the sacrament.—He soon after
died.

Treatment of Dr. Howman's patient.

THIS was a person at Norwich.—About
six weeks after the bite, the symptoms
made their appearance.—The Doctor was
called on Wednesday, October 1st, 1684.—
“ This morning he had taken (I know not
“ by whose advice,” says the Doctor) a dose
“ of the common spirit of scurvy-grass,
“ which gave him seven or eight stools, and
“ made him very faint.—I prescribed,” says
the Doctor, “ the best temperate anti-
“ spasmodic and antiparalytic remedies I
“ knew, to be mixed with the specifics
“ of common use in an Hydrophobia.”—
Next day, the left arm was bled—the quan-
tity taken, about seven ounces; the other
arm, being the one bit, was paralytic:—
the remedies to be continued as before pre-
scribed.—The Doctor left him now.—No
Hydro-

Hydrophobia had yet appeared, but in his absence, “ the great *symptom* appeared, and “ another was consulted, who gave him “ many remedies.” The Doctor tells us, he returned from the country on Friday.— “ *His reason was all along very good*, and, as “ some observed, better than in his health.” —At ten this night all his symptoms worse. —He died between twelve and one next morning.

Treatment of Mr. Turner's patient.

THIS was a child of about three years of age. He was bit on the cheek, and immediately carried to Mr. Turner.—“ The “ wound we treated with digestives for “ some time, *futures* were forborn, though “ otherwise necessary,” (the wound was large) “ that the *sanation* thereof being deferred, the contracted venom might have “ the freer *egress* thereat.—In about three “ weeks time we had *incarned*, and brought “ over a very firm, and seemly *cicatrix*;

“ and in about two days after, the child
 “ was seized with a fever, &c.”—Here
 the Hydrophobia came on in less than
 a month.—This is the earliest case of its
 appearance in the human species of which
 I remember to have read.—Next day the
 little patient was in a most deplorable way.
 —Among other symptoms, the eyes were
 distorted, and *there appeared* “ an irregular
 “ expansion of the optic nerve, attended
 “ with an *extraordinary fierceness*, in the
 “ whole visage.”. He could not bear the
 reflection of a looking-glass.—“ In the
 “ evening, notwithstanding such *alexiphar-*
 “ *mics* as had been exhibited, he sunk under
 “ the oppression of these cruel symptoms.”
 —We are not told what these alexipharmics
 were, but we may conclude they were some
 of the common specifics of the times.

Treat-

Treatment of John Brown, thirteen years of age, Dr. Dickson's patient.—The accident happened in January, 1767, in Whitechapel-road, London.

“ HE was immediately carried to the
 “ London hospital, where the parts affected,
 “ which were the right cheek and shoul-
 “ der, were very well scarified, and suffered
 “ to bleed freely. *Mercurial ointment* was
 “ rubbed on these parts immediately after-
 “ wards ; and this was done twice a day,
 “ for ten days, without producing any spit-
 “ ting, or even foreness of the gums.”—He
 left the hospital at the end of three weeks,
 free from all complaints, after taking three
 doses of purging salts.—On the 30th of
 April, he felt symptoms of the disease, and
 was again carried back to the hospital.—
 The Doctor ordered the warm bath ; but it
 was with great difficulty he could be pre-
 vailed on to go into it.—After staying in it
 a little, “ he found his throat become quite
 “ easy.”

“easy.”—But he could not, without the utmost difficulty, swallow some spermaceti mixture, with a little Tinct. Theb. that was ordered him.—He plunged his head twice under the water by the Doctor’s entreaty.—After this, he got down about an ounce of the spermaceti mixture, containing twenty drops of Tinct. Theb.—Twenty drops of Tinct Theb. were now directed to be given every hour, in the same mixture, if he could swallow a liquid—or one grain of Extr. Theb.—if neither could be got down, to have a clyster every two hours of a little broth and one dram of Tinct Theb. with fomentations frequently applied to the neck and throat, and an emolient poultice, if possible.—He was laid in bed, and sweated half an hour very copiously—He lay quite easy under it—but he enjoyed only a short interval—every symptom grew worse.—No medicines could be given, except a pill of two grains of Extr. Theb.—this was about three o’clock.—He complained soon after this of hunger, and eat an apple greedily,
with

with a piece of bread and butter.—He took two grains more of Extr. Theb. at six he vomited frequently—all his complaints encreased—a dram and a half of Tinct. Theb. was thrown up in a clyster.—He died at eleven this evening, continuing very sensible till within a quarter of an hour of his end.

Treatment of Dr. Mead's first patient.

HE was a lad about nine years of age; bit on the right cheek. A Surgeon cured the wound, which was very large, in fourteen days, by applying, we are told, Theriac. Androm. in Sp. Vin. and afterwards dressing it with Linim. Arcæi, and Balf. Terebinth.

“ No other care was taken, only a Bol.
 “ of Theriac. Androm. was given him every
 “ night while under cure; and, quickly
 “ after he was bit, he was persuaded to eat
 “ *the whole liver of the dog.*”—Such was
 the specific of that time.—“ Blistering plai-
 “ sters were applied to the back, and on
 “ each

“ each side of the neck ; and a diuretic Bol.
 “ of Camphor. Sal. Succin. and Conserv.
 “ Lujul. was given every six hours.”—
 Next day, which was the second of his
 disease, “ he eat some bread and butter
 “ heartily,” but vomited it immediately up
 again.—He was dipped in a tub of warm
 water—and was quiet in it for a little while
 but soon fell into a convulsive fit.—Every
 symptom now encreased—he was tossed with
 violence from one place to another—and
 soon after expired.

Treatment of Dr. Mead's second patient.

HE was a man of forty-five. He was bit
 in one of his fore fingers, near the nail, ten
 weeks before.

WHEN the symptoms appeared, the first
 thing those about him did, was to give him
 a vomit of Rad. Ipecacuan.—On the second
 day after, he had eight ounces of blood
 taken from his arm ; and took a Bol. of
 Theriac.

Theriac. Androm. with Lap. Contraierv.
 —It was not till the third day of his illness the Doctor saw him. He found him then tied in bed, and in the last stage of the disease.—“ I observed he had a palsy in his
 “ right arm.”—His sight was also affected—for “ he had endeavoured to read, but
 “ could not, complaining of a mist before
 “ his eyes.”—The Doctor ordered him to be bled to the quantity of twenty ounces.—Nothing more was done—this seemed to reduce his strength greatly—and soon after he expired.

DR. MEAD relates a third case of Hydrophobia, which was sent him by a Surgeon in Stamford, in Lincolnshire; but does not tell us what had been done, except that the wound was healed up by Theriac. Androm. the common application of these times: yet it had been long under cure, for it was three months from the accident till Hydrophobia appeared, and then there was left “ a small black scab behind.”

The

The Surgeon, he tells us, opened the body, and slightly wounded his fore finger with his knife, “ and was surprized to find that
 “ it festered, and gave him much more pain
 “ than a greater cut at other times had
 “ done.—This,” says the Doctor, “ I the
 “ rather take notice of, because something
 “ of the same nature happened to the Surgeon who dissected my patient. His hand,
 “ the following night, was taken with an
 “ erysepelas, attended with great heat, tension, and pain; this was owing to a little
 “ wound made in one of his fingers a day
 “ or two before, from which, in turning
 “ over the parts, he had rubbed off the
 “ plaister.”

Treatment of the Frenchwoman, bit by the same dog that bit Master R. and only a few minutes before—by Mr. John Hunter.—The accident happened on the 6th of December, 1784.

MR. HUNTER in a letter writes me,—
 “ The poor Frenchwoman the dog bit a
 “ few

“ few minutes before Master R. died last
 “ Tuesday se’nnight, at two o’clock in the
 “ morning. She was taken ill the Tuesday
 “ before with a pain in the wound, which
 “ rather encreased. She called on me on
 “ the Thursday, but I was not at home.
 “ She called on the Friday, and I saw
 “ her. The cicatrix was very painful,
 “ and she seemed not to be perfectly well.
 “ At twelve o’clock that evening, she was
 “ taken with a kind of fit. The apothecary
 “ was sent for, who gave her two grains of
 “ opium. I saw her on Saturday morning,
 “ when she had all the symptoms of the
 “ disease, although not violent. I ordered
 “ opium to be given, as much as they could
 “ get her to take. The symptoms became
 “ more and more till she died.

“ FROM the time she took the first dose
 “ on Saturday about eleven o’clock, till she
 “ died, which was about sixty hours, she
 “ took only forty-four grains of opium ;

“ and two hundred drops of laudanum in
“ clysters.

“ THE fores had caustic applied several
“ times, but *not till several days after the*
“ *accident.*”

Dated London, April 2d, 1785.

APPEN-

1881

of the United States of America

in the year 1881

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Fig. 1

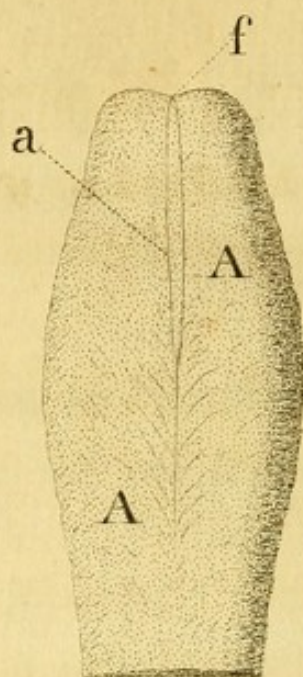


Fig. 2

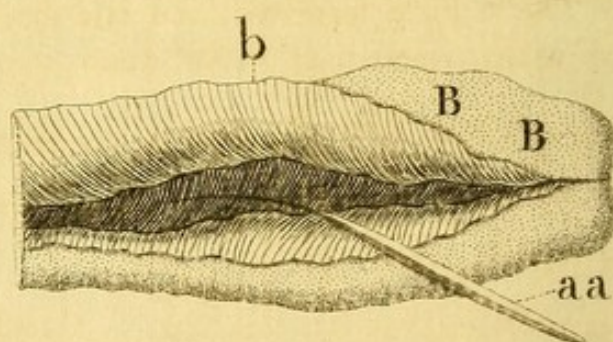


Fig. 3

EXPLANATION of the PLATE.

FIG. 1.

- A. A. Part of the Tongue of a Dog; the under Side turned upwards, to shew the *Worm* in situ.
- a. The Worm, as it appears through the Cuticle.
- f. Its Communication with the marginal Line of the Tongue.

FIG. 2

- B. B. The Tongue dissected.
- b. The Cuticle separated, and laid back, to shew the Muscle wherein the Worm lies.
- a. a. The Worm raised from its Situation, with its Attachment to the Muscle.

FIG. 3.

- C. The Worm taken out.
- c. The tendinous Part.
- d. The ligamentous.
- e. The ligamentous running out to a Point, but which unites and mixes with the muscular Fibres, so as to be lost among them.

EXPLANATION OF PLATE.

Fig. 1.

A. A. Part of the Tongue of a Dog; the under side
marked with a line to show the position of the

C. The Ventricle, as it appears through the Caudal

A. In Communication with the arterial line of the

Fig. 2.

B. B. The Tongue of a Dog

In the position of the Tongue, as it appears through the

C. The Ventricle, as it appears through the Caudal

Fig. 3.

C. The Ventricle

The Ventricle, as it appears through the Caudal

The Ventricle, as it appears through the Caudal

The Ventricle, as it appears through the Caudal

The Ventricle, as it appears through the Caudal

The Ventricle, as it appears through the Caudal

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The Ventricle, as it appears through the Caudal

The Ventricle, as it appears through the Caudal

The Ventricle, as it appears through the Caudal

A P P E N D I X.

The case of ——— Christy, admitted into the Royal Infirmary of Edinburgh, as taken down by the late Dr. Drummond, then Hospital Clerk—and which, as far as I know, has never yet been published.—Extracted from a MS of Mr. Rodolph Rhodes, Surgeon to the First regiment of Dragoon Guards, who also attended.

———CHRISTY, aged eleven, was six weeks ago bit on the right arm by a mad dog: nothing was done to the wound at the time. She has since taken a medicine that contained liverwort for one of its ingredients: has been sweated for a considerable time together, and taken some mercurials.

ABOUT

ABOUT three days ago some unfavourable symptoms appeared. On Sunday at one o'clock, P. M. she was taken into the hospital, and had the cicatrices of her arm cauterized, and took gr. v. of Vol. Alkali in a bolus.

AT three she swallowed a second bolus of the same, but not without much persuasion. Starts sometimes, and seems much frightened; sighs frequently, and heavily; talks in general sensibly, but sometimes raves; pulse quick, and very irregular; is much frightened if any cold touches her; starts, and is more convulsed in a recumbent posture, than when she sits up.

AT four an attempt to go to stool. Is afraid we shall shoot her; wishes to go to sleep; pupils of her eyes very much dilated; can bear the sight of a looking-glass, but not even the mention of water. Another bolus exhibited; she took it with more
reluct-

reluctance. At five, vomited. A fourth bolus given; and though her intention is evidently to take it, yet her arms seem, contrary to her inclination, to be convulsed, and thrown away from the mouth, when near it. Has difficulty in putting sugar to her mouth, of which she is fond. At eight, took another bolus of the Vol. Alk. and had a clyster administered, containing musk scrup. j. and L. L. gutt. xv.—did not retain it. Another bolus given at ten o'clock, consisting of musk gr. x. and L. L. gutt. xv. but she rejected it immediately. Seeing it was impossible to attempt another bolus, and from the bad success of the former clyster, L. L. gutt. xl. in aq. font. unc. du. was injected, but with much difficulty.

At half past eleven o'clock all her former symptoms encreased. Cannot now bear the sight of a looking-glass. Fits more frequent; convulsions stronger; always raving. Saliva from the mouth in great quantity, and appears bloody. Complains greatly
of

of her throat; has frequent reaching to vomit.

THREE o'clock, A. M. Has been raving constantly since our last visit. Constant vomiting; flow of saliva more copious. At this time a bolus of musk, gr. x. and L. L. gutt. xv. given, which she now took with much less reluctance than the former; but it did not seem to get beyond the larynx; it was vomited up the next moment.

FOUR o'clock. Took another bolus, and seemed as if she could retain it: symptoms as before.—Half after five: still raves continually; but sometimes makes sensible answers. Not so much convulsed of late; nor seems so much frightened. Made some water. Has just taken a bolus with little entreaty; and without the convulsed motion of her head as before.

HALF past six. Is now in a perfect sweat over her whole body. Pulse rather calmer,

calmer, but still too indistinct to be reckoned.—Seven o'clock. More delirious; weaker; convulsive startings less frequent; pulse irregular, and weaker. Bolus rejected, which she swallowed with as little entreaty as the last. Some moisture still on her skin, but chiefly on the upper part of her body, and of a clammy nature.—Half after eight o'clock. Still weaker. Eyes very much contorted; pupils excessively dilated.

NINE o'clock.—Sinks apace. Is now without motion.—Dead. A little after death the pupils contracted to nearly their natural size.

DISSECTION.

I. THE whole surface of the body of a dun colour. Nails livid; also some parts of the arms.

II. HEAD. D. mater of the natural appearance. Nothing extraordinary in the
ven-

ventricles. Choroid plexus rather pale. Veins on the surface, as usual, distended with blood.

III. FAUCES. Membrane lining the inside of the mouth of the natural colour. Tongue also natural. Epiglottis, larynx, and spaces between the cartilages of the Trachea, so very little altered as to render it doubtful whether any thing redder than common. Pharynx natural. Submaxillary glands of the natural appearance. Parotids being cut through appeared redder, but doubtful whether the redness did not proceed from extravasation of blood from the cut vessels.

IV. THORAX. Œsophagus natural. Lungs much inflamed; and, towards the back part, of a livid appearance. Pericardium, and surface of the heart natural. A considerable soft whitish polypus in the right auricle, adhering loosely. Right ventricle no blood. Smaller polypus than that
in

in the right auricle found in the left auricle, and adhering rather more firmly. Little red blood in the heart.

V. ABDOMEN. Stomach natural. Some mucus in it. Two lumbrici. That part of the intestines towards the end of the ilium contracted, and the coats thickened in some places. Pancreas redder than usual. All other parts found.

A case of Hydrophobia communicated to me by Mr. Tufon, Surgeon, at Boxford.—The accident happened Dec. 6th, 1784.—The subject of the case, Master R. already alluded to in these pages.

I WAS informed he was on a visit in Jermyn-street, the 6th of December, 1784, where a stray dog came into the room. The lady of the house taking notice of its being very thin and poor, ordered a plate of meat to be set before it, which the dog eat. The young gentleman took particular notice of

it, and stooping down to examine it, the animal turned from its meat, and bit him on the right side of the lower lip. He was immediately sent in a coach, which was then ready at the door, to Mr. Hunter's in Leicester-fields, being at the distance of about a quarter of a mile, who very wisely and cautiously treated it as supposing the dog mad, by applying a caustic to the part, in such manner as to endeavour to destroy all the adjacent absorbing vessels from taking up any of the venom. Immediately on which Dr. Turton was consulted. The Ormskirk medicine was given, and mercurial ointment rubbed into the legs twice a day; the musk medicine was likewise given.

I FOUND by Dr. Turton's account, they were alarmed at the feel of the skin, and some other dangerous symptoms, when in town, before the musk medicine was given. They continued the Tonquin medicine and ointment till he came into the country, which was on the 24th of December, where
he

he arrived in perfect health. I saw him on the 25th, with his lip healed, which was kept open till nearly the time he came down. I received directions from Dr. Turton and Mr. Hunter as follows: That “the general health must be more particularly attended to, the state of the bowels, the pulse, &c. must be watched.”—Before he began the musk medicines, the pulse was low and feeble, the feel of the skin cold and clammy, though he made no complaints.—The feel of the skin and pulse are now (25th) much better; and he appears to have no complaints.—Bowels in their natural state. Mr. Hunter thinks the wound in the lip may be permitted to heal, and that any little softening application, such as suet, oil, fresh butter, &c. and preserving it from the air, is all that may be necessary.—“We wish, however, not to omit any thing that may be necessary to prevent mischief, and could wish the musk medicine and mercurial ointment to be continued, under the direction of those

“ those who attend. Half a dram of the
 “ strong mercurial ointment may be rubbed
 “ in twice a day, but the gums and mouth
 “ must be watched, as we do not wish to
 “ bring on a salivation, though we could
 “ wish to fill the constitution pretty full of
 “ mercury. Under this idea it must be
 “ continued or discontinued, from time to
 “ time, for three weeks to come.

“ We should advise, also, the use of the
 “ following prescription, according to the
 “ circumstances of the pulse and feel of the
 “ skin, and *general state of health*, which we
 “ beg to repeat, as we consider it as the
 “ most material.”

Two scruples of the strong mercurial
 ointment were rubbed in for two or three
 days; but as the weather has been so severe,
 half a dram only hath been used twice a day,
 and that discontinued for two or three days,
 The musk medicine, as ordered, was

“ R. Mosch. gr. vj.—Cinnab. fact. &
 “ nat. aa gr. viij.—Ft. Bol. 8vo. quaq; hor.
 “ fumendus.”—For some days he hath only
 taken it twice a day.—“ The dose of musk
 “ and cinnabar may be varied according to
 “ circumstances, but should be continued,
 “ at times, for three weeks to come.”

I WAS, on enquiry, informed the dog was secured, and died before the young gentleman left town; therefore, I observed a strict attention to the method adopted of giving the musk medicine, and rubbing in half a dram of the strong mercurial ointment twice a day: I was desired to visit him every other day. He continued perfectly well as to his pulse, feel of the skin, state of the bowels, and in great spirits, till about four days after, when I perceived a cold clammy feel on the hands, with a tolerable good pulse, but without complaint. I was induced to believe that this feel might arise from a pain from a contusion on his great toe,

toe, which was occasioned by a table being overturned and falling upon it.. Upon my next visit, I found that disagreeable symptom quite gone off; his hands very warm, dry, and comfortable, and his toe much easier, which seemed to confirm my suspicion.

As I wished to prevent any bad consequences as much as possible, and adhere to Dr. Turton's ideas, about six or seven days after his coming into the country, I encreased the doses of musk to eight grains, and the cinnabar to ten each, and the ointment to two scruples twice a day. In this manner he proceeded till January 12th, without any symptom of illness or complaint whatever. I was as particular and minute as possible in my examinations, and could not find any tendency in his constitution but what perfectly coincided with health.—I was sent for early on Wednesday morning 12th January, and, upon my arrival, was informed, that the young gentleman

man had complained about four o'clock in the afternoon of the day before, with head-ach and sickness, that he had a very restless night, and at this time could not swallow well. I was alarmed at the account, and sorry, as I visited him every other day, that he happened to be seized on my vacant day. Upon my entering the room, I immediately perceived he laboured under a confirmed Hydrophobia. I called for something for him to drink : as soon as it was offered him, he was immediately convulsed, particularly about the throat, and drank it with much agitation : this confirmed me in my opinion. He complained exceedingly of a pain in his head, and great thirst ; his pulse was very quick, full, and hard ; and he lay tossing about in the bed. I asked him if he felt any uneasiness in his lip. He told me he felt pricking pains about the part the evening before, and at that time he felt a soreness on touching it. I desired that every assistance that could might be procured. Two messengers were

dispatched for two Physicians. In the interim, I gave him three doses of the above musk medicines every hour, and proposed bleeding him; but as farther assistance had been sent for, I deferred it till they came: they agreed in my opinion. I took about ten ounces of blood from the arm; they wished to see him take some liquid; he took it in his hand, put it hastily to his mouth, and upon deglutition, all the muscles concerned in that action seemed very much convulsed. His tongue appeared clean, not dry. They ordered him—R. Cinnab. nat. & fact. aa gr. viij—Mosch. gr. decem.—Opii. gr. j.—Conserv. Cynosbat. gr. ij. Syr. q. s. ft. pil. ij.—Statim. sumend. & tert. quaq; hor. repetend. sine Opio. These he took regularly; likewise an injection with a pint of gruel, and two ounces of oil, thrown up for a clyster. A cloth wetted with oil was applied to his throat: his feet bathed with flannels dipped in hot water for a considerable time together, and four scruples of the strong mercurial ointment

was

was rubbed in twice a day, as they wished to promote a ptialism. He passed most of the day in a chair, and now and then walked about the room. His eyes appeared very wild and red. He had a small stool from the use of the injection. He made very little urine; his blood appeared a little inflamed, and somewhat fizy. In the course of the day he frequently took bread moistened in tea or gruel. He went to bed in the evening early, and got two or three hours sleep (I suppose from the effect of the grain of opium) after which he appeared very restless, and convulsed; towards the morning he was exceedingly so, and not able to lie still a moment, constantly calling for something to drink, and complaining of great thirst. He then swallowed with great anxiety and perturbation, and appeared in the utmost distress. On the morning of the 13th (Thursday) he rose about ten o'clock in the state above mentioned; about twelve his physicians saw him again: his pulse was about one hundred and thirty. They then ordered

him—R. Mosch. gr. xij.—Mercur. Emet. flav. gr. ij.—Opii. gr. j.—Mucilag. G. Arab. q. s. ut ft. Pil. No. ij. tert.—qua; hor. repetend. cum, vel sine opio. prout res postulare videatur,—and continue the use of the ointment.—They had not left him an hour, before he was taken with frequent vomitings, reachings, and constantly spitting a viscid phlegm. This came on before he took the Turbith pills. He took one dose with opium as soon as it came, which was about two o'clock. He was very sensible and pertinent in his answers and conversation till now, when a delirium came on, with such fears and horrors as are scarcely describable—rubbing his throat, and walking up and down the room in great agony, but without any violence to any one in it. He continued in this distressed state till about six in the evening, when he was standing up, and leaning on the housekeeper, and nature, from his incessant talking and raving, being exhausted, he dropped down in a kind of fit. He was then laid on a bed quite senseless,

less and speechless, groaning, foaming at the mouth, now and then vomiting a dark brown choler, and appeared as if strangled. He expired about half past eleven at night. His lip, after death, did not appear altered.

It should have been mentioned, that on the 11th he complained greatly of a pain in his right ear—and this was the first symptom observed.—A flannel dipped in warm water was applied, to which was added a little brandy: by this method the pain abated in the afternoon of Wednesday the 12th.

The following letter I received from Mr. Hunter in the beginning of March; some paragraphs of which have already been quoted.

SIR,

I RECEIVED the favour of yours. I am always extremely happy when I can give any useful information; but all the information

mation I can give you relative to the Hydrophobia is rather negative good than positive. All the means recommended were used in Master R.'s case. I saw him only a few hours after the bite. The lip was torn a good deal. The teeth had gone through and through, and had torn out a piece. I immediately applied the caustic to every surface that I conceived had been made by the dog's teeth; and when those sloughs came away, I went over the same field a second time; but, from the termination of the whole, I am inclinable to believe that I did not touch every part where the teeth had been. He took the Ormskirk medicine by the direction of Mr. Barry who sells it, therefore we must suppose it was properly given. He also took the Tonquin medicine, viz. musk, cinnabar, &c. as also rubbed in mercurial ointment till his mouth was sore. My whole dependance was on the caustic, but did not object to the others being given. I wish I could say more on the subject in general. We
seem

seem to be as much at a loss how to treat it as they were a thousand years ago. I have not yet heard of the particulars of Master R.'s attack and symptoms. I want very much to learn them. To ascertain a mode of cure will be very difficult. For a few cases not having the symptoms, under any course, prove but little. I know where there were twenty-one people bit by one dog; nothing was done for any of them, and only one was taken ill. If they had all taken medicines, then it would have been said, that they only lost one out of twenty-one.

I am, dear Sir,

Your most obedient servant,

JOHN HUNTER.

*The following was sent me by Mr. Newson,
an ingenious Surgeon in Woodbridge.*

TO DR. HAMILTON.

DEAR SIR,

As the following case of the bite of a mad dog was successfully treated, doubtless it will be acceptable to you, as a support to that system of advice you most judiciously recommend, and which, in my opinion, is the only known prophylactic method at present that any person can place any rational confidence in, as a security from the most direful effects of a disease by much the worst to which human nature is subject.

EIGHT years ago last August, during the time I was assistant to a Surgeon, in Norfolk, of great eminence and real skill, the alarming case of the bite of a mad dog came under my inspection. It took place in consequence

sequence of a favourite dog being rabidly infected, and from losing his hilarity, and accustomed fondness for his master, and being observed to skulk beneath a table, the servant maid was requested to take him out and feed him, and in endeavouring to withdraw him, received a considerable bite from him in the fleshy part of her arm. The laceration extended in circumference not less than four inches ; as near as I can recollect, the whole part was removed within two hours of the melancholy accident, by excision, and at least half an inch deeper and wider than the dog's teeth had penetrated or extended. The wound was afterwards dressed with escharotics, viz. red præcipitate of mercury sprinkled on lint, and a large cataplasm of oil, milk, and bread, applied over the whole part. It was dressed again the same evening, and repeated many days, which brought off several small eschars, and a great discharge was excited, and kept passing off a considerable time. The wound

was

was kept open for six or seven weeks, and cicatrized without any difficulty. She likewise took Turbith mineral, night and morning; and, in the intermediate time, some of the most esteemed antispasmodic medicines were administered, such as musk, castor, valerian, assa foetida, and opiates; after which the bark, in substance; and finished with the cold bath.

THE dog that gave her the bite was evidently mad, as two other dogs were bit by him soon after. They were secured, and within eight or nine days discovered the strongest signs of genuine madness.—I think the event of this case manifestly declares, and proves, the justice of the proceeding and treatment this girl underwent, viz. from not receiving any hurt; from the dog being indisputably mad; and the person bitten had not the chance of escaping free from infection from the dog's teeth having been wiped, by previously passing

ing

ing through any clothing, so as to take off the subtle and active matter.

I am, dear Sir, with respect,

Your obliged and

Obedient humble servant,

JOHN NEWSON.

The following appeared in the Ipswich Journal of February 19.

To Dr. H.

SIR,

Feb. 17, 1785.

YOUR very learned and intelligent dissertation in the last Ipswich Journal, upon the treatment and effects of the bite of a MAD DOG has given me not only great pleasure, but much information, and has encouraged me to trouble the printer and you with the mode of treatment two men underwent, a few years since, that were bitten by a mad dog, and were under my directions.—

F f

The

The part bitten was immediately scarified, and a strong caustic, of at least the size of the wound, was applied, which produced a very deep eschar; upon the removal of which, the wound was dressed with red præcipitate, or Egyptian ointment, constantly, to keep up as large a discharge as possible, and prevent the wounds healing, which they were not allowed to do for many weeks. The patients each took five or six doses of the Ormskirk powder, and as many of the Tonquin; but, having a suspicious opinion of those *once* celebrated remedies, I ordered a sufficient quantity of mercurial ointment to be rubbed into the bitten leg, so as to saturate the body without occasioning a spitting. The patients were ordered a light, though not very low, diet, and their spirits kept up as much as possible, by every art in my power, both by forbidding their friends talking on the subject, and by my promises of (what indeed I doubted) the infallibility of the means put in practice.—That the dog was mad

ad-

admitted of no dispute, as the animals bitten by him, on the same day my patients were, died mad; yet my friends had the good fortune to escape, without one alarming symptom, notwithstanding both their legs bled from the bite, and one had his pretty much torn.—This is a true and exact narrative of the cases and treatment, and it would be an additional favour to me and the public, if Dr. H. would be kind enough to make his free comments upon both, that future unhappy fellow-creatures, under similar misfortunes, may reap the benefit of his learning and philanthropy. G.

P. S. I AM apprehensive, that although different *poisons* shew their *effects* at different periods, yet the *cause* is sooner communicated to the animal juices than Dr. H. has hinted; and that, notwithstanding you cut out the *local pustule*, occasioned by the inoculating scarification, on the fifth, sixth, or seventh day, still you will not eradicate the small-pox from the system.

Ex-

*Extract of a letter from Mr. Goodwin,
dated Earl-Soham, Feb. 28, 1785.*

—'Tis a fair thing to say, that ninety-nine out of a hundred reputed mad dogs, are not really so; but are lost by their masters, and hunted by the vulgar into a frenzy; or are delirious from fevers, to which they are very subject; and, I think, are capable of inoculating that fever on their own species, when they are not upon the human.

You are perfectly right respecting *worming* dogs, notwithstanding the plausible address on that matter lately. It is impossible removing the tendon from the tongue can prevent the dog's running away when mad. But vulgar opinions, though having no foundation in truth, are impossible to be removed; witness the prejudices in Lancashire in favour of the Ormskirk powder. I once lived there, was intimate with
Hill,

Hill, and believe, many a man might have been found, who would have received the bite of a mad dog for hire, from the belief of the infallibility of that medicine; which now is so much exploded. The truth is, so very few of the reputed mad dogs are really so, that any medicine, with quackery, may be rendered popular; but, I much fear, no remedy is yet found for the bite of a mad dog, on the *nakea* body, but almost immediate excision: I say naked, as I believe many subjects have owed their escape more from their clothes, than their Doctor. The saliva of the dog, being naturally thick, is apt to be strained by the stocking, &c.

THE time of poisons shewing their effects, depends on various causes:—the nature of the poison itself; the time of the year; the patient's habit—all have an influence. Yet, I think, excision must *soon* be performed, or the venom will have travelled beyond the knife. The viper's poison is almost instantaneous

taneous in its effects.—A lad I looked after was bitten on his finger, and in a *few minutes* fell into violent vomiting and purging.—Another, bitten in both legs, *directly* swelled all over, with so great a difficulty of breathing, I thought of nothing but suffocation. These are mentioned to shew the spicula and nature of the venom, and to beg the favour of your turning your attention that way. As the minds of many people may be inflamed by the recent misfortune in this neighbourhood, and many made wretched that may happen to be bitten, I hope, and make no doubt, but your publication will tend to alleviate their anxiety, by shewing the great odds against their being bitten by a *real mad* dog; and then, the probable chance of escape, by the saliva or venom being left upon their clothes.

I am respectfully, dear Sir,

Your obliged humble servant,

WM. GOODWIN.

SYMP-

S Y M P T O M S.

IN the following, the reader will find collected the most material of the SYMPTOMS that appeared in the cases alluded to.

Dr. Mead's three patients.—Vid. Philos. Transact. No. 323.

SYMPTOMS in the first.

THE patient was a lad about nine years of age. From the 20th of April, when bit, till the 22d of May, continued well. On this day, seemed dull, and sick; would eat no dinner; in the evening complained of his stomach and head; in the night very bad; started often, and screamed out—refused drink—complained greatly when he made urine, saying it hurt him.—Next morning (23d) vomited—in the afternoon, sweated; trembling; tossing himself up
and

and down ; talking continually ; looking very wild ; pulse low ; sometimes quicker, sometimes slower ; urine appeared of a natural colour ; could not swallow.—Next day (24th) much worse ; could not bear the sight of any thing white ; became convulsed ; eyes grew more staring ; pupils prodigiously enlarged ; convulsions so violent, that it was with difficulty he was kept in bed ; at length became tired and spent ; fell into cold sweats ; and died in this way at four in the afternoon.

Second Patient.

SYMPTOMS.

THE patient a very lusty vigorous man of forty-five. On the 8th of November in the morning, *i. e.* ten weeks from the bite, complained of great sickness at stomach ; vomiting green and yellow choler.—Next morning (9th) began to complain of a difficulty in swallowing ; took drink with much difficulty.—On the 11th the Doctor
first

first saw him, it seems:—was then tied in bed, raving mad; biting and spitting at the by-standers; crying out murder; making an odd noise, as if he coughed up something from the throat.—This, the Doctor adds, is, as he supposes, what some authors call barking.—Was untied, but soon became so unruly that it was with difficulty he was tied again.—Palsy of his right arm—this symptom appeared on the 10th, *i. e.* the day before; complained then also of a mist before his eyes—seemed afraid of every body.—Was to-day blooded; then was quiet for a few minutes; but soon his outrageous fit returned, and he laid himself down, quite spent, and died.

Third Patient.

SYMPTOMS.

THIS patient was a young man of eighteen, the Doctor tells us; and adds, that, three days before his death, he was seized with a fever, for which he was blooded,

vomited, and blistered: he bit to pieces the glass in which drink was given him.—During the whole violence of the distemper, the penis was observed to be constantly erected, and as hard as a bone.

THESE are all the symptoms the Doctor relates in this case; but, in his account of the dissection, he adds the following anecdote, viz. that the Surgeon who was employed to open the body, slightly wounded his fore finger, and was surprized to find it gave him much more pain than a greater cut at other times had done.—“ This,” he says, “ I the rather take notice of, because something of the same nature happened to the Surgeon who dissected my patient. His hand, the following night, was taken with an erysepelas attended with great heat, tension, and pain. This was owing to a little wound made in one of his fingers a day or two before, from which, in turning over the parts, he had rubbed off the plaister; and it went not
“ off

“ without the application of cooling and
 “ discutient medicines.”

*Case by Mr. De La Pryme.—Vid. Philos.
 Transact. No. 277.*

SYMPTOMS.

THE patient aged fourteen.—Is not said to have been bit, but only to have frequently put his finger into the throat of a whelp, when they found it could not swallow, to see what ailed it. The mother of this, and some other whelps, was bit by a mad dog; became mad, as did all the whelps, in about three weeks after, except this one.—After some time longer, this also shewed signs of the disease, and, in a day or two more, died.—The first symptoms in this boy were—Pain in the head—somewhat feverish; and continued better and worse for some time. Had a cough; eat hearty, yet could not drink.—The sensation of the cold air gave him great uneasiness—“ he
 “ ran from it,” as it is expressed, “ as if
 “ it

“ it had been to save his life” ; and said,
 “ that the wind would needs stop his
 “ breath.”—In a day or two more, became
 worse ; vomited a matter like black blood,
 “ which stunk like fallad oil, but much
 “ stronger ; after which he would be pretty
 “ well, and walk about, but most com-
 “ monly ran as fast as he could, first out of
 “ one corner, then into another—then up
 “ stairs, then down again ; as if it was for
 “ his life.”—On the third day of his con-
 finement, grew perfectly mad—would start,
 leap, and twist his arms together.—His fits
 were now so strong, that four men could
 hardly hold him.—Wanted to bite—strug-
 gled some time longer—and became speech-
 less—and, it is added, “ then died, just as
 “ the Physician came.”

Symptoms in Dr. Munckley's patient.—

Vid. Med. Transact. Vol. II. p. 46.

THE patient thirty-six years of age. Bit
 by one of his hounds, in his own stables,
 on

on the 11th of July, 1760.—On the 19th of August, felt a difficulty in swallowing, resembling what proceeds from a common sore throat.—His friends had observed him melancholy for some time.—Next day the Doctor found him in bed.—“ He “ was lying on his left side, and resting “ his head, a little lifted up from the pillow, upon one hand.—He had in his “ countenance the appearance of a fixed “ melancholy, and did not care to lift up “ his eyes,” on being desired to answer questions.—No considerable degree of heat.—Pulse low—not much quicker than in health.—Vessels of the eyes appeared turgid.—Tongue parched and dry, not white.—On the word drink being mentioned, started almost upright in bed, and put on the look of fierceness and anger—repeating with great eagerness and quickness, the word *drink*!—saying it was impossible to drink—“ and “ begged for God’s sake I would not mention it.”—A very short time before, *i. e.* less than an hour, he had no symptom of this fort.—

fort.—Here we may see how quickly the *aquæ pavor* comes on.—Slept none this night, yet lay quiet.—Towards morning, however, began to shew signs of great uneasiness and distress.—These gradually increased, till about ten o'clock, when they had arrived to so great a height, that none of his friends could bear to remain with him.

TEN o'clock.—Sitting up in his bed, with an attendant on each side.—In great agitation of body; tossing his arms from side to side; and moving himself about with great vehemence.—His eyes were redder than the day before.—He bared now one of his arms, and striking it with all his force, cried out to the Physician, with great eagerness, to order him to be let blood.—“ In
“ his looks were the appearance of horror
“ and despair, beyond what,” says the Doctor, “ I had ever seen before, either in madness, or any other kind of delirium.”—Spat much; sometimes to the top of the bed; at other times about the room; sometimes

times into the handkerchiefs which the attendants had for that purpose.—The phlegm which he spat was of a yellow cast; so tenacious, that it was with difficulty got up: hence, when he opened his mouth, it could be seen adhering to the roof; but no foam about the mouth.—The sound which he made in endeavouring to raise the phlegm, was of a very singular kind—it was different from common hawking.—This sound varied also at different times, being at some times much sharper than at others,—“and being frequently repeated,” it is added, “and quick and sudden, as every other motion of his body was, a warm imagination might consider it as barking or yelping like a dog.”—Was perfectly in his senses at this time—knew every body—did not attempt to snap or bite at any one, nor any thing within his reach.—On the collar of his shirt being unbuttoned, the fore part of his neck appeared remarkably protuberant, and as

if

if the uppermost cartilages of the wind-pipe had been swollen, and thrust forward.

ONE of the attendants, who was a man that had been much employed in the care of mad people, held his left hand in one of his own, and with the other gently stroked the outside of his throat; which seemed to give him a momentary relief. This person was desired to be upon his guard; for it was not impossible, but that he might receive a bite; and that he ought to put on gloves, or cover his hands in some way or other, if he continued to be thus employed. But he refused to do any thing of this kind; and said, that he had seen enough of him in the course of the night, to be very certain that there was nothing to be feared from him. When the phlegm was so tough, and tenacious, that the patient could not himself spit it out of his mouth, this person put his fingers into his mouth, and with the corner of an handkerchief drew it out for him.—When water was brought near,

near, and poured from one basin to another, it gave him the greatest distress and horror; he seemed as if convulsed all over—shrank from the sight—then called out aloud to the person that poured the water in this way, adding the word *villain*, and exclaiming against the cruelty of this treatment.—Died about two that afternoon.

Three Cases by Dr. Dickson.

First Case.

SYMPTOMS.

JOHN BROWN, aged thirteen, bit, with a great many more, in Whitechapel-Road.

APRIL 30th, felt a pain in the right cheek, the part bitten, all of a sudden.—Slept none this night; yet eat his victuals.—Next morning (Friday) eat his breakfast; in the evening could neither eat nor drink.—Pains and cramp in his throat and cheek returned with great violence and frequency.

H h

—Breath-

—Breathing became very difficult.—By Monday, May 4th, all his complaints encreased.—He had a wild, frightened, frightening stare—was very restless, shifting from place to place—hung his chin on his breast—great discharge of viscid saliva, which he spat out with force to a considerable distance—could not bear the least air to blow on his throat and cheek—a considerable mucous discharge from his nostrills—breathing quick and laborious; pulse soft, and not frequent.—Felt like a lump in his throat, but without foreness.—Was quite sensible.—Refused water; yet attempted it; and had a difficulty in bringing the glass to his mouth: it was done in the manner of one labouring under *Chorea Sancti Viti*.—Still complains of the cold air giving him great pain.—After the warm bath, a respite and a copious sweat; but the spasms and pain in the cheek returned.—Now, great restlessness.—In some time after, was seized with considerable vomiting—the matter thrown up, frothy and colourless.—Vomiting continued

tinued frequent.—All his complaints encreased. He continued very sensible till near a quarter of an hour before his death, which happened at eleven o'clock at night.—Dr. Dickson takes notice, that so great was the restlessness, that it was not in the power of those who attended him to keep the bed-clothes on him : he was at last strapped down.—It did not appear that light any wise affected him, though the cold air did.—Complained greatly of thirst, but could not drink.—His spitting of frothy matter encreased so much, that, in spite of all the care possible, his bed was exceedingly wetted by it.—The mucous discharge from his nose continued.—He never attempted to bite any person ; but, half an hour before he died, being pressed by the apothecary to take a pill, he looked furious, and seemed as if he aimed at striking him.—He did not bark like a dog ; though the nurse and the patients of the ward said that he made a noise like a young puppy.—His pulse could not be felt for five or six hours before

before his death.—The spasms of his throat became much more frequent, and the muscles of the throat greatly affected, attended with a very quick laborious breathing.

Second Case.

SYMPTOMS.

A GARDENER's servant, bit by the same dog.—On April 28th, at a public-house, after having drank share of several pots of beer, he found, all at once, he could not swallow.—He had filled his mouth with beer, but not being able to get down a single drop, he spurted it out with great force, and cried out that he was a dead man.—He thenceforth kept continually spitting a frothy matter, of which he desired those about him to beware.—Was exceedingly restless.—Had no sleep; but remained perfectly sensible till his death, on Friday noon, May 1st.

Third

Third Case.

SYMPTOMS.

— BEAN, aged sixty-nine, at the end of three weeks and five days, was seized with a pain in the part bit, which extended to his throat.—His breathing became very short.—Next morning he drank some tea, with difficulty.—Was delirious from this time till Thursday se'nnight following, when he died.—He spat much frothy matter the whole time; and neither ate nor drank any thing since the tea already mentioned, till ten minutes before his death, when he drank a cupful of cold tea.—He had no sleep during all his illness, and was blind the last four days.

Case by Mr. Bathie of Fifeshire, communicated to Dr. Hope.—Vid. Med. Com. Vol. III. p. 290.

SYMPTOMS.

JAMES PATTON, aged fourteen, was bit on the back of his right hand on the 8th of November, 1774.—Continued well till February 9th, 1775, or about eleven weeks.—On this day, was attacked with universal lassitude; loathing of food; slight head-ach: yet went to-day to his employment.—Next day (10th) went likewise to his business of driving the plough.—Very inactive and heavy to-day: his master rebuked him for laziness, not knowing he ailed any thing.—He complained now of a pain between the elbow of the hand bit and his shoulder; a disorder of his throat, and head-ach; could not now swallow liquids, from something in his throat which interrupted its passage: went this evening from his master's to the house of his parents,

rents, which is about a mile; was fatigued by it, and faintish; was seized soon after with a shivering; and complained greatly of the pain of his arm and throat.—It may be worth while to remark, that his mother examined his arm, and observed, that between the shoulder top, and down towards the elbow, the skin was of a yellow hue, having the appearance and feel of that of a dead person.—Got very little rest this night; constantly shifting from side to side, being in every posture remarkably uneasy; and often attempting to drink, without effect.

SATURDAY (11th) continued much the same; rather worse than better.—He tried to sip out of a tea-spoon; as soon as the liquid touched his fauces, it seemed at the peril of his life, so strongly was he threatened with suffocation.—Had this evening a paroxysm, resembling an intermittent: first universal coldness and shivering, succeeded by a hot fit, and this by a sweating fit.—

Pain

Pain of the arm and throat now diffused all over his body.

ABOUT the middle of the night, was seized with delirium.—Struck his mother, who waited by, imagining she was some other person intending him mischief; but when she reasoned with him calmly, he became sensible of his mistake, and was sorry for his behaviour.—After this attack, he took little notice of any person, unless when he was spoke to; had now a timid look; was easily alarmed with noise, or the presentation of luminous objects; had a *subfultus tendinum*, and raved much; but when asked questions relative to his health, he immediately appeared awake and collected, and gave distinct and sensible answers, returning soon into his reverie as before, when permitted to be undisturbed.—Even to the conclusion of the scene, when he was carried to the summit of frenzy, as was the case before he expired, he had the power of summoning himself, and rationally

ally answering questions all along, with a distinct voice, such as maniacs express themselves in, but more or less impetuously, according to the degree of fury with which he was agitated when spoke to.—At the appearance of a lighted fire or candle, he shrunk back in terror, calling out to remove them from his sight; and when the bed-clothes were adjusted on him, he always complained of being much hurt.

SUNDAY (12th) rolled his eyes without intermission; startings of the muscles of the face; voided some urine of a greenish hue, turning whitish when cold; frequent desire to discharge urine; quantity small, and quality as above; considerable heat, and moisture on his skin; a very white, thin fur on his tongue; thirsty; pulse full, and beat about one hundred and twenty-five, or one hundred and thirty in a minute; head-ach; oppression, or heat at his stomach; inclination to vomit, but was afraid to do so for the obstruction in his throat.—“ With

“ all these symptoms,” says Mr. Bathie,
 “ the boy spoke to me sensibly (on the 12th)
 “ and in his ordinary tone of voice, as if
 “ his throat had been quite well.—Two
 “ bluish marks remained where he had been
 “ bit, but the part was healed.”

WATER was now offered : as soon as it touched the fauces, he was thrown into convulsions—let go the dish—started to his feet—grasping his throat with both hands—his face greatly flushed—and he continued in a state of suffocation for a minute, when the spasm began to yield, and wore off gradually ; this was accompanied by a quick involuntary action of the muscles of his face, and with a convulsive motion of the whole chest, similar to sobbing, but in quicker paroxysms, and with a peculiar noise from the throat.—Thirst extreme.—Increased in fury and madness now, fancying, in his frenzy, that his friends and attendants were all conspiring against his life.—At last, could scarcely be held in bed by
 three

three or four men.—He, to the last, knew his friends when they spoke to him—raving and tossing about when he had answered them.—About eight o'clock in the evening, he turned suddenly quiet and motionless.—He lay in this condition for little more than half an hour, and then expired without a struggle.

From Dr. Berkenhout's Essay on the Bite of a Mad Dog.—Vid. p. 80.

SOME years ago, I was sent for to attend a young gentleman, in the last stage of this horrible disease, who was bit by one of his father's hounds about six or seven weeks before.—A day or two before I saw him, he complained of a pain in the arm which had been bitten, gradually extending towards his shoulder. He had taken many doses of the expressed juice of rib-wort, which, in that county, was universally deemed a specific, and had bathed every day in the river. I saw him about ten in
the

the morning. He complained of nothing but a pain in his arm, and some little difficulty in swallowing. I ordered a warm bath to be prepared, in which he sat half an hour with great composure. I rubbed a considerable quantity of mercurial ointment into each arm, and gave him a grain of crude opium every hour, till nine or ten o'clock at night, without the least effect. About eleven, he became extremely restless, and died at twelve, retaining his senses to the last moment, without any symptoms of madness, or propensity to bite his attendants.

SIR THOMAS MYERNE tells us, dogs are subject to the following diseases:—1. The *Hot Madness*; this, he says, is incurable; they fly from every thing, and can hold out but four days.—2. The *Running Madness*. This is likewise incurable: they fly only on dogs, and that by fits; and may sometimes, we are told, hold out nine months.—3. *La Rage Mue*; which is a disease that
lies

lies in the blood.—4. The *Falling Madness*; this seizes on the head, and is a sort of epilepsy.—5. The *Blasting*, or *Withering*; this lies in the bowels, which shrink up exceedingly.—6. The *Sleepy Disease*; this, he says, comes from little worms in the mouth of the stomach.—7. The *Rheumatic Disease*; this swells the head very much, and makes the eye yellow.—“ In these five latter diseases the dogs will not eat; but they live eight or nine days, without hurting any body, and then die of hunger.”—[Vid. *Philos. Transact.*].—The reader is left to form his own remarks on this.

The following appeared in the Ipswich Journal of Feb. 19, 1785, in consequence of some Thoughts on Hydrophobia published therein some weeks before.

THE public has been much obliged by an advertisement in the Ipswich Journal of the 5th of this instant February, advising proper care to be taken with dogs likely to
be

be mad; but that part relating to what is commonly called *worming* of dogs to prevent their madness, is a mistake, it being done to prevent their biting any thing when mad: experience having shewn, time out of mind, that by taking out the tendon which grows under the tongue, not one single instance has ever happened of any person being bit by a dog so wormed. And it has been observed, that out of several packs of hounds, and many other dogs that have been mad, those wormed have fallen off their meat, refused water, and always died fullen, or sleepy mad, not one of them ever offering to bite any thing; when other dogs, part of the same pack of hounds, which were neglected to be wormed, though bit at the same time by the same mad dog, have acted as usual, biting every thing that came in their way.—Whether this tendon under the dog's tongue be, during his madness, full of extreme pain, or violent heat, and the cause of his snapping at and biting every thing he meets, is hard to determine; but

but as experience has all along shewn, that taking away this tendon (which is drawn out without the least difficulty) has always prevented biting, &c. why should this preventive precaution ever be neglected?

In reply to the foregoing, the following was inserted in the same Journal, March 5.

A C A R D.

DR. H. presents his compliments to the author of the stricture, inserted in the Ipswich Journal of February 19, relative to the worming of dogs; thanks him for his approbation of the observations on Hydrophobia; fears there may be some misinformation in what is advanced of packs of hounds being so much changed from the common course, when seized with madness, by the extraction of the little tendinous ligament under the tongue.

MAN-

MANKIND have been too apt to follow the traditions of their forefathers, without consulting their own reason and judgement; or have drawn too hasty conclusions from experiments, through neglect of carefully weighing every circumstance.

IT must in the first place be admitted, that an effect can never be greater than its cause. This is a maxim Dr. H. thinks indisputable. The extirpation here contended for, seems very inadequate to the change said to be thereby produced. A philosopher will ever be cautious, if his aim be truth, the encrease of knowledge, and the removal of popular prejudice, or popular error, of assenting to assertions which have not for their basis well instituted experiment, where results have been marked with accuracy, and related with fidelity.

IT appears from the expressions " it has
 " been observed, that out of several packs of
 " hounds

“ hounds, &c.” that the author has not made the experiment himself; therefore, may he not, through a confidence on the veracity and discernment of others in distinguishing phænomena, have suffered himself to be imposed on? If he speaks from authority which he can trust, his readers should have been referred to it.

THERE appears no reason to argue from facts, till once they are well established, otherwise he might be told, that both tendons and ligaments, or tendinous-ligaments, as the accurate Morgagni inclines to call this, are endowed with less degrees of sensibility, than softer parts possessed of more numerous nerves, and larger blood vessels. This is now pretty well established among physiologists:—This, however, is not meant to deny an encrease of sensibility to them in a state of disease; or that they are incapable of inflammation; but it is refusing to admit them more sensible, in proportion to other

parts differently furnished with organs, that are the medium of sensibility.

THE pain in the organs of deglutition, occasioned by the spasms brought on from the virus; the changed state of the salival secretion, and degree of irritation thereby given, are sufficient to account for the dog's change of temper, &c. without having recourse to a supposed pain, and extraordinary heat, in so diminutive a part as the small tendinous ligament referred to.

THE falling off from their meat, the melancholy and sleepy appearance of dogs infected with madness, are always the first symptoms. Hydrophobia, or the refusal of water, &c. follows. The power of snapping, or biting, depends on the motion of the under jaw; if the muscles, appropriated for this office are thrown into violent and fixed spasms, called in the human body Trismus, (locked jaw) the animal cannot bite; the power of opening or shutting the mouth

no longer remains: in the last hours of a dog's illness this has been observed. Sometimes, likewise, the tongue lolls out before death, no power of biting remaining.

Dogs, which possess different constitutions, in some measure analogous to the human race, have also a variety in their symptoms, and must therefore be differently affected by the same cause. The different tempers of dogs prove to a demonstration the different make of their fibres, and form of their various organs, and will sufficiently, it is apprehended, account for all the variety observable in the manner of death from madness.

ALL these things considered, it cannot be allowed, without more certain experiment than the subject has yet undergone, that the taking out this diminutive part has influence enough on the animal to alter his disposition, or lull sensibility.

BESIDES, as nature never does any thing in vain, she must have formed this little organ for some useful purpose to the animal. Why then deprive him of it till there be more ample assurance of its having such power over the mind of the animal?

THE limits of a newspaper forbid any farther discussion. Should these remarks not satisfy the gentleman for whom they are thrown out, Dr. H. will cheerfully embrace a private correspondence, in order to enter farther into an investigation of the subject; though he confesses it scarcely would seem to deserve it; but must decline any thing farther in a public paper, as being an improper vehicle for such discussions.

The following, however, appeared in the Ipswich Journal for March 19—it is supposed, from the same anonymous writer.

For the GOOD of the PUBLIC.

IT has been the received opinion, from experience, that the alarming mischief which frequently happens from the bite of a mad dog, may be effectually prevented by worming of all dogs, by taking out the long tendon, or fibrous muscle, which grows under the tongue, and which is thought to be much swelled, particularly inflamed, and the sole cause of the biting during the madness; those dogs that have been wormed having always died sleepy mad, never offering to run away from home, to snap at, or bite any thing. Many things may be fully credited, though not easily to be accounted for. It will always be prudent to tie up such dogs as have been wormed,

wormed, upon the first symptoms of madness, though most people have not even thought that a necessary precaution. The injury done to the dog is very little indeed, if any, and not worth mentioning, in comparison with the fatal consequences attending the bite of a mad dog. Some people think it their duty to the public, never to keep a dog that has not been wormed.

From the same Journal of April 16, in reply.

TO the PUBLIC.

IN the Ipswich Journal for March 5th, some arguments were adduced with a view to prove the inutility of worming dogs, to prevent their biting when affected with rabies; and doubts were there entertained relative to the authenticity of some seeming facts laid before the public, in order to establish the belief of the salutary effects of this vulgar practice.

PREJUDICES inculcated in early youth are strong, and yield with difficulty to reason, especially if imbibed from persons for whom we have an esteem and veneration. Hence traditions handed down from father to son are tenaciously held, though they want even the semblance of truth to support them.

WE love and venerate our parents ; we greedily imbibe their opinions, and consider them as incontrovertible, without the least doubt but they stand supported on the firmest foundation of facts. Yet, if we do not first doubt, and next investigate, it becomes impossible ever to advance in improvement, or arrive at a certainty of truth.

HAD not Sir Isaac Newton doubted that the systems of former astronomers were erroneous, and incapable rationally of explaining various phænomena relative to the heavenly bodies, we never should have been
pre-

presented with that system of beauty and simplicity, by which his discoveries have enlightened mankind.—Had not Harvey been a sceptic, we should have yet remained in darkness with respect to the circulation of the blood in animals, and the consequent improvements founded thereon.—And had not later philosophers doubted the truth of Des Cartes' system, and thence exposed it, we might at present still continue in the absurd belief, that the soul could be confined to a small protuberance within the cranium, situated behind the part from whence proceed the optic nerves, called, by anatomists, Pineal Gland, not larger than a common pea.

WHEN we question the truth of opinions, it is by applying them to the test of judgment and reason; and lastly, to confirm this decision, where the case requires it, and the subject will admit, we have recourse to experiment. This is our *ne plus ultra*—it fixes the fate of the investigation. From hence—

henceforth opposition must cease, and truth becomes triumphant; for to this determination all must yield. This is the same, whether the thing to be investigated, on which the contest may turn, be a matter of *great*, or a matter of *small* moment, as happens in the present.

To come, then, to the point. Dr. James, and others, doubted the utility of the practice mentioned at the beginning of this article; but they produced no experiments to oppose the error, and confirm the justness of their doubts. The writer of this article doubted likewise, from the apparent absurdity of the thing, and the disproportion between the cause and the effect said to be produced. He had, however, no experiment then, on which he could absolutely rest; his proofs, therefore, were built on reasoning—were presumptive only—not positive. But, not altogether satisfied with this, he wished to trace it farther, and arrive, if possible, at certainty. He has at

length fortunately succeeded to his wish, as the following relation will amply testify; where experience convinces, that wormed dogs are not incapable of biting when mad; nor do they always die fullen.

A PERSON of veracity in Ipswich, who practises worming of dogs, declares, that many of those he wormed have gone mad. But he relates, and is ready, when called on, to attest, that, among others, he wormed a dog for one Cutting, a butcher, of this town (Ipswich). That the dog not only went mad, but bit a cow, a gander, and a spaniel of his own, on which he set great value. The cow and the gander, soon after, likewise went mad; and to prevent the same event in his own dog, he shot him; and adds, that the loss gave him great uneasiness. At another time, two dogs he had wormed also went mad, and both ran away, as did the former; but he cannot assert whether they bit other animals. The same person also wormed another dog,
when

when a puppy of four months old ; he remained well till about three years after, *i. e.* till about three months ago, when he went mad, ran away from his master, and bit a great number of other dogs, several of which went mad soon after. All this can be attested by different people here ; and, should any of the readers of this doubt its authenticity, every satisfaction relative to the affair, that can be required, may be had by applying to the printers of this paper.

HERE, then, are facts, where no error in observation can be admitted. This relation was given by the person who wormed them, before several respectable witnesses, not long ago, who were then conversing on the subject ; one of whom, some time after, mentioned it to the writer ; on which he sent for the person, and had it farther confirmed from his own mouth.

THE readers of this Journal, it is hoped, will excuse the author of this article for
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employing so much of their time on an affair of so little importance. But it has been productive of the removal of an error; and so far it has some utility. Nor will humanity, he thinks, blush at being the instrument of preventing an unnecessary practice, giving a degree of pain, without any good purpose, to a species of animals, whose fidelity, and attachment to man, claim, in a strong degree, his mutual affection and sympathy. Hitherto, however, they had the apology of a supposed good to plead. But henceforth there can remain none.—Besides, we are not sensible of the injury we do the animal by thus mutilating him, and destroying parts which nature formed not in vain. It is not enough that we may be yet ignorant of its use; for, some purpose it must unquestionably serve, otherwise the Creator would never have endowed them with an useless organ. **H.**

July 30, 1785.

MR. RIPSHAW now informs me, that he has learned the fate of two other dogs he wormed; which, as farther proofs to establish the inutility and absurdity of the practice, we shall lay before our readers.

ONE of these was the property of a Mr. Clubbe, a baker, in this town: he wormed this dog when he was a puppy. About six months from the date of this, *i. e.* about three years after he was wormed, he became affected, and bit several dogs; next day he left his master and ran away. Two of the dogs he bit, about three weeks after, went mad: one of these belonged to a Mr Mayhew, a farmer, at Whitton, a village about two miles from Ipswich; the other to a gentleman at Bramford, about four miles distant.—These are facts, and can be well attested.

I WOULD

I would observe here, that dogs do not *always* refuse water in madness.—The Rev. Mr. Mills, near Boxford, in Suffolk, assured me lately, that his own observations enabled him to confirm this remark; and related an instance, where one of his dogs that went mad, lapped water only a few hours before it died. He added, it lapped with ease; nor did it shew a desire to bite, unless a stick was held to it, when it immediately snapped at it. It fawned on him, likewise as usual. He took notice, however, of a particular fierceness and wildness in its eyes, and that it bounded rather than ran, and

Mr. TUSON, Surgeon, at Boxford, who was then in company, related a case, similar in almost every respect, which fell within his own knowledge.—Hence the danger in pronouncing a dog *not mad*, because he either laps water, or fawns on his master.

To conclude these remarks, I shall present my readers with the opinion of the late Dr. Gregory, Professor of Medicine in the University of Edinburgh, relative to the production of Hydrophobia.—Speaking of *stimuli*, which, he thinks, are the chief cause of the evacuation of the *vesica urinaria*, he says,—“ You may take it for a general rule,
 “ that those creatures that feed upon animal
 “ food have their bladder more muscular,
 “ and considerably stronger, and less capacious, than those that live on vegetables,
 “ such as horses, cows, swine, &c. whose
 “ bladder of urine is perfectly membranous,
 “ and very large. This is wisely adapted
 “ to the nature of their food; for, in these
 “ first, *all their juices are more acrid*, so, in
 “ a particular manner, their urine becomes
 “ exalted, which, as its remora might be
 “ of very ill consequence, must necessarily
 “ be quickly expelled. This is chiefly effected by its stimulating this viscus more
 “ strongly to contract, and so discharge its
 “ contents.

“ contents.—And if these creatures, whose
 “ fluids have already a tendency to putri-
 “ faction, are exposed to heat or hunger,
 “ the liquids must, for a considerable time,
 “ undergo the actions of the containing
 “ vessels, and frequently perform the course
 “ of the circulation without any new sup-
 “ plies of food ; by which the fluids become
 “ more and more acrid, the creature is apt
 “ to fall into *feverish* and *putrid diseases* ;
 “ and, in fact, we find, that *these causes are*
 “ *sufficient* to produce that fatal and melan-
 “ choly distemper, the *Rabies Canina, Vul-*
 “ *pina, &c.* in these animals : whereas
 “ those that feed on vegetable food seldom
 “ or never contract those diseases, but by
 “ infection.”—Vid. Essay on Comparative
 Anatomy.

In page 69 we promised to lay before
 our readers the noted powder of Palmerius,
 “ Whose power he believes sufficient to be
 “ trusted with operating a cure, even though
 “ the patient should neglect all due treat-
 “ ment

“ ment of his wound, or observation of
 “ regimen in diet ; and to be able, not
 “ only to work a prophylactic, or prevent-
 “ ative cure, but likewise a radical cure of
 “ the Hydrophobia already present.”—The
 prescription is as follows :

“ TAKE of the leaves of rue, vervain,
 “ sage of virtue, plaintain, (and polypody
 “ leaves) common wormwood, mint, mug-
 “ wort, baum, betony, St. John’s-wort,
 “ and of the lesser centaury, each equal
 “ parts by weight.”

WHEN these were to be used, they were
 to be reduced separately into a fine powder
 a dram of which was to be administered
 daily to the bitten patient, mixed with twice
 as much sugar, in a draught of wine, or
 cyder, or broth ; or made into an electuary
 with honey, to be swallowed on a fasting
 stomach, three hours before taking food.

F I N I S.

E R R A T A.

p. 3. l. 9. for them, read *it*. p. 8. l. 3. for *superfluous*,
read *superfluous*. p. 40. l. 9. for Henry II. read *Forester of*
Henry II. p. 101. l. 6. after urine, add *in*. p. 131. note
l. 5. for *ut pote*, read *utpote*. p. 181. l. 5. from bottom,
for *were*, read *was*. p. 193. l. 10. for evening read *night*.
ibid. l. 5. from bottom, after *became more and more*, add
violent. p. 212. l. 3. after *means*, add *commonly*. p. 214.
l. 10. dele *is*. p. 216. l. 13. for *days*, read *weeks*.



