1838
Haslett
Dissertation
by
S.T. Haslett
On Hydrophobia by T. H. Huxley p. 36

A dream recurring from Dr. Sydenham came a person a negro animal

Dr. Fezeltar

Diphtheria would breed

Being much informed reading

Judgment Injustice

Two membranes only need

dam
5. What animals are equally capable of communicating to others? And of most, which are born


7. Origin - conclusion

8. To be - animals.

9. Lilies equally capable of communicating to others? - And of most, which are born

10. Canis - Rabies in dogs

11. Remove paws? - heaves - hooves? 

12. Principles of all the functions

13. Most pressing

14. More general

15. More general

16. More general

17. More general
4, ALBANY STREET,
Edinburgh, 29th May, 1838.

SIR,

MR. ANGUS MACKAY, HATTER, 23, North Bridge, having granted a Trust-Deed in favour of Trustees, I have been authorised by them to Collect the Outstanding Accounts. I therefore annex a Note of Account standing in the Books at your debit, and have to request that the Amount (£2. 10s.) may be paid to me within eight days from this date.

I am,

SIR,

Your most obedient Servant,

[Signature]

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Inaugural Dissertation on Hydropathia by Samuel Torrens Haslett
It is not customary for us to enter upon the investigation of any subject, without first examining its relative importance, and weighing in our minds the probable advantage which may be expected from our prosecution of such an inquiry. The two circumstances which appear to be of greatest moment as regards any disease are, first, its comparative fatality, and secondly, the frequency of its occurrence. The present disease, then, is one which demands our attention chiefly as regards the first of these points, but in no inconsiderable degree as regards both. There is no disease recorded in medical annals which has been heretofore and still is contemplated by all ranks of people, with so much horror as Hydrophobia. That this horror is founded in truth no one will dispute who for a moment considers the dreadful nature of its symptoms and the very little control which can be exercised over them by medicine, or its almost inevitably fatal termination.
Fortunately indeed! for the interests of humanity its occurrence is comparatively a rare event, but when it has once seized upon its unhappy victims, the tortures which it inflicts upon them are almost unparalleled by any to which human nature is liable. As there are several ingenious disquisitions extant upon this disease, and some of those of a recent date, it may be objected here that the subject has already received more attention than should justly fall to its share from its comparative importance; and that therefore time and study would be better disposed of by the investigation of some disease of more common occurrence. The two following facts appear to me to be a sufficient answer to this objection: First—The most—if not all of the recent treatises upon this subject contain too much of a theoretical and too little of a practical nature. Secondly while all the diseases of common occurrence are treated of fully and in their various bearings both in the popular books of the day on the Practice of Medicine and Surgery, and in the daily lectures which are delivered—Hydrophobia is almost entirely overlooked, or is left as it were, to furnish a subject for future speculation and inquiry. This disease is one concerning which it would be
A matter of no small satisfaction to have some facts in which to rest, seeing the bare idea of it is a horror to the minds of all. Accordingly in the following pages it shall be my endeavour to collate, with as much as possible, the most interesting facts which have been proved concerning it, and to present the most important of the views which have been taken of it by different authors. While I do not pretend purposely to bring forward new theories neither to speculate unnecessarily on those which have been already brought forward, neverthless if any such occasions should present themselves to me in the course of the inquiry as being of value, I shall not shrink from dedicacy; paying them over. After this preface which perhaps demands an apology for its length. I begin by dividing my subject into several heads. I shall first as is customary give a brief sketch of its name and history; secondly I shall treat of the origin and communication of true rabies among animals including man; thirdly its causes, fourthly its symptoms in dogs; fifthly the phenomena it presents in man; sixth its treatment. History—Hydrophobia which is termed by Dr. Good Lyssa Rabies is placed by him under the genus Entasia order LINCTORID (= nervosus affections of the muscular Tissues) and by the immortal Allen under Neurones (order...
Hydrophobia was not unknown to the ancients, some writers have endeavoured to prove that it existed as a disease in the earliest ages, and as dogs have existed in all ages this opinion is the most likely to be true; it is also supported by evidence of both a negative & positive description for. Although we do not find that the father of medicine Hippocrates has taken any notice of the disease, this does not amount to a proof that it was not in existence in his time, because it is an established fact that some countries are so far protected by circumstances as to be almost wholly exempt from its attacks; thus we learn from Baron Larry that although Hydrophobia is more frequent in warm than in cold or temperate climates, it is not observed in Egypt, and the natives alleged that they knew of no instance in which the disease had manifested itself either in men or in the inferior animals. That Hydrophobia was known at least in dogs to the ancient Greeks may be inferred from a passage in Homer's Iliad in which Ulysses is made to compare the fury of Hector to that of a mad dog. The first clear mention however of Hydrophobia.
nophobia, or that dreadful series of mental affections which follow the bite of a mad dog—this is supposed to be that which is made by Aristotle, whose ideas of it were nevertheless extremely erroneous, since he sets down man as incapable of receiving the distemper from the bite of a mad dog. Dr. Hecker thinks the fact clearly proved that the disease existed 400 years before the Christian era and even in the most remote periods. It was known to the names of older writers under various: we learn from Galen that it received from them at different times the following designation: Acracophobia or a "fear of air" since the impression of cold air sometimes excites terror. Pronephobia or a fear of all things, because in addition to a horror of water it is attended with a singular degree of general timidity and distrust; it has likewise been termed Hygrophobia and Phobobipos. The meaning conveyed by the two last appellations are almost perfectly identical with each other as well as with the name by which the disease is now commonly known: Hydrophobia. The foregoing appellations, numerous as they are, were found to be all inadequate inasmuch...
They expected only one symptom of the disease, accordingly several modern writers have adopted the term Rabies canina or Rabies contagiosa, or simply Rabies. This last corresponds to the French Le rage. It is to be remarked in reference to the applicability of the last mentioned term, that as the patient does not commonly betray any tendency to fury, while the dread of water is really a customary attendant on this complaint, the last mentioned terms seem strictly more exceptionable than the word Hydrophobia. Whatever be the name chosen to designate this formidable disease, one fact regarding it appears necessarily to be borne in mind, when it is called by its ordinary appellation. The fact alluded to is that a dread of water is not strictly speaking a constant symptom of this disease, and that this symptom does not even belong exclusively to it, a dread of liquids being as we are told an occasional symptom of some inflammatory and nervous affections such as Gastroitis, Hepatitis, Hysteric, Epilepsy. I would suggest that Rabies should be the name for that most virulent form of the disease which arises from the introduction of the saliva of a rabid animal beneath the skin, while Hydrophobia
be employed to distinguish the symptomatic or less formidable species. Any one will be convinced who peruses the accounts of the various forms of the disease in man, that there is a greater difference between the two kinds of it above mentioned, than there is between some other diseases which have separate names.

Now come to the second head of which I have proposed to treat, namely, the origin and communication from one animal to another of Habies (canina). Habies it is needless to state originates in dogs. But it also asserted that it appears spontaneously in cats. To much does its origin seem to be confined to the two genera to which these animals respectively belong, so that it has been denied by some that it ever commences in any other in this manner, i.e. independent of the bite of another animal labouring under it. The older authors were, however, of a very different opinion. It is asserted by Cebus Aurelianus Sophyurus, Aovicena, Van der Weil, and Balenda not only that Habies may originate in man, but the same is laid with regard to horses, asses, camels, pigs, bullocks, poultry, butterflies, bears, and monkeys. Now I believe there is no well authenticated instance on record of its occurring in modern times in any animal not
Transmissioin of Babes.

Canine race independent of contagion. A question of much importance and interest to be determined—are all animals when affected with Babes equally capable of transmitting it from themselves to others? and if not what are those which do not possess this power or possess it but in an inferior degree? These are questions which it would be of great utility in the management of disease to arrive at certainty in; if this were done it would enable us to adopt instantaneous measures in those cases in which the worst result was to be dreaded; whilst it would guide us in forming a judgment in such cases as were not of so highly dangerous a description and thus unnecessary alarm and suffering might be avoided where there were no real grounds for fear; in these points as well as on most others connected with this singular malady there is considerable difference of opinion among Authors. The contradictory results of the experiments which have been performed in this subject are no doubt partly owing to inaccuracy of observation in the parts of some of the experimenters but partly also to various modifying circumstances. Whilst understanding these discrepancies some interesting facts have been ascertained in the course of the inquiries which have been made on this subject.
The experiments of the French veterinary surgeons
(and others) seem to have established the following
most important fact: that all herbivorous quad-
rupededs when affected with Rabies are incapable
of transmitting the disease to other animals. If
this fact be true what a comparative feeling of ease
and security does it not afford to the minds of that very
immense class of persons who are of peculiar sen-
sibility as to the dread of this complaint? To know
that they have nothing to fear from the attack of any of
these quadrupeds which constitute so large a majority of
the domestic tribes would indeed be a happy release
to thousands! some of those to whom I communicated
experiments on which this opinion rests fully convinced I had
there stated, For it is not more illustrative of the
weakness of human nature than it is true, that an
undefined feeling of Terror regarding Hydrophobia
prevails to such an extent as to cause serious uneven-
siness to the minds of numbers in society at large.
This Epidemic Terror (so it has been justly called) exercised
an astonishing influence during the last century in some
parts of the empire, but especially in London, and we find
Dr Goldsmith endeavouring to drive it from the minds of his
countrymen both by reasoning and ridicule. Thus this Illust-
nous Author says "A dread of Hydrophobia is the Epidemic
Terror which now prevails, and the whole nation is at present actually groaning under the malignity of its influence. The people daily from their houses with that circumspection which is prudent in such as expect a mad dog at every turning. The physician publishes his prescription; the beadle prepares his halter and a few of unusual bravery arm themselves with boots and buff gloves, in order to face the enemy if he should attack them. Although it is still necessary to inoculate every beast of creation against mad dogs the same does not seem necessary with regard to all other tribes of the animal kingdom; as the following experiment selected from several of the same sort will show. First: Mr. Macnaul & Vatel inoculated with the saliva of a rabid sheep two other sheep, a young dog and a horse, but none of these animals was affected by the disease, and continued well for four months after the experiment. Professor Dupuy endeavoured to communicate Rabies to cows and sheep by rubbing their wounds with a sponge which animals of the same class labouring under the disease had had in their mouths but without success; while the same experiment made with a sponge which had been bitten by a rabid dog communicated Rabies by a kind of inoculation. Dr. Aikman likewise relates that he inoculated two rabbits with the saliva of a rabid dog but
without communicating the disease + such are some of the experiments on which this opinion is founded, several others are related by Mr. James Cooper, who thinks them conclusive evidence of the fact, namely that all herbivorous animals are incapable of communicating Rabies. It is true there are some instances brought forward to prove a contrary opinion, the best authenticated of which is a case in which a rabid badger is said to have communicated Rabies by biting + but I think even allowing a badger to be a herbivorous animal, that this is by no means sufficient to set aside the accurate experiments above mentioned. Before quitting the subject of the transmission of Rabies from animal to animal I cannot avoid glancing at some experiments which have been performed with the view of proving whether or not the human being possesses the communicating power also affected with this disease. In this country it has been tried by Gauthier, Vaughan, Babington + and on the continent by Giraud, Girard, M. Paroife + Regard. All these gentlemen failed to communicate (by repeated trials *) the disease from man to other animals. This unquestionably proves that if Rabies be contagious in the human species it must be in a very slight degree compared to what it is in Dogs and other animals of the same genus. However that this quality does in some degree belong to the human race
has been proved in such a manner as to leave no room for doubt, and from this fact coupled with that which precedes it an important rule may be deduced. I shall however first briefly relate the authentic experiment alluded to. On the 19th June 1813 at the Hotel-Dieu at Paris, Magendie and Brechet took some of the saliva of a man, who died a few minutes afterwards of Hydrophobia, and by means of a bit of rag they conveyed this saliva to the short distance of twenty paces from the patient's bed and inoculated it two healthy dogs. One of the dogs became rabid on the 27th July and bit two others, one of which was attacked with complete Rabies on the 26th August.

What the foregoing experiments proves with regard to man would most probably be found true of all omnivorous animals, namely, that they possess the faculty of transmitting Rabies from themselves to others, but in a very inferior degree to what the truly Carnivorous do.) On reviewing the foregoing facts, the only which I have already hinted at obviously presents itself: It is a rule by which a physician when called in might be able to form a judgment whether or not any given case of a wound by animal supposed to be rabid was likely to prove dangerous; after what has been stated. I need hardly say that the physician's judgment in such a case is to be guided by the description of the food on which the animal in question naturally
Rule of Spontaneous Rabies

Causes

lives; and that the degree of danger is in the direct ratio of its carnivorous propensities. We have seen that the herbivorous species are wholly incapable of causing Rabies by biting; it is universally admitted that Dogs, Wolves, and Foxes, the most carnivorous of all quadrupeds are almost universally in producing the disease, in this manner. Furthermore, those whose propensities are intermediate between those of the two classes specified above is to be regarded as capable, when affected with this frightful malady, of reflecting a wound (with big teeth) which is neither so harmless as that of former class, nor so virulent as that of one of the latter class. Thus, this rule may serve for a prognosis or in any case of the disease which may occur. This may also be observed that the same rule appears equally adequate to denote the liability of any given class of animals to the spontaneous attack of Rabies.

Now arrive at the third division of my subject, a division which is perhaps more important than any other, when the object is to discover rules for the prevention of the disease. This is the causes of Rabies among animals. In treating of this subject I shall confine myself to the cause of the malady in Dogs, both because the disease itself, is almost wholly (in these countries) confined in its origin to that animal and, because of its great powers in spreading it, confere...
Causes

The contagious virulence of the disease in the dog joined to its aptness to bite. The causes of Rabies are divided into proximate and remote, or morbid, concerning the latter as of the most importance. I shall speak first. The causes of Hydrophobia which have been laid down by Bonhaze and by almost every writer on the disease since his time are as follow: "a very hot climate or one exposed to extremes of heat and cold" "a very hot and dry season" "feeding upon putrid flesh" "want of water" "worms in the kidneys, intestines, brain or cavities of the nose."

It is my purpose to speak of these consecutively, and I shall endeavour to show that they are all reducible to one head: that head is "want of water, which known is better expressed by calling it excessive thirst." This I consider to be one very efficient morbid cause of Rabies in dogs and other animals in which arises spontaneously. Salivary contagious is here of course left out of the question, the first cause given is a very hot or variable climate.

That these circumstances may favour the corruption of the prolap of the disorder is extremely probable, but that they are of themselves sufficient to produce it is wholly untrue as the following reasons will show. First, in some countries where the climate is of the hottest description, Rabies has not since appeared.
Causes

Throughout very long periods (as not once in the space of fifty years). Thence Dr. Mosely states that during his residence in the West Indies, he never heard of a single case of the disease, and that he is certain there has been no instance of canine madness in many of the islands for 50 years before the year 1783; again Dr. Hunter alleges that in the hot island of Jamaica, where dogs are exceedingly numerous, not one was known to go mad during a space of 40 years.

Dr. Thomas who also resided a good while in the West Indies avers that he never saw more heard of a case of Rabies there. Secondly: The disease after not showing itself for such long intervals, as those mentioned above, has broken out with the greatest virulence. What are the foregoing testimonies of the absence of Rabies in the West Indies, what do we find Dr. Hillary's statement to be? He answers (with reference doubtless to a different period from those alluded to above by Dr. Mosely and Thomas) that this disease, from its frequency may be considered endemic in the West Indies. Several other instances might be adduced to prove that neither of climate is of itself a cause of Rabies, but those given above seem sufficient. To prove that coldness of climate is equally inadequate to produce this disease, it appears sufficient to mention the following facts. 

Dr Hillary in the case of Benjamin does judgment
Cause

It is seldom or never heard of in Poland and that mad dogs are almost unknown at Archangel, Tilsit, and in the country north of St. Petersburg. The second cause assigned is "a very hot and dry season." This cause may be considered as identical with the third, namely "a want of water." I shall not therefore separate them but speak of them as if one and the same. We find it universally allowed both by professional and non-professional persons that a "want of water" is one sure cause of hydrophobia. So sensible are the Governments of those countries where water is habitually scarce, as to take measures to have dogs and other animals duly supplied with this article. Further it is found that where dogs are well treated and supplied regularly with water, the malady seldom or never occurs; thus Baron Lary attributes the exemption of Egypt from the disease in part to this circumstance. As was one... during the day they lie down in the shade near wells, full of fresh water, prepared by the natives. They only run about in the nighttime; they evince the signs and effects of their love but once a year, and that only for a few minutes. They are seldom seen coupled. On our arrival there was a vast number of these animals in Egypt, because they were held like many others in great veneration.
Causes

and were never put to death. Their disposition is meek and peacable and they rarely eat fight with other. Doubtly all these causes may exempt them from Rabies. It is to be particularly remarked in this account that the only difference worthy of notice between Egyptian dogs and those of other countries is that the former are regularly supplied with water, and by this simple means are defended from the injurious operation of all those other circumstances which have been so long held as causes productive of this dire disorder! There can be no doubt that "extremes of heat and cold" as they occur during the summers and winters respectively in these islands, are very frequent causes of Rabies. This happens altogether and is perfectly explicable by the circumstance of water becoming equally scarce from long continued heat or drying up the receptacles of this fluid or by permanent frost rendering them unaccessible. As an additional proof of the fact that
Causes

Excessive Thirst, if it be not the only efficient morbid cause of Rabies, is at least necessary to the production of the disease; I shall in speaking of two remaining supposed causes show that this condition (i.e. of Thirst) is to be considered as present during their operation. The first of these two supposed causes and the one which demands greatest notice is the third assigned by Faerharne - namely, "Eating brutal flesh." To this cause a great deal of weight has been attached by most writers, and it would seem not undeservedly. Dr. Mead of Philadelphia, quoting of it says, "We had a remarkable proof of the influence of carrion eaten by dogs in setting them mad. At the conclusion of the late war in this city, as well as before that period, all the horses and other animals that died in the city were carried out to the Commons and suffered to putrefy there; and it was known that at this period madness was a most common
Disease among the dogs, who used constantly
to devour them, but of late it rarely occurs since the
former practice is not any longer continued.

It appears evident to me that this cause has been
like all the others been somewhat mistaken.

It cannot indeed be denied that it operates in
some manner tending to the production of Rabies.

It is my opinion however that it acts thus either
in cooperation with Thirst or in a manner entirely
identical with that in which that cause operates.

It is not my design to attempt an explanation of the
modus operandi of either of either of these reputed
causes, in this place. That of course belongs to the subject
of Proximate cause. The proposition which I believe
shall endeavour to prove stands thus.

We have seen proved by both negative and
positive evidence that "Thirst" is an efficient
cause of Rabies. I shall show that "Putrid" aliments
does not cause Rabies unless a want of water or
"Thirst" be present at the same time, cooperating
with the former. If this be case, since "Thirst"
is a certain cause and "Putrid" aliments an uncertain
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disease in every such case to the former.

The reasons on which this opinion is founded.
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disease among the dogs, who used constantly to devour them, but of late it rarely occurs since the former practice is not any longer continued. It appears evident to me that this cause has been like all the others somewhat mistaken. It cannot indeed be denied that it operates in some manner tending to the production of Rabies. It is my opinion however that it acts thus either in cooperation with Thirst or in a manner entirely identical with that in which that cause operates. It is not my design to attempt an explanation of the modus operandi of either of either of these reputed causes in this place. That of course belongs to the subject of proximate cause. The proposition which I believe and shall endeavour to prove stands thus:—We have been proved by both negative and positive evidence that Thirst is an efficient cause of Rabies. I shall show that Putrid Aliment does not cause Rabies unless a want of water or Thirst be present at the same time cooperating with the former. If this be the case, since Thirst is a certain cause and Putrid Aliment an uncertain one we must set down the production of the disease in every such case to the former. The reasons on which this opinion is founded—
Causes

are as follow: first, the fact that "Pythiolic Fever" does not produce babies where the dogs which feed on it are abundantly supplied with water. Thus for instance, the fact of this disease never occurring in Egypt which has been already adduced on the testimony of Baron Larrey is fully confirmed by other authors, both ancient and modern, as de la Reynie, and also by Calmet* and by the Traveller Brown. But Baron Larrey says with regard to the Egyptian dogs: "They do not go into the houses in the day time, they remain at the sides of the streets, and they wander into the country at night in order to find the dead animals which are lying unburied." Here we find these animals exposed to devour carcasses, yet completely protected by regular supplies of water from any attacks of the malady. The exemption from babies in the country referred to seems to depend on the fact that it is and has been a regular custom for the Egyptians to allow their dogs to feed on dead carcasses, and therefore the animals do not put themselves with such proclivity in the same manner as if such occasions occurred but rarely. Indeed it is certain that this diet element does cause the disease in dogs, when they eat it in great quantity even although they be supplied with
water. Such is the instance quoted in page 18th of this Essay; and the prevalent opinion among authors proves that this cause must apparently have been productive of the disorder in numerous cases. It must therefore be admitted that putrid aliment, either directly or indirectly, is a cause of Babies; but I think I shall show some reasons to make it appear probable that it operates so as to produce this effect in the latter of these ways; and that if by first causing excessive and unquenchable thirst that this cause excites Babies. First let us consider the phenomena which Repetition, in general presents. It is evident that, when any animal has gorged itself to an excessive degree with food it soon after becomes barren with thirst which is in most instances very difficult to allay; whereas if the food has been of a mild description, such as farinaceous or vegetable—this distempers condition will pass off after the animal has lain in a semitorpid state for some time, without leaving any morbid effects behind it. To illustrate this I may adduce the instance of Dogs which are fed for the purpose of being killed. These animals are generally supplied with as much food as they can eat; and they frequently gorge
causes

themselves to such an extent as to fall down in a helpless state from the weight. In this state they lie until the effects of their enormous meal have passed off. But let any person observe them as they lie there, and he will be convinced from deep, laborious breathing and the groaning sounds which they utter at intervals, that they pay dearly for their gluttony. Indeed the sufferings of these animals from repulsion are too well known to every one to require comment. Persons who feed hogs for the market are so fully sensible of the fact here stated. And if the injurious consequences which result from it as to the health of the animals that they have now generally got into the custom of supplying them with gravel or some such substance, which they eat with avidity, and which has an extremely wholesome effect, by stimulating their digestive functions to greater action.

If the foregoing be a true account of the effects which follow on repulsion from the milder sorts of food, what are we to suppose will be the nature of those which ensue from the most stimulating of all kinds of food—namely, animal flesh? There can be no doubt they are of the following description—great depression, nausea, vomiting—all
First of the most intense description. - Now when these symptoms coexist (and that in such a case they must coexist will not be questioned!) what will be the result? I should say, what will the result be of the united force of those four morbid conditions? I think it is perfectly unavoidable that it will be as follows: While the desire to drink is extreme, the nausea and loathing may so overpower the voluntary energies of the deprested animal as to render it impossible for him to satisfy this desire, even although water were placed before him! or in other words, the effect of overcharging the stomach to an extreme degree with animal flesh may be to raise an obstacle to the animals taking into its stomach either solids or liquids. What then shall this condition be called? It knows of no name for it unless it be inslicant nabies, but what is the cause? Repulsion with animal flesh, doubled is the first place, but the prominent and maddening cause (if I may so express it) is surely thirst.

From the preceding observations it will appear that it is not "putrid Aliment" but Animal flesh which has been taken into account. The idea of putrid
of putrefying flesh, which and not "albumen" is the term used by most authors, I believe, to have arisen from the circumstance. That it is only on the occasions of dead carcasses being thrown or left for them to devour, that dogs and other carnivores have an opportunity of sating themselves with this kind of food and such carcasses are generally supposed to be in a putrefying condition. Such opportunities occur in particular after battles and so we have accounts of the prevalence of Rabies after Battles. I have only one other fact to refer to in favor of the view I have here taken of the operation of this cause. That is that it is only in those animals of the most carnivorous propensities that we have certain evidence of the spontaneous origin of the disease. Thus the Dog, the Wolf, and the Fox are set down by most writers as the only animals subject to Rabies independent of a bite from another animal afflicted with it. The last cause which I have to speak of is one which I think deserves to be altogether put out of the list of causes—it is "worms in various parts of the Body and in particular under the Tongue." In the first place, that substance which is designated under the Tongue of dogs which was by the Ancients

* * *
Causes — Mr. S. Cooper's Opinion Contested

mistaken for a worm & considered as the sole cause of madness in these has been shown by Morgagni to be no more than a spiral coil of fibrillogamentous tissue! Secondly — in the majority of those cases in which worms have been found on dissection, some of the other stipple which have been spoken of as leading to the disease, have been in operation previous to the death of the animal. Further — it is very possible that some of the causes mentioned may (as putrid animal flesh for instance) give rise to worms, and thus a more accident be taken for the cause of the disease.

Before quitting the subject of causes I must take leave to combat an opinion of Mr. S. Cooper's in which he expresses his belief, that none of the foregoing causes will produce Rabies. He expresses himself as follows, "While I consider that neither, thirst, hunger, eating putrid flesh, nor infallible produce this disease in the canine race!" This opinion he appears to found chiefly on the following experiments which he relates, as follows —

"Machowicz, Breschet, and Duperthure have purposely kept many dogs for a long time in the most disgusting state of uncleanness, let them even die without food or water, or even devoured each other, yet without exciting Rabies."
Causes

It is true he gives some other arguments of the same tendency, but this is the only experiment on which he rest[s] his opinion I have quoted. That it is of no force in supporting such an opinion I shall show. He says, "the animals were allowed to die of hunger and thirst, yet without exciting Rabies." Now it is well known that Rabies does not ensue from a bite in general sooner than the 20th day, and often not for many months: this fact Mr. Cooper himself gives several examples of--extending the period even to several years. It is also very probable that as a bite is the surest way of producing the disease, it is likewise the swiftest; but the period set down by Allison is that in which death will ensue from a deprivation of food and drink is less than 20 days in the case of a man. Moreover the human species can sustain life under such deprivation longer than any other. The inference from these facts when brought together, on the experiment above mentioned is obvious. The animals would be certain to die of hunger and thirst before the disease (if it were caused) had had time to manifest itself! These animals are also reported ever to have devoured each other yet without exciting Rabies. But, under the circumstances in which they were placed, viz. of a total want of drink, as well as food, is not the fact of their "devouring each other" as strong
a proof of Rabies as could possibly be adduced? Before finally quitting the subject of causation it is necessary for me to state, that I have entered into the foregoing discussion not with the view of proving Jesus to be only cause of Rabies—but merely to show that the four others which have been assigned as causes (as it were habitually) by writers—are all without any great stretch, referable to it. I am clearly of opinion, however, that the disease may arise where no thirst from any of the preceding causes is present—and consequently where none of those causes can be in operation. I am therefore inclined partly to agree with Dr. Jillman (if indeed the Opinion throws any light upon the subject!) who says that this disorder arises in Dogs much in the same way as Typhus fever in the Human Subject. I shall next speak briefly of the approximate cause of Rabies. This is involved some obscurity, as well as the former. But the belief of most writers inclines to one opinion, namely, that it depends on a peculiar specific venom. This however has been called in question by several Authors, amongst whom may be enumerated Reneeau, Meaux, Girard, and Bossuyt. The latter writer considered that it was the effect of fear, or an impression made on the imagination—but this view of the matter is far from being need
and has been ably refuted—in particular by M.
Dezauche, of Bordeaux, who remarks that horses, apes
and mules quibus non intellectus had died each year in
the very year in which he wrote. The facts in proof
of the reality of a peculiar infectious principle in rabies
are too numerous to leave any doubt on the subject.
However, the following disastrous occurrence as related
by Mr. Samuel Coopers (I know not on what authority—is too
(Stating a proof to be omitted. Twenty three persons)
he says were bitten one morning by a female wolf
of whom 13 died in the course of a few months
besides cows, which had been injured by the
same animal. He then goes on to ask with reason
"How could all these unfortunate persons have had
similar symptoms, and especially a horror of water
had they not been all under the influence of
some cause besides the bites? The patients who
died were bit on the naked skin, while in the other
who escaped infection the bites happened through
the clothes which no doubt, intercepted the saliva
the vehicle of the virus?"

The melancholy occurrence
just quoted affords an opinion which has been
advocated by Mease and Gird—namely—that
rabies depends on irritation of the nervous system
generally proceeding from the enervation of
the irritation at the bitten parts. If the cause
Symptoms in Dogs

The suspected doge operates in producing the disease, it can only be the symptomatic form of it, such as occurs from ordinary lacerated wounds, or from causes similar to those which produce tetanus.

It appears to be of importance in a treatise prosecuted to lay down rules for the prevention of hydrophobia to point out some of the most prominent trees in respect of the signs which dogs exhibit when the disease is about to break out in them. Some elucidation of this point is the more necessary because the prevalent notions on this subject are highly erroneous — and consequently of an extremely dangerous tendency.

In the first place the idea that dogs and other animals must necessarily come a dread of water when affected with disease is totally without foundation. This notion however is chiefly applicable to the first stage of the complaint, but it will be readily admitted that it is in the first stage that it is of by far the greatest importance distinguished in the animal may be destroyed before he becomes truly dangerous in the second stage. So far it appears one dogs or from having that dread of water which the generality of persons would expect in the first stage, that they are often very greedy after it, and generally take it with great freedom.

The second false and dangerous notion to be refuted is that the disease in dogs is always
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attended with furiousness or a disposition to violence. It
need not be necessary to say that this is by no means the case. I have again to refer to
the article above noticed in the margin—the author of
which seems to have had many opportunities of judging
of the truth of what he asserts. These facts are also
confirmed by instances given in Mazière’s Journal,
and also by Darrieu, who in reference to the first mention
of the above notion says, that a rabid wolf at Freycinet
across several rivers. I shall conclude this brief notice of
this symptoms with a short sketch of some of the most constant which
do present themselves. There is first to be observed some
deviation from the natural habits of the animal, or some alteration
in his ordinary manner. This is generally evinced by a disposition
to pick up stones or very small substances which may lie on
the floor. Their temper is half playful half peevish—
and they are very easily provoked and cannot bear the
presence of strange dogs. There is also a fondness for taking
cold substances as stones, metal, 
and they are
generally subservient to the voice of their master unless where
much enraged by ill treatment. These are the most
characteristic signs which appear in the first stage of
Rabies, and are chiefly exhibited from the authors above refer-
to—but are also confirmed by accounts which I myself have
had communicated to me.

It may naturally be asked (and indeed, the question
had been put to me by a friend as a weighty objection,
to my sending in this essay, as my inaugural one; why I have devoted so much of it to the investigation of Rabies in Dogs? It may seem at first impression that this subject does not belong to our profession but that of the veterinary surgeon and that therefore it is irrelevant to the purpose intended to be answered by the regulations of the College respecting dissertations. In short I have been told that a discussion about Dogs can neither advance the interest in the credit of the Postgraduate. When I first entered on the consideration of the subject I would have readily coincided with the prevailing opinion. But after perusing several of the treatises on Hydrophobia which are considered the best, I became convinced that the view I have taken of it had been hitherto too much neglected, and that while the writers were busily committing themselves in inventing new theories of its proximate cause or for its cure (an endless pursuit!) the more practical and useful considerations were overlooked. I would ask in them, is it not more creditable for the Physician, during a period in which anxiety and terror pervade the minds of the people concerning this malady, to be able to give such directions as will-if observed-prevent its occurrence, than to labour under the conviction, when it has occurred, that he can do little to alleviate it and nothing to cure it? It has been justly said that whatever tends to lessen human suffering is the province of the Physician. This is the province of the Physician. This is the province of the Physician.
Cure

profession, and he likes affects that medical practice is grounded more on the principles of worldly advancement than on those of humanity will find few indeed among the well-educated of his professional brethren to admire his sentiments.

It was my intention on commencing this dissertation to give some account of the various forms of disease in man which have received the name of Hydrophobia. I also intended to add to it an enumeration of the symptoms of Rabies or the worst form of the disease in man. However, as my paper has already extended to such a length and as these are subjects (especially the latter) which are fully treated of in most works on the disease, trust I may without censure pass them over. For a full account of the various forms of Hydrophobia I would refer to Cooper's Surgical Dictionary, where this subject is discussed at much length.

It now only remains for me to dispose of the subject of Cure. This I shall also do briefly. In the first place, I would have it understood from anything I have said in another place, that I think there is nothing or little to be done after the disease has manifested itself. On the contrary, I think many things which reason and experience can suggest to be done because the attempts to effect a cure have been hitherto unsuccessful are we on that account to give up the case in despair? Far otherwise! we are to administer with the utmost energy and promptitude those remedies which have most reputation or which can be procured most readily.
There was a theory for the cure of Hydrophobia given out some time ago by Dr. Eyres of London, which no one, I have not seen any refutation of it published. I shall notice briefly. Dr. Eyres believed that—Since the symptoms which follow an overdose of strychnine very closely resemble those of the disease in question, it is confidently asserted that because iodine is a specific antidote against strychnine (it ought from analogy) to cure Hydrophobia also.

It is quite evident that Dr. Eyres must have entirely overlooked the mode in which iodine acts as an antidote against strychnine. And it is considered that it is by forming an iodide of strychnine, which is invoicing in the stomach that this substance acts; he would have at once seen that, as no analogy exists between the causes of these two diseases—his conclusion was altogether untenable. The remedies which have been tried in this disease are as numerous and as various as could well be imagined. Of all those which have been tried and recommended, the following seem to be most deserving of attention. 1st. Excision of the rattle part within a moderate period after the infliction of the bite. 2nd. Spreo necrification of the surrounding parts. 3rd. The internal administration of Mercury & Quinine or Antimonial. 4th. The warm bath. 5th. Cold affusion. 6th. Kneadification of the parts & rubbing with mercurial ointment. 7th. Water dripping.
The first mention of the foregoing remedies is most to be relied on. Indeed if it be employed before the poison has had time to become diffused through the system, there is every chance of a cure. The period within which it may be adopted with advantage appears to vary from ten minutes to as many hours according to the severity of the bite and the constitution of the individual. However I think it is the first step which should be taken on seeing the patient, provided it be at any time short of the actual running of the constitution.

Cauterization of the parts surrounding the wound is of use in arresting the progress of the absorption—in case any particles of the virus should have been already carried beyond the boundaries of the epidermis.

The second class of remedies are such as should undoubtedly be freely given in this complaint. If the action of the secreting and excreting organs can be increased without materially affecting the patient's strength, it cannot fail to have a beneficial tendency, and it is very possible the judicious exhibition of these medicines may, especially if the constitution be restored, enable the patient to overcome the malignity of the disease.

Concerning the 3d and 4th remedies what can be said? It is evident they act in a similar manner—namely, by promoting the excretion by the skin; for I cannot conceive what other beneficial effect either of them could have in such a disease. It is to be apprehended, however,
That by means of the mental excitement caused by their application (especially the latter) the exhaustion which may follow it that these remedies may do little as much harm as good.

Scarification of the parts around the wound and rubbing them

fully with mercury ointment appears to have effected some

good in several instances where bites had been inflicted

by dogs which afterwards went mad - Dr Parry

however mentions two cases in which the treatment

was fully adopted in the commencement (i.e. immediately

after the bite) but where the patients both died afterward

of the disease. Wetter dressings have been highly recom-

mended by Dr Macartney in this complaint. This remedy is

however founded entirely on theory. Dr Macartney

recommends that the moistened band should be changed

often (as once every two hours) so as to keep up a continued

fomentation to the parts.

Venesection, ad delirium,

+ topical bleeding of the parts affected have much experimented

evidence — the taking away blood by a large syringe

and continuing it till the patient faints away was recommend

d by Bouveau & has since been tried in numerous cases,

but with no success to warrant its being at all relied on.

I shall conclude by observing that this last is a remedy which judging

a priori could scarcely have been supposed admissible in this disease

because the only rational indication seems to be to lessen the tendency

to inflammation, at the same time to diminish the vital energies of

patient as little as possible, and for the same reason all antiphlogist

medicines should be given in small doses often repeated.