Epilepsy in its Relations to Insanity

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The study of Insanity possesses charms for the Medical Man now which it could not have had in the end of last Century or beginning of the present. In those days the Physician must either have been continually pained by the miserable,fare-worn faces of the inmates of the Asylum, as well as by the harsh treatment considered necessary at that time, or else his heart must have become callous to all such impressions; but in the present day when such great and beneficial changes have been wrought, the study has charms for the student which it never before possessed, consequently it is becoming daily more necessary to know something of the management of Asylums and of the treatment of the Insane. At the present time too Asylums are increasing so rapidly that there will, of necessity, be an increased demand for Medical Officers, who unless they have seen something of the usage of cou-
...ducting such institutions must certainly feel, to some extent, awkward for a short time at least, after their entrance upon their new and strange duties.

With the view of obtaining some view of the information so desirable, I spent the greater part of the autumn recess of 1860 at the Montrose Royal Lunatic Asylum, and while there, meeting as I did daily with numerous cases of epilepsy, I determined to make "Epilepsy in its relations to Insanity" the subject of the paper which it is necessary I should lay before you previous to obtaining the Degree of Doctor of Medicine.

When we see men in the prime of life compelled, on account of this fearful disease, to spend the remainder of their days in an asylum with very small prospect of ever again joining in the busy scenes of this busy world, I...
to see that home where all their youthful days were spent, and for the pleasures of which they so often sigh in their strange abode, it would be remarkable did we not try to discover some means whereby to alleviate their miserable condition, and if possible to render the disease less dreadful and less to be feared than it has been heretofore.

"Epilepsy," says Retzius, "appears to belong to all climes and all countries, it occurred in the early history of mankind, and it prevails at the present day, among the untutored savage as among the most cultivated of civilized society; it startles the mother from the security with which she hangs over her beloved infant; it afflicts the lover trusting in the future happiness promised to him by his betrothed; it warns the son and the daughter of the mutability
of things when they see a parent, whom they thought healthy, struck down by the convulsive Joveyphus. Epilepsy, shares no condition, age, or sex."

Epilepsy seems to have been known and dreaded at a very early period in the history of medicine. We find Hippocrates stating that before his time it was looked upon as a disease more especially sacred than any other, most likely on account of its mysterious and incurable nature. Such as in those days professed to treat it carefully avoided any particular line of treatment, and steered their course in such a way, as Hippocrates tells us, that if they were unsuccessful the gods should bear the blame of it. Hippocrates in his paper on the "Sacred Disease," objects to the name "Sacred" in as much as he considers all diseases as alike.
sacred. Many persons are of opinion that those persons who are spoken of in Holy writ as being affected with Devils were in reality Epileptics.

Among the Romans the disease bore various designations, such as "Morbus Comitialis", on account of the superstitious manner in which they regarded the occurrence of an Epileptic seizure in any of their public assemblies.

But as time advanced, and science marched steadily on, those superstitious views gradually died away, and there arose more enlightened minds and enlarged opportunities who desired to remove the veil that enshrouded the disease in obscurity, and if possible to establish a cure. Many and various were the remedies they tried, many of the drugs raising high hopes at the outset of their trial, but all destined to
cause more deep disappointment to those who so anxiously watched the result, and such is even now to a great extent the case. No great remedy of universal application having yet been found.

It would appear that among the ancient Scotch it was customary to extract epileptic and maniacal patients, in order that they might prevent the disease being transmitted to a new generation, but were though the measure was invidently was not successful in ridding the country either of epilepsy ormania. The Romans imagined that by making the unhappy epileptics drink the warm blood of gladiators they might succeed in driving away the fits; though that might, I think, be some doubt whether such a draught would act rather than an opposite effect from the one desired.

At the present day it is
thought fit and proper to confine
an epileptic in an Asylum so soon
as he shows signs of Insanity alike
for his own safety and that of his
friends. You cannot go through
any of our large Asylums without
seeing numerous cases of Epilepsy all
more or less subject to fits--of tempor-
ary excitement; in some the ex-
citement being that of the most
violent Mania; the paroxysm in
a few hours or days passes off,
and the patient once more puts
himself in a state of comparatively
good health, able perhaps to attend
in any work that may be going on,
till another attack comes, and
again gives rise to the period of ex-
citement. In many cases the patient
is able to calculate almost to a day
when the next attack is likely to
be the place. In many cases there is
always the fear, maybe in the majority
of cases, almost the certainty that
some day (if he live long enough)
he will become a hopeless invalid.

Many and various causes are assigned as the beginning of epilepsy, and among these exciting causes fright holds a somewhat prominent position. The patient most likely when a child has been startled by some unlooked for or horrible sight, and immediately thereafter became epileptic. This cause is very well illustrated in the case of W.R. aged 21 years who was admitted into the Asylum in the end of August in a state of great excitement. In a day or two the excitement passed away when he was able to give us his history somewhat as follows. When about 7 years of age he was startled by a horse running away with a cart. Then for the first time he fell down in a fit, the effects of which he did not get the better of for 6 days; he had not another attack till after the lapse of about 8 weeks, after which they generally occurred about
every 3 or 4 weeks. He also states that if the interval between the fits was short, the attack was milder than one occurring after a longer interval. He was never subject to maniacal excitement until the occurrence of the last fit, when after being 4 days in bed he rose, dressed himself, and rushed out of the house, chasing every one he met. It was while in this state that the author—his friends held on him and sent him to an Asylum. He says that before the fit comes on, he feels an uneasiness about the heart, that he occasionally has time to get up and walk off the fit—but not always. When I last saw him, about 4 weeks after his admission, there had been several slight attacks, but none of them at all equal in severity to the one previous to his admission. It is somewhat difficult to conceive how a fright should so affect the system as to cause the
Romberg believes that it will very often be
found that the parents of Epileptic
patients have been insane.
person ever after to be liable to attacks of epilepsy, but in all such cases, there has most likely been a pre-disposition to such a state long before this fright which merely acted as an exciting cause. The predisposition may have existed from their very birth, as evidenced by convulsions in infancy, though in all probability not referred as epileptic at the time, and very likely if enquiry were made still further a hereditary tendency would be discovered. Turner suggests that fright may give rise to epilepsy by causing spasm of the muscles of the bloodvessels. Esquire I find, says that the hereditary tendency is more frequently transmitted through the fathers than the mothers, possibly because we often meet with it in males than females, though some authors I find consider that it occurs equally in both sexes. This however does not
soon to be borne out by the experience of the Montrose Asylum for [illegible] standing that the new house contains about 40 more females than males there were so far as I can remember only 5 female Epileptic patients and 16 male Epileptics; and in that Asylum there are patients from every part of Scotland.

Though much has been written regarding Epilepsy, and that with anything but a favourable result too little attention has I think been paid to its relations to Insanity.

I have looked over a considerable number of Asylum reports with a view to ascertaining how the statistics bore with regard to Epilepsy and in all of them I found the proportion of Epileptics very large. In the report of an Asylum in Kentucky for the year 1854 though the actual number of Epileptics is not given the deaths are from which we may perhaps have
some idea of the proportion, the report says there were 202 patients in the house in 1834, of those afflicted with Epilepsy 16 died, 7 of them by Cholera; we may I think fairly allow more Epileptics than those 16 who died, to the 202 inmates and in so doing we give a very large percentage to Epilepsy. Then again out of 2113 cases treated in the Eastern Asylum Kentucky there were 34 cases of Epilepsy, and if we look at the result in those 34 cases we find that 17 died, 11 still remained in the Asylum, and only 3 are marked as having recovered—3 not being accounted for, at least in a way that I could understand. If we look at the Colney Hatch Report July 1839 we find a still larger proportion. In the Male Department there remained 524 patients, and among those there were 96 cases of Epilepsy.
in 766 patients remaining in the house, no less than 104 were cases of insanity in various forms, all complicated with epilepsy. In the Worcester Pauper Asylum, 1859, out of 318 cases 54 were epileptic.

These few examples that I have just brought forward show a most appalling proportion of epileptics, and of themselves I think sufficient proofs of the importance of my subject. What an inestimable boon there would be and benefit upon mankind could we crush in its infancy the growth of this strange disease. Dr. R. Maclellan says "Epilepsy is at once the great type of convulsive disorders, and the key to their interpretation," could we then but make use of this key what a treasure would we discover.

No cause seems of times to lead to epilepsy next to fright, than sexual abuse. The case of T.W. age 27.
and who has been epileptic for the
last 9 years is very good example
of this, but I will refer to this case
a little more at length when I
come to speak of treatment.
In such cases the body is reduced
to a state of great weakness, and
this I think is greatly in favour
of the view now so commonly taken,
and so strongly advocated by Dr.
Radcliffe, namely that epilepsy
is not the result of a Pneumonic
state of the system, but is induced
by a weak and debilitated frame.
Dr. Radcliffe bears this statement
out in his history of the Epileptic,
where he says, "In very many in-
stances, again, if not in all, the
hands and feet are cool, or cold,
the pulse is scarcely ever otherwise
than weak and thin; and a
feeling of chilliness is almost habitual.
Indeed, so far as my own
experience goes, the powers of the
circulation are always defective,
I do not remember a single instance of a person suffering from simple epilepsy who had the red lips and face, the full pulse and disturbed veins of Plethore, or even a faint semblance of such a state, except, perhaps, for a short time after the fit. For a short time after a convolution there may be some degree of reaction in the circulation, but if there be it soon dies out, and the state which follows it is more akin to collapse than Plethore. I know, indeed, of cases presenting satisfactory evidences of Plethore, in which apoplexy and Paralysis were the dangers to be apprehended, and in which Epileptiform convulsions were the occasional accompaniments of the Apoplectic or Paralytic state; but these convulsions, as will be shown, eventually are not to be confounded with those of ordinary Epilepsy, without confounding matters, practical as
well as theoretical, which ought to be carefully kept apart."

The very periodicity of the disease Dr. Maccliff regards as but an-
other sign of "defective vital power," so that the old practice of bleed-
ing and purging is now de-
nounced as the very worst treat-
ment the patient could be sub-
jected to, but while this has been
stamped as so prejudiced with-
ing has been brought forward to
replace its place, that has any
permanently beneficial effect; and
it, afterwards, have to observe
sometimes as to treatment proposed
by Van der Poel, on which he places
great reliance. Dr. Maccliff, thinks
muscular exercise may be regarded
as a cause, also abstinance. Epilep-
tics leaving abstinence ill, after
then the places sexual impiacture
he finds Dr. Watson giving expres- 
to the same opinion as Dr. Maccl-
cliff, on this subject. "Taking," he
"Epileptic people as a class, you will find them to be generally characterized by weakness and irritability of mind and body and not by steadiness and vigour; by a lack rather than by an excess of vitality; they are much more commonly pale than florid, anaemic than plethoric, pale than robust, melancholic than rancouve, timid than bold. And these indications of defective vitality become still more manifest in those who have been long or frequently subject to the disorder. The inherent debility of the nervous system, augmented as the paroxysms multiply in number." Hussain and LINEN also in their work on convulsive when giving expression to their discussion of the course of treatment the most often adopted, declare "To no pur- pose is it, as regards epilepsy, an established fact that soon lowered
subjects are often attacked than full-blooded ones, that debilitating fevers, loss of blood, and venereal formation, or adulteration of the blood (as by alcohol, lead), and finally congenital weakness of the brain (idiociesmus congenitus), in most instances bring on the attack. In vain do numerous experiments on men and animals arrest the correctness of the doctrine that blood-letting and all treatment of too debilitating a nature increase the number of attacks and accelerate their final transition into inscrutability and consumption."

Van der Kolff is opposed to the views of Kussmaul and Turner, who say that epileptic attacks generally depend on a diminished flow of blood to the head. He thinks that the effects produced by them in tying the carotids ought not to be confounded with true epileptic attacks. "Such convulsions," he says, "it is well known, exhibit-
themselves in cases of violent hysto-
ring; but whatever the proximate cause
may be, no practical man will con-
found them with epilepsy, neither
do they return after recovery." He goes
on to say, "I will, indeed, admit, that
in the very beginning of an attack
more a less vascular spasm may
exist, which may even produce a
sudden momentary retardation or
obstruction in the circulation through
the capillaries rapidly passing in-
to dilatation; but I should not con-
sider this spasm to be the cause
of the attack, but rather the re-
sult of commencing discharge of
the nerve ganglia, which are certainly
most closely connected with the
vaso-motor nerves." He brings forward
the experiments of Monbreg as support
of this view, "Cases," he says, "have
been observed, by Monbreg, and still
later by Reimer, where by compression
of the carotids the fit was cut
short. In the case observed by Reimer,
This succeeded 22 times, the patient experiencing great relief, and improvement in his memory and mental condition. Van der Niekh believe that his microscopic observations bear him out in his views on this subject, he having observed dilatation in certain of the blood vessels of the Medulla Oblongata. Ponder in his paper on Epilepsy observes that Epileptics have lost of blood, ill, the states likewise that Hyper trophy of the Left Ventricle which causes increased flow of blood to the Brain nearly ever causes Epilepsy, though causing Apoplexy. Jenner considers it as probable that Epileptic convulsions cannot be brought about by contraction of the blood vessels induced by the Vas-Motors where he also remarks that in anemic persons the nervous system is more irritable, and that such persons are more susceptible to fright than others. He asks, not without reason why if one can blush, the cheek may not like -
rise, cause the smaller reflexes to con-
tact? Or rather he says that it can-
not be denied that such a thing is
possible.
If we look at D. Linnet's opinion as
to the state of the system in Epilepsy
will find that he is rather inclined
to agree with D. Neadcliffe, and those
who like him, look upon it as caused
by an impoverished state of the blood,
rather than by an excess of that fluid,
we will quote his own words. “However
we may wish to localize, the affections
we cannot overlook the numerous facts
that show the state of the blood to
exercise a material influence in the
production of Epilepsy. We have
had occasion to observe, in a former
chapter, that in uniform abnormal
ment is met with in the secretions,
as far as we are at present informed,
and which might serve as an indica-
tion of the special lesion which
prevails. The close alliance between
Epilepsy and Terofulose affections
points in this direction; while in the great majority of cases, circumstances have preceded the outbreak which notoriously tend to impoverish the blood, and exhaust both the vascular and nervous power. But though the disturbed polarity which induces the hemp upon most frequently depends upon extensive conditions, so much so that some writers among whom Turvill, especially mention Dr. Racecliffe, report this class of causes as the sole indication for treatment, I am satisfied that the state of the blood, need not necessarily be impoverished, but that various pathological conditions of the blood may be associated with Epilepsy. That it does not always depend on an impoverished state of the blood, he thinks is evidenced by the successful treatment adopted by Dr. Cooke who commenced not to abstract blood, men so far as to affect the whole system, and, apparently with a fair show of success. Dr. Fothering-ham,
candidly says that such is not his own experience, but this he is inclined to attribute to a difference of type in the disease, according as it is found in town or country; and it seems to me that we cannot well explain such differences of opinion and practice in any other way without almost declaring that those who state such treatment to have been successful in their hands are stating what is untrue.

Dr. B. Secours has performed various experiments on animals, was it possible to discover the real seat of the epileptic seizure. His experiments tend to show that they may be produced in animals similar to epileptic attacks in man, by division of different parts of the spinal cord, - certain injuries of the Wm. C. Orme being followed in a few weeks time by "Epilepsy or at least a disease resembling Epilepsy." In a review of his lectures in the "Journal of Psychological Medicine" for July 1858, some interesting facts regarding his
Experiments are given, the various stimuli, inquiries of the holy Lord, that will cause these epileptiform attacks are given as follows. 1st. A complete transversal section of a lateral half of this organ. 2nd. A transversal section for two posterior columns, of its posterior columns of grey matter and of a part of the lateral columns. 3rd. A transversal section of either the posterior columns or the lateral, or the anterior alone. 4th. A complete transversal section of the whole organ. 5th. A simple puncture. Of all these inquiries, the first, the second, and the fourth seem to have more power to produce epilepsy than the others. The first, particularly i.e. the section of the lateral half of the Holy Lord seems to produce constantly this disease in animals that live longer than 30 or 40 weeks after the operation. He gives a very accurate description of these fits from which it will be seen that they have a very close resemblance to an ordinary
Epileptic fit as seen and described by most authors. "When the attack begins, the head is drawn first, and sometimes violently toward the shoulder by the contraction of the muscles of the neck, on the side of the irritation; the mouth is drawn open by the contraction of the muscles of the neck which are inserted upon the lower jaw, and the muscles of the face and eye (particularly the orbicularis) contract violently. All these contractions usually occur simultaneously. Frequently at the same time or very nearly, the animal makes a cry with a peculiar hoarse voice, and the passage of air can be felt through the vocal cords spasmodically contracted. Then the animal falls, sometimes on the irritated side, sometimes on the other, and then all the muscles of the trunk and limbs that are not paralyzed, become the seat of convulsions, alternately clonic and tonic. The head is alternately drawn upon one or the other side, all the muscles of
neck, eyes, and tongue contract alternate ly. In the limbs when the convulsions are done, there are alternate contractions in the flexor and extensor muscles. Respiration takes place irregularly, account of the convulsions of the respiratory muscles. Almost always there is an expulsion of frothy matter, and often of urine. Sometimes there is an erection of the penis, even ejaculation of semen. These symptoms as here described bear a very close resemblance to those of an epileptic attack.

Authors in general are not inclined to place the seat of epilepsy in the thalamus, but as we shall notice further on, they are more inclined to attribute it to something in the mid-olivary area. This view is very strongly supported by van der Hoeck.

The epileptic paroxysm does not overcome all patients alike; some are overcome by the fit without any warning, others again, have a distinct "aura," but in most, the same person there may be c
one time an "Aura," and at another no
warning whatever. This so-called "Aura"
varies in different persons, the true "Aura" is
described, as being like a gentle tinge,
beginning at some one of the extremities,
and passing upwards towards the head,
but when it reaches the throat all sensi-
ability is suddenly lost, and the patient
is laid prostrate in a fit. But there
are other sensations distinct from the
true "Aura" which are occasionally ex-
perienced, such as weight about the
chest, a fluttering at the heart, and Dr.
Rachcliffe mentions a case in which there
was a sensation of hunger felt previous
to the attack, and in one case which I
observed, there was great drowsiness,
and tremulousness of the hands with in-
ability to take food; these symptoms
being followed in about a couple of
hours by a fit, after which he felt quite
relieved, and able to take his accustomed
starch. In another case which I saw, there
was a distinct "Aura" beginning in the
centre of the palm of the left hand.
and, raising upwards to the head, when a patient notices these premonitory symptoms he can occasionally ward off the impending attack by some particular kind of exercise, which experience has taught him to have. The desired effect, though sometimes to use the words of the patient I last mentioned, the fit is too strong for him, on such occasions he at once lies down to save himself from injury; when he has been affected in his endeavours he says he feels himself "as clear as crystal." He is, however, occasionally overcome without any such warning. In the case, which I mentioned as illustrative of the effect of fright as an exciting cause, an uneasy sensation about the heart was the occasional forewarn. Another case, who proceedings to his having those attacks received a very severe wound on the forehead, and which has left a very deep depression, says that the first warning he has of an attack is always at that spot. Dr. Mackenzie mentions two cases, one
in which a little blue ink perched itself on the table. Mocking the unhappy victim, and another case when patient thought he heard a guitar grated close to his ear; and there is that well-known case mentioned in Dr. Holst's Lectures where a patient of Dr. Gregory's saw a little woman in red, come up to him, to strike him when he fell down, Dr. Connolly in his book on Insanity alludes to the spectrum seen in cases of Epilepsy in the following words: "The paroxysms of Epilepsy are often preceded by a spectrum, and the state of the Brain, then existing, whatever it be, being present in other instances without being followed by the paroxysm, has often been the origin of a belief in supernatural appearances. In other cases, all objects have appeared inverted just before the Epileptic attack. I know a gentleman, who when in a state approaching to fainting, sometimes induced by cupping, and sometimes by pain, sees the most lovely landscapes
displayed before him." Further on he
again refers to the same subject as
follows: "Epileptic patients are occasion-
ally warned of the approach of a par-
oxysm by mental excitement; their
high spirits becoming, to their friends,
the well-known precursors of their
sufferings." D. P. Segard, in speak-
ing of the "Aure Epileptica," says that
it seems to be somewhat analogous to
the sensory condition originating in
the skin and face of animals made
Epileptic by injury of the Spinal Cord.
He has observed that it is the cut-
naneous ramifications of the nerves
that seem to possess this power of
exciting an attack, and not the
trunks of these nerves, he says. He
therefore, as well as in man, (when there is
a real aura) the trunks of the nerves
sum must to possess the faculty of pro-
ducing feel, whereas their ramifications
in the skin, or in the muscles have
this power. In (Epileptic) animals as
well as in man, if there is an interrup-

of nervous transmission between the
skin, the nervous centres, and, or are no
more seen, or at least their number is
very much diminished.
Many cases of epilepsy with an evident
aura. Epileptics are on record, in which
there has been either a diminution of
the fits, or more frequently a complete
cure, after the interruption of nervous
transmission between the starting
point of the aura and the nervous
centres. Various measures have been had
recourse to in order that these nervous
transmissions might be destroyed, in the
hope that by so doing the course of the
disease might be arrested. If the aura
take its rise in a finger or extremity a
ligature has been applied above the part
to check the transmission of the nervous
influence; division of nerves and veins,
amputation of parts of the body
have been had recourse to with occasional
benefit; indeed, one would require to be either
very hopeful of a cure, or else rendered des-
perate by the disease, before either patient
or physician could bring their minds to
decide upon such a severe measure as that
of amputation. B. B. Lequeur, also mentions
disposition of the muscles that are the seat
of the aura as a means of cure, and
lastly cauterization by various means, of
the part of the skin from which the
aura originates. Though possibly the
following passage ought more properly
to belong to the consideration of the
treatment of Epilepsy, I shall nevertheless
introduce it, at present, as bearing
heavenly upon the subject of the Aura.
the case is quoted by D. Recking
from Dr. Lyson's Practical Essays
upon Intermittent FEVER. The case was
that of a farmer's daughter in whom
the Aura commenced in the fingers
in whose case a lipatine was applied
below both knees. The method failed
the desired effect; the Epilepsy pro-
ceeded as further than the lipatine,
but the fact shows most clearly, it
must be to ridiculous an appearance,
that the girl herself, though in the
greatest distress, could not refrain from laughing heartily, and, almost at the same instant, begging us to let the disease take its course, lest her feet should drop off by the violence of their agitation, which, she said, was intolerable; and N. Lewknigg adds, "strange to say, the repeated use of the ligature in this case was followed by a complete cure." He mentions a case where the Acne began at the Gastro-remies, and where the removal of a small nervous tumour effectually dispelled both the Acne and the epilepsy.

In well-marked cases the harangue is often ushered in by a shrill and unearthly cry, which some authors describe as having startled a parrot, himself no mean adept in such unearthly cries. Persons have been known to faint from hearing this strange cry, but though a frequent occurrence of an Epileptic harangue.
The patient soon becomes convulsed, and rigid in the face, and perfectly insensible to all external stimuli, but previous to this congestion of the face there is a symptom which Dr. Rachele says is difficult to observe, namely a death-like pallor which overspreads the countenance. Temner lays great stress upon this state of pallor preceding the congested state of the face, a fact which has been observed by many writers on Epilepsy, notwithstanding this pallor, Temner says "the heart and heart-beat strongly, indicating the existence of an impediment to the circulation in the smaller branches. Cases are even known where the aortic arch has burst during the epileptic attack. Finally, Berens relates that Holst observed an epileptic subject at Christiania, whose pulse always disappeared in the left arm during the attack; at the Post-Mortem examination..."
dilatation in the course of the arteries was found; the left arm, receiving its blood from the vertebral arteries, which themselves obtained their supply through the Basilar artery from the Carotids. The disappearance of the pulse renders it probable that the circulation through the Carotids within the cranial cavity was arrested during the attack.

This then goes far to show that in the early stage at least of the paroxysm there is spasm of the smaller vessels and not congestion, Trousseau however remarks that this does not prove the spasm of the vessels to be the cause, but that it may just as fairly be regarded as one of the phenomena accompanying the general anterior affection. From the various experiments which Trousseau performed, he comes to the conclusion that it is probable that Epileptic convulsions can be brought about by contraction of the blood vessels induced.
by the two Mourners." He also states that on the 9th page he gives several cases where plugs were found in the sinuses of the Brain, and where there had been epileptic convulsions previous to death, he is however unable to decide whether they were the cause or the effect of the Epilepsy.

It has been alleged by some that the hystery is caused not by spasm of the arteries, but by retention of the venous blood leaving the brain, though Jenner admits that this may give rise to such a state in some exceptional cases, he denies that this is generally the cause. He referring to an experiment performed by Dr. A. Cooper, in which he tied both Juguulars, and where convulsions happened on the 7th day after the operation, he says that though he himself tied the external jugular vein of rabbits upwards for two days, and sometimes the internal jugular, likewise, no similar result occurred, although the animals remained...
allowed to live for weeks or months after. The most prominent symptom that he observed was slight substitute and grinding of the teeth in some of the cases during the first 24 or 30 hours after the operation. Though Trennmann did not agree with all that Marshall Hall states regarding epilepsy, he believes him to be correct when he says that sudden closure of the glottis produces epileptic convulsions, and also in drawing attention to the similarity between strangulation and epilepsy, he himself having frequently produced insensibility and convulsions by ligature of the trachea. He relates a case of attempted suicide by hanging, first by Woodward in 1842 or 3 under the care of the late Prof. Pache of Heidelberg which bears upon this part of the subject. A young servant-girl, who had been cut down and with difficulty restored to life, was affected with violent epileptic attacks for many weeks, the conjunction of one eye appeared aggravated.
with blood for a longer time in consequence of the stranguation". He explains epilepsy arising from closure of the Glottis as being caused by "cessation of the nutrition of the brain". This state of closure of the Glottis may also be produced secondarily by irritation of the motor nerves that close the Glottis, and this Turner believes to be the cause in certain cases, as instanced by a case of epilepsy in a girl aged 19, in consequence of irritation of the Epiglottis by a long vowel. He moreover thinks that the languidness generally follows instead of preceding the depression of the mental powers. Turner supports his views by various cases where the Carotids have been tied in many (two of them in his own experience) and where convulsions have followed with a softened and vacating state of the Brain as shown after examination after death.

In opposition to the views of Turner, Lanier Stohlman's papers on several cases
when compression of the Carotids, effects cure, a fact which, he considers, altogether at variance with the views held by Turner, but even such cases Turner turns very ingeniously to his own account, he says, "though life saving, compression of the Carotids may in some few instances have been of service, yet it does not necessarily follow that it was the anemic condition of the brain that in these few cases produced the favourable result. Apart from the influence just now mentioned, of such operations upon the mind of the patient, we must not forget that the arrest of circulation in a subject produces an increased determination of blood to the collateral vessels. In individuals still professing an adequate or normal quantity of blood, the closing of the Carotids will necessarily cause an increased flow through the vertebral arteries. Let us imagine an epileptic seizure in an individual, delirating in an anemic state of the
posterior and excitable parts of the brain (the M. Oblongata for instance) which condition affects but sympathetically the rest of the brain, compression of the Carotids may achieve a cure not only because of the resulting anæmia of the cerebrum, but by the induced hyperæmia of the posterior part of the brain. Moreover, it is also to be remarked, that every compression of the Carotids, however short, is closely followed by Central congestion from the short duration of the compression, as usually applied, it is difficult to say how much of the remedial effect is to be ascribed to the Central anæmia, slight in itself, or to the hyperæmia, consequent to it.

The opinion of Fuller was that epilepsy arose from Plethora and debility, and the course of treatment which he pursued was after a fit to diminish the Plethora and increase the strength. Fuller also takes notice of the opinion of Fuller to use Fuller's own words: it appears that the meddling...
which is the predominant cause of Epilepsy depends more particularly upon debility, or upon a Pneumonic state of the body.

From the evidence of cases in which there was a local exciting cause, and in which the removal of this cause effected a cure, Vaunder Pothc draws the conclusion that "to produce, Epilepsy in the human organism is necessary, viz., great change in the tissue, but only increased excitability, and, consequently, augmented determination of blood, and chemical changes are required." Though Trousseau considers that a sudden stoppage of the nutrition of the brain may bring on Epilepsy, he does not believe it to be the universal or even general, proximate real cause. He believes that it acts indirectly by including a certain molecular change in the brain substance, but anaemia is not the only cause of this change, chemical and mechanical agencies may likewise induce such a change.
In ascertaining the seat of the epileptic
convulsions we find some difficulty in
coming to any thing like a definite con-
clusion; the researches of microscopic
anatomists have not yet been sufficient-
ly clear and minute to establish with-
out doubt the various changes which
occur in that most complex system,
namely the nervous system, during an
epileptic convulsion. Hippocrates
came to the conclusion, that the
Brain was the seat of Epilepsy, but
he could not go further. Heber was
more definite when he declared the
Pineal gland to be the seat of the
disease, an opinion, however, which,
later experience has by no means confirm-
A. At the present day Physiologists
are inclined to believe the M. Oblongata
to be the actual seat, even though as yet
no clear exposition has been given of the
changes in its structure or arrangement
of its particles which give rise to such
a state of things.
Mr. Oblongata in epilepsy, and that here is the primary seat of the disease he feels certain. He believes that except in nervous irritability depending upon a great vascular distension in the real cause, and as more blood is distributed to the Mr. Oblongata than any other part of the nervous system he considers himself justified in drawing the conclusion that epilepsy is most likely to take its seat there.

Kussmaul and Zeller believe that the Mr. Oblongata is very frequently the seat of the epileptic attacks in as much as it is from the Mr. Oblongata that those nerves arise which cause constriction of the Throat as also the Vaso-Motor nerves, but they also believe that the state which gives rise to these epileptic attacks is not necessarily confined to any one particular spot, but may exist through the whole Brain. Dr. Elliotson thinks it probable that the Mr. Oblongata is the seat of epilepsy in as much as if it be slightly compressed we have convulsions; if it
be more compressed we have, sleep, and if a
sharp instrument be introduced into the Brain
there is no pain felt; but as soon as we reach
the N. Olfactori Epilepsy is produced.

There are those who believe that there is one
class of Epileptics who bite their tongue, and
another class who swallow. Van Der Holth is one
of those who hold this view and so convinced
as he of the accuracy of it that he has
published a list of the Tongue biters who
came under his own observation. He thinks
that what he has seen by the Microscope
sufficiently explains this; his observations
lead him to conclude that the tracts of
the N. Olfactori are most markedly dilated in the course of the Hypoglossal
and of the Corpus Thalamus in those who
like their tongue, and that in those
who do not like their tongue the tracts in the course of the Vagus are not
dilated. It may appear somewhat like
presumption on my part to express doubt
regarding the correctness of the conclusions
come to by so great a Physiologist as Van
der Holth, but it does not seem tome
a practical classification whereby Epileptics are divided into those who bite their tongue and those who do not, in as much as a patient who bites his tongue in a fit today may very likely not do so for months to come. There are many I believe who look upon biting of the tongue merely as one of the accidents of the fit; and so look upon it in the same light as they do other bruises and injuries received during a fit in one case which I saw the patient occasionally hit his tongue, but in the great majority of the fits he did not; and in Van der Holth's own table, the tongue bites seem only occasionally to have inflicted that injury upon themselves. Something I find remarks "the absence of the symptoms (biting the tongue and the inside of the mouth) by no means proves a seizure, and to have been Epileptic, for it may be regarded as another accident like any other injury in the Epileptic, induced by the coincident convulsion, and unconsciousness, ..."
as a fall into the fire, or against a sharp corner.

The hallucinations of Epileptics is I think a subject of considerable interest, though one so far as I have observed, but little spoken of in works on Epilepsy. A large proportion of these I believe have some form or another of hallucination after the fit, and always having reference to the same subject after every succeeding fit some patient that I know believes that she hears her son or some other member of her family speaking to her through the window during the night, she will declare that people come to the back of her door and make some great disturbance for the especial purpose of keeping her awake, the same patient he also obsission of a less pleasant character, when visited in the morning she will complain loudly of the attendants having come into her room and beat her most unmercifully. Epileptics generally, frequently complain of the ill usage which they say they receive from the attendants.
Another patient believes that he is, at some future period, to be the great Judge upon Earth, and that for that reason he has been confined in an Asylum, whether the object of his confinement is that he may be able from personal experience to rectify the many and great evils supposed to exist in such Institutions I cannot say. The hallucinations of this class of patients seem to be quite of a different cast from those observed in other types of Insanity such as General Paralysis. I have known the patient first mentioned here these hallucinations for 8 or 10 days in succession after a fit, after which they gradually became less apparent, and she could again associate comfortably with her fellow inmates. A case where these hallucinations were very evident is mentioned in the Report of Worcester Asylum for 1856. The patient was a female in whom there was a tendency to suicide. She imagined she was accused by men with unbecoming speeches, and reproved with dreadful imprecations, that she
was lashed with ropes and cruelly lacerated, and that she was drawn into painful attitudes by various mechanical contrivances, and to escape these various torments she attempted to destroy herself by strangulation or suffocation.

Of the symptoms noticed previous to an attack of Epilepsy, Headache is one frequent as well as well as well important and one very generally noticed by authors. Dr. Elliotson speaks of it as occurring one or two days previous to the paroxysm. Dr. Plicke, likewise, mentions it. Promberg mentions a case in which there was severe frontal headache after the paroxysm. Paralysis frequently occurs in conjunction with Epilepsy. Promberg mentions a few cases in which this was observed, one a case given by Pinel, the younger, of a female idiot aged 18 in which there was paralysis of the Left side, one other being a case by Membrie of a woman aged 57 paralysed on the Right side and in whom the Epileptic paroxysm affected the paralysed side.
P. Redcliffe, in describing the history of Epileptic convulsions and the impairment of the intellectual faculties which invariably ensues, says "Paralysis generally of a hemiplegic character is the constant accompaniment of this mental blight—paralysis which, as a rule, differs from the paralysis of hemorrhage in being more slowly developed, as well as in being less complete and less uniformly unchanging. At one time or another also, and generally, but not always, on the paralyzed side, there is more or less permanent spasm," "a temporary paralysis of part," says P. Scriber, "a seizure of the whole body, but then with a predominance on one side or the other, and frequently remains after the fit." It occasionally happens that such may take place after one fit, but never after another future occasion, though a sine a case, mentioned by P. Scriber, the "paralyzing influence of the disease" may be shown by frequent stammering
in the speech, in after, Dr. Pierre Minguez,
a talk by Moreau who analyzed 4,400 cases of Epilepsy in females at the
Salpêtrière, he found that 70 out of
the 4,400 cases were Paralytic.

The Paralytic

- Preceded the Epilepsy in 19 cases
- Followed in 34 cases
- Occurred coincidentally in 20 cases

The period of its duration
was unknown in _ cases

Total 80 -

The speech is considerably affected in many cases arising from Paralysis and failure of the intellect. The countenance of the confirmed Epileptic is in many cases very characteristic, the eyes grow heavy and dull, the eyelids puffy, the lips thick, and the countenance becomes dull and void of any signs of animation. The Pupils of the eye are frequently greatly dilated; it may be observed that while in cases of General Paralysis they are unequally dilated, in Epilepsy they are equally dilated.
Instead, this specific dilatation of the Pulp, in several cases.

That attacks of vertigo without any concomitants whatever may alternate with the more severe fits—is well known; there has been a good deal of discussion regarding the comparative liability of each to induce mental imbecility, one class believing that the simple vertigo is much more to be feared in this respect than the more severe fits; another set of men again, holding the opposite opinion—Touilla and Esquard belong to the former class, while Dr. Copeau advocates the latter opinion. Dr. Leding is disposed to side with Touilla and Esquard on this point; in his book on epilepsy he quotes the following passage from Esquard in which he says that the tendency to dementia bears a more direct ratio to the frequency of the vertiginous attacks than to that of the epileptic seizures; the vertigo exerts a more active, a more energetic influence upon the brain than what is called the Grand Mal,
the complete fit: the vertiginous attack destroys the intellect more rapidly and more certainly although their duration may be almost inappreciable; because there are individuals who may be vertiginous in the presence of other parties, without their being able to perceive it, unless previously informed.

A patient may have been for a very lengthened period subject to fits of epileptic vertigo, it may be seen for years, without the medical man being able to say positively this is epilepsy, till some day the patient is seized with a typical epileptic fit and all doubt is at an end. Dr. Tischring mentions a case where a female patient for 3 or 4 years occasionally felt giddy, and for a short time lost the control over her speech, but without ever becoming unconscious, when she suddenly was seized with an uncontrolled epileptic vertigo, in which she struck her face and teeth, and bit her tongue severely.

The forms of mental alienation are not the same in all cases, they are not all
Debenture or all Maniacal, but none are affected in one way and, some in another.

In the Report of the Female department of the Asylum at Colney Hatch for the year 1868, 104 patients are stated to have been Epileptic, and of those 86 were in a state of Dementia; this certainly leaves but a small proportion for the other forms of Insanity, but are looking at the classification of the Male Department we find, a great and very remarkable difference in the figures. The number of Epileptics was 96 and of these 70 suffered from Mania, and only 26 from Dementia. Why in that years report such a great difference should exist between the Male and Female Departments I cannot say, in the Report of the previous year no such remarkable difference seems to exist. Of 121 Male Epileptics 42 were subject to Mania, and 66 were in a state of Dementia; here we find the cases of Dementia exceeding those of Mania, which was not the case in the Report for 1868.
On the female side, the cases of dementia still preponderated, but here likewise the cases are more equally distributed. Epilepsy was complicated with dementia in 65 cases out of 121. - Esquirol made some observations in the female department of the Charenton regarding the forms of mental aberration met with in epileptics. The cases he examined amounted to 339, the results being as follows:

12 were Monomanics
30 were Maniacs
34 were Furies
145 were Demented
8 were Idiots
50 intellectually reasonable, but affected with frequent loss of memory.
60 exhibited no aberration of intelligence.

Here again we find a large proportion of cases of dementia, we may take a few more examples with reference to this subject. In the Worcester Asylum 133, there were 58 cases of Epilepsy, of which 20 are marked as complicated with dementia.
and thus with mania, in the same asylum, in the year 1758 there were 50 epileptics, of whom 11 were maniacal, and 24 demeniacal.

From such evidence, then as is afforded us by these and similar asylum reports, I think we may warrantly conclude, that the most prevalent form of insanity is in conjunction with epilepsy is dementia.

Dr. Percival says, "The natural tendency of epilepsy is absurdly towards dementia, and dementia is the first, close of the epileptic, if his character be uncheck'd, and life protracted sufficiently, and, this equally, whether symptoms of insanity have or have not been developed."

Next-in-point-of-frequency to dementia stand mania, but though mania may be the first form of insanity manifested, yet I fear it is often but the stepping-stone by which the unhappy patient sinks lower in the scale of created beings, other forms of insanity are intercalated, but the two already mentioned are the prime-sinews. But though he be reduced to a state
of deranged nervousness? Mania, melancholy, and times occur, especially after a fit, or series of fits. Epileptics are as a rule an irritable and querulous, the slightest cause or imagined cause of provocation being sufficient to give rise to a pitched battle.

When a person is first seized with this affection the fits are said to occur most frequently during the night, but as the disease acquires a firmer hold of the system they occur during the day like risings, and improvement manifests itself by their becoming once more nocturnal.

There are those however, who have been subject to epilepsy for years and in whom the fits invariably occur during the night; an example of this manifested itself in the case of T. M., a woman of twelve aged 36, who was admitted as an inmate of the asylum in the year 1854. In his case the fits occurred with great regularity in their recurrence, so much so that he made an Almanack in which he marks down every day that he is free.
from the fits, and knows perfectly when he expects their recurrence; he has generally about 28 clear days between each attack. After one of those attacks there about three care-fully avoid speaking to him as their only answer would most likely be a severe tear- ing or the hurling of any article that might happen to be near them at the offending party. During the intervals his always perfectly quiet. The convulsions in his case are always very violent.

In other cases the fits occur during the day and night indiscriminately.

There is one point in relation to Epile-py which has as yet attracted but little of any attention from the Medical Profession, the subject to which I refer is the comparative frequency of the disease in town and country districts. It is a subject worthy of being investigated, and one which, I suspect, would show the proportion of epileptics in the French districts to be much higher than what is found in urban districts.

Dr. Home in the last Report of the Roya.
Lunatic Asylum. Mowbray expresses this opinion. He says, "The habits and occupation of a rural population, differing so much from those of the inhabitants of a large city, give rise to mental characteristics equally marked; once it is, therefore, to be expected that the diseased mind, like the locality, should present itself under different phases. Those who are conversant with Asylum practice cannot fail to remark the difference between the inmates of a rural and a Metropolitan Institution. The former are generally more apathetic - more prone to stupor and depression of the intellectual faculties; the latter, more excitable, less amenable to control, and, present more varied, and curious delusions. Epilepsy is a more frequent accompaniment of insanity in country districts; and as has been pointed out by Dr. Shaw, the general peculiarity of the insane is much more frequent in large cities. During the last year, 183 patients were committed from rural districts, 2,800, or 4 per cent. were Epileptics, and only a small proportion..."
General Paralytics, while, of 43 from an urban population, only 2 per cent were Epileptics, and 11% per cent, labourers, under general paralyses."

The reports of the Worcester Asylum, bear out this opinion somewhat. In that asylum, the greater number of the patients belongs to rural districts, and there the proportion of cases of Epilepsy stands very high. In the Report of that Asylum for the year 1835, it is stated that there were under treatment during the year 319 patients, and that 230 remained at the close of the year of these 230, 38 were Epileptics; then again, in the same Asylum for the year 1836, there were 310 under treatment, and 251 remaining at the close of the year, and, during that year there were as few as 45 cases of Epilepsy under treatment, 34 such cases remaining in the house. If we take another report still, namely that of 1838, we find, 318 patients in the house at the end of the year, and of these 50 were Epileptics, from the preceding it will be
observed, that the percentage for their asylum, which is especially a rural one, is very high. This supposition if found to be correct would give rise to a very interesting question, namely why should such be the case? One would think that a people, living in an open country far away from the artificial life of the city would be least likely to be subjected to those circumstances which are so commonly regarded as exciting such predisposing causes. In making such observations as this however, many fallacies may arise. In deciding whether a patient belongs to the rural or the urban division many circumstances must be taken into account, though he may have lived in a rural district immediately prior to his admission, it may have been merely for a short time previous, the greater part of his life having been spent in a city. In which case we must take into consideration the form of life led by the
parents of such an individual, so that to make a really fair division is a very

task, to make anything like a fair
generalization it would be necessary to have

a very large number of cases to work with.

Though the cases of Epileptic

residents in Asylums are extremely few, we

find comparatively few cases of death from

actual Epilepsy, Epileptics more frequently

suffer, under some other form, of disease,

superimposed upon Epilepsy, except in those
cases where death takes place during a fit,

from suffocation, some foreign body being

become impacted in the Larynx, or while

in bed, being seized with a fit he buries

his face in the pillow and so dies.

It has been noticed by some writers on Epilepsy

that Epileptics have a strange propensity
to tie their neck clothes tight whenever they

can, as well as to buy themselves up com-

pletely in the best clothes during the night,

not unfrequently Epileptic patients die of

Phthisis, lesions of the alimentary organs

are also frequently found after death,
I find that it is Dr. Monley in a paper on Epilepsy in the Journal of Mental Science, 1857 who mentions this strange case, the intestines contained besides, "some thick masses kept a yard long and four inches wide. Perforation of the colon had taken place."
which lesions are stated either by Leckie, or Luc, or by Peck, to be frequently caused by a
morbid craving of which the patients are
prophets, to swallow whatever comes in
their way, he gives an example of a man
who was found to have a large piece of
stream paper coiled up in his intestine,
after death. *

The Post Mortem appearances of the Brain
are of a very uncertain character, in cases
bringing us to a nearer understanding of
the real nature of the disease, the same
changes were being found, constant in
any number of cases. There is very generally
a considerable serous effusion into the
ventricles, and on the base of the Brain
there is also frequently opacity of the Arach-
inoceil, Membrane. In the Post Mortem appear-
ances given in the Cotley Hatch Reports
old and recent blood calcite were ob-
erved in the substance of the Brain in
several cases; calcareous deposits, affected
membranes, absorption of Pituitary body here
all been observed, but unfortunately the
appearances do not so harmonize as to throw any light upon our path. Dr. Percival says that "in arophy of the brain, where the condition is congenital, the probabilities are that the patient is idiotic as well as epileptic." Romberg states that the changes most frequently seen in the thirse, lobe, "are cartilaginous laminae in the thirse, arachnoic, and partial softening especially in the Lumbar region."

Hippocrates had a strange idea concerning the cause of epilepsy, the editor of his works for the best Hygeamic Society says he "holds that the Materis Morbi is a solid phlegm or pustula secreted in that organ, which passing down into the blood reforms and encountering the Pneuma, or principle of life, produces there dreadful convulsions to which Epileptics are subject." Aristotle and Lucetius both adopted a similar hypothesis.

I am for Wolf in examining the brain of epileptics found the intercellular fluid much more aluminous than is usual in the healthy brain, which he thinks accounts for the fact.
stated by J. E. Bucknill, that the specific gravity of the brain in epileptics is rather increased, than diminished, this state however he regards not as the cause, but as the consequence of the epileptic attacks. He believes that the first cause of epilepsy consists in an excited sensibility and excitability of the medulla oblonga, rendering the latter liable to discharge itself on the application of several irritants which excite it in involuntary reflex movements. He believes that unless the disease be checked, the vessels become permanently dilated and so admit of too great a supply of blood to the brain, that expectation of albumen ensues, which expectation subsequently passes into fatty degeneration and softening. The small ganglionic cells being compressed, delirium and loss of memory ensue, or if an unusual supply of blood be sent to the front an attack of acute mania will supervene, when the nervous excitation van der Holt takes of the charge, going on in the substance of the brain. Arguing from these premises
Ian Ber Nolke thinks that Epileptic Demence should not be considered so incurable as it is at present in, way he states that he has had cases where the patients have perfectly recovered from a state of Demence. Esquiroz, on the other hand, says "L'Epilepsie compliquee d'alternation mentale ne guerit jamais." He would conclude our remarks on the Pathology of Epilepsy with the following rather depressing sentence from the work of Dussmain, "Leur on Conclusions. Every physician of the present day who is at all judicious, will relinquish the hope cherished, with childlike confidence, by certain schools and times, that pathological anatomy is destined to give an explanation of the nature and seat of Epilepsy, and he will only expect that result from the progress of the experimenter physiology of the nerves."

Dr. Cullen gives it as his opinion that Epilepsy is most liable to occur in the Melancholic type of persons, whom he describes as having thick and crisp red hair, a yellow-brown complexion, and turbinated skull bones
All constitutions however fear, are more or less liable to this disease; that they become intemperate and dull, there can be no doubt, but they are so whatever type of constitution they may belong to. Very few amongst of those Epileptics that I have seen could well be put under this cloak of Calderon, many of them being very vain, and not naturally addicted to melancholy.

Epilepsy like many other diseases seems to have a hereditary tendency, though not necessarily appearing as Epilepsy in every generation, it may possibly appear as Mania in one generation while in the next it assumes the form of Epilepsy. Accurate records were made in France of the Per cent rate of Epileptics by which it was shown that the hereditary tendency amounted to 21 or 22 per 1000 whereas the average of Epileptics to the whole population was only 6 per 1000, thus demonstrating a strong hereditary tendency.

There does not seem to be anything very specially worthy of note in the brains of Epileptic patients, neither is it
generally taken notice of in works on Epilepsy. Dr. Trenching however, in the cases appended to his work on Epilepsy gener-
ally mentions the appearance of the urine; in all the cases the results are negative, except in 2 or 3 where albumen was
present. I examined several times the urine of 15 Epileptics, but only in three of
them did I ever find anything abnormal.
In one patient, a light heavy man, I succeeded
in finding beautiful crystals of uric acid
on three different occasions, and in two
other patients I once found the same de-
posit. It is perhaps a fact worthy of note
that in those cases where I did find uric
acid, the patients had been the subjects
of Epileptic seizures the day preceding that
on which their urine was examined. In
one of the 15 cases there any appearance
of either Sugar or Albumen. In several
cases the Specific Gravity was remark-
ably low, in one case, where the urine had
been passed about 5 o'clock in the morning
it was so low as 1010. In two others, also
passed in the morning it was 1011, in
other two 1012, in one 1013, and in one case where the urine was passed, a short time before the patient dined, how the P.D. was so low as 1007, and only in one case did it ever reach so high as 1024. In every case without exception the reaction was acid.

Nothing very precise, as to the appearance of the blood, in Epilepsy seems to be known. Dr. Seel has said, "I am satisfied that the state of the blood need not necessarily be impoverished, but that various pathological conditions of the blood may be associated with Epilepsy."

No class of patients within the walls of an Asylum are more troublesome to attendants and to their neighbours than Epileptics, neither are there any who require more attention, not only on account of their being mixed with idle, but also on account of their being pokey and to raise quarrels and dissensions. It need not be said that they are a difficult set of patients to manage properly that some Asylums actually refuse to admit.
such cases, or if admitted they lose an
covincement of opportunity of getting rid of
them again. There are those I believe who
claim that the presence of Epileptics may
exercise a prejudicial influence upon the
other patients. I doubt much if they are
capable of exercising any such injurious
effect upon the other patients, and partly
for this reason that in the case of almost
every patient in an Asylum self occurs
such a prominent position in the mind
that there is little room left for con-
ceptuating the misfortunes of others,
and indeed the occurrence of a fit is but
little heralded by the other patients in the
Dayroom. No doubt were Epileptics to
be conspicuous in an establishment by them-
selves it would render other Asylum
Inmates but I should think the
management of such establishments
would be so sincere either to the Patients
more or the attendants, and I doubt
much if it would be at all beneficial for
the Patients themselves, and I believe in
very many cases they would be much more
unhealthy. But now let us consider briefly the means of treatment of such cases. In no disease, I believe, have so many and so varied medicines been tried and with such a very partial measure of success. Some forms of epilepsy are undoubtedly more amenable to treatment than others, much depends on the period of life at which the disease sets in. The most favourable cases would seem to be those that occur about puberty. In the case of infants becoming epileptic, Esquirol regards their case as hopeless unless a cure is effected by the time they reach puberty. Esquirol gives his opinion on this point very clearly, but refers to cases occurring at puberty as well as at a more advanced period of life. He says: "Ceux qui sont pris d'épilepsie peu avant la puberté, guérisent lorsque cette crise est finie; ceux qui débutent après la puberté guérisent quelquefois, quoique Hippocrate ait pensé le contraire."

Whatever treatment may be tried for the cure of the disease, must I believe, be had recourse
to at the very outset; and long before it is
found necessary to confine the patient in
an Asylum. When the disease has so far ad-
vanced, it will be found in the vast major-
ity of cases quite intractable. There is very
frequently considerable improvement in the
patient's state for some time after his admis-
sion into an Asylum; regular hours and,
diet, and moderate exercise according to the
patient's abilities all seem to act favourably
upon him; and a patient - who is described
in the certificates as being violent and in-
declic - do seems to neither the one nor the
other. In course of time however the novelty
and strangeness of the scenes around him
lose their effect and he again relapses
into his former state. Of the few cases of
cure indeed in our Asylum Reports could
be followed in their future career. In a
short way, I fear their even those few
would find their ranks still further
thinned by the return of many or most of
them to end their days in the Asylum.
And here I may perhaps be allowed to give
a case bearing somewhat on this point.
Charles aged 49 was admitted into the Asylum in the beginning of 1854, discharged "greatly improved" on August 25th, 1854. He was re-admitted May 15th and again discharged as "cured" in September of the same year. He was once more re-admitted April, 1857 since which time he has remained in the Asylum. It seems that he had been in the Asylum at a date previous to any of those mentioned. At present he has fits every 3 or 4 days, unaccompanied, however, by any violent excitement. Esquire declares that Epilepsy improves under every new medicine for a short time but that each in turn proves as unsuccessful as its predecessor. Remedies applied for the cure of Epilepsy after they have become the inmates of an Asylum cannot from the very nature of the case, have a fair trial given them, in as much as in the words of Dr. Cree - "Thing a Lunatic Asylum is generally made, the ultimate resort of Epileptic patients in whom the usual remedies have been exhausted, and in whom
incident—mental faculty has already indicated organic intra-cranial lesion."

The operation of Trephining has in some instances been made recourse to, in cases namely where a depressed portion of bone protruding upon the Brain was suspected to be the exciting cause. If the operation be made recourse to immediately after the accident, the superintendence of Epilepsy may possibly be avoided altogether, but where the depression is of long standing and Epilepsy has taken hold of the system for some time, there can I think be little hope of benefit from such a course of practice. The operation was I believe, tried in two or three cases in, Mairing-side, but without any permanent benefit to any of them. Successful cases of Trephining however are upon record, one is mentioned by Mr. Travers when he performed the operation upon a lad. A case is related by Tippot of a Frenchman who had his head trephined in a very unusual and unlooked for manner by a band of Robbers, and who when the
wound at last healed, found himself happily cured of the epilepsy.
Such a case as the following might have been a suitable one for the operation had it been done in time.

P.H., aged 21, single, a labourer. In his forehead, there exists a cicatric and deep depression the result of an accident which he received in a saw mill about 4 years previous to admission.

2 years after the accident epileptic fits supernenmed. His fits occur at irregular intervals of a few days. He is stupid and occasionally quarrelsome after the fits, but he is never much excited.

Before admission he is reported as having been subject to "uncontrollable fits of passion on the slightest provocation" if having insensately abused his person of threatening violence to others, and threatening suicide by drowning. His bodily health is good, and he is occasion
ally employed at out-door work.

This patient raises the idea always tell the fits coming on at that part of his
forhead, where the operation erected.

The actual cautery has also been tried, for example, by Kell, and of this remedy Van Der Holk speaks somewhat favorably, as illustrated by a case, which he gives at p. 270 of the Translation by the New York Medical Society of his work on the

Huncy Cordy, the actual cautery in that case being applied over the occiput.

Cauterization of the part from which the

Aura takes its rise has also been proposed. He also speaks favorably of incision

of the scalp, evacuation inserted to make

the wound open.

Tracheotomy also has its advocates; this

plan of treatment was first, I believe, proposed,

by Dr. Marshall Hall, and since he first

proposed it, has been tried on several

occasions, Riccard has recorded the case

of a single female, aged 30, who had been

subject to epilepsy for 7 years, the fits

occurring literally 2 or 3 times in a day.

Tracheotomy was performed October 5th

1857, and she continued free from con-

vulsive fits till the beginning of May 1858.
the had then some severe fits, and it was found that the tube had escaped from the trachea, and was lying outside it. The tube, does not seem to have been replaced, and she died on May 31st.

I will take the liberty of giving the following case, where tracheotomy was performed, and in which the patient declares that he was not benefited by it for a single day.

September 1860. J. W., age 27. Patient states that he first became subject to epilepsy at the age of 18 years, that at the age of 20 the fits ceased altogether for the period of 18 months, after which they reappeared again. Nearly 2 years ago he was sent to the Bartemal Asylum, Glasgow, but before going there, tracheotomy was performed without the slightest benefit accruing. This patient's excitement after the fits, which occur every few weeks, is of the most violent character. He attributes his illness to self abuse. This patient's father it is understood, kicked on the lower side of an epileptic fit.

Brown liquor, proposes as a means of cure.
that the Larynx be cauterized with a solution of Nitrate of Silver, his object in doing being to overcome the cause which he looks upon as the cause of the attack; the strength of the solution that he advises is sixty grains to the ounce of water. These means of cure by which I have spoken are all more or less radical, but Medicine, has been by no means a silent spectator of the struggle, she has herself joined in the conflict, bringing with her a formidable array of medicines by which if possible to achieve a victory, where as many remedies have been tried, recourse to it is difficult to know where to begin, or what remedies to consider specially worthy of remark. Mr. Upjohn came forward, as the advocate of Officeezine, in which he put great faith, whether or not this medicine is really beneficial. Dr. Radcliffe thanks somewhat doubtful, Van der Holt on the other hand, thinks he saw benefit from its use in large doses, for example, 30 daily. J. Moreau tried it in 9 cases without benefit. Something more...
favourably of zinc, but he prefers the Sulphate of the oxide, which he thinks is too insoluble, a compound, to be very beneficial. Dr. Radcliffe is inclined to place the Ammoniaco Sulphate of Copper before zinc as a remedy. Considering as Dr. Radcliffe does that Epilepsy is the result of an enfeebled state of the system, he regards Iron and Oxine, as perhaps on the whole the remedies most to be relied on. Distillation also speaks highly of the use of Iron. Some people think it necessary to keep Epileptic patients on low diet, preventing them eating animal food, but that such a course of treatment is correct is, to say the least, very doubtful. Often, though on such debatable ground, as this there is of course great scope for diversity of opinion. Dr. Radcliffe says: "It is not necessary to suppose that Epileptics are cured by a liberal diet. On the contrary, the full allowance of good substantial food is given to the Epileptics who are cared for in our County Lunatic Asylums, and in some of
there establishments it is the rule to treat them more literally than the other inmates. For my own part I am in the habit of recommending a liberal diet, in which there is an scant of animal food, and certainly I know of no disadvantage from such a course. Indeed I have often seen unquestionable signs of benefit from such a diet, particularly in cases where a patient has been for some time upon an opposite course."

Dr. Lecky also thinks that well-cooked brisket meat is beneficial, rather than otherwise. Dr. Binney, however in his work on diseases of children objects to the use of animal food, Dr. Read claims places considerable reliance on stimulants, but he is cautiously opposed to the use of narcotics, Vander Pol believes that the ordinary narcotics can be beneficial in this disease, in as much as they tend to cause congestion and dilatation of the vessels, a condition which he thinks will rather aggravate than relief the evil. This same author seems to have considerable faith in derivatives,
such as James and Letons, also in the application of cupping glasses, and in many cases they certainly do seem beneficial, such means are favourably spoken of by others also. Where great excitability of the intestinal canal acts as an exciting cause, Belladonna he regards as the most satisfactory remedy for countering this excessive excitability of the sympathetic system.

Nitrate of Silver used, internally has been considered by some persons as a remedy of a specific, but laxative, the force of frequency thickening the patient's skin to a beautiful extent it seems to have but little influence on the state of the patient. But as Turpentine also has been highly spoken of. But so I believe, that the time for the application of remedies in the majority of cases is before admission into an asylum, I will say nothing more of particular remedies.

Persons are too apt to be deceived, I fear, both in Asylums and, out of them, by a temporary full, in the course of the fits, and on account of this internal dismissing.
such patients as "cured," though most likely soon after their discharge they have a recurrence of the attacks in a severe form, than before. It is a fact worthy of note that the longer the fits are absent, the more violent are they likely to be when they reappear. The patients themselves will, often observe this; one case whose case I quoted at the beginning of my paper was quite aware of this fact. I found, that in several patients, there had been a cessation from the fits, previous to admission into the Asylum, for a period of several months, but that on the recurrence of the fits, the mind gradually began to give way, and there was nothing left but to send them to an Asylum. If such an interval occur, while the patient is in an Asylum, and undergoing some special treatment the medical man is too apt to say here is cure, to discharge the patient, and mark it in his books and in his report accordingly.

There is a great difference as to the frequency of the fits in different patients,
some having fits daily but of a mild
nature; others having a series of fits every
month, and generally corresponding in
severity to the interval of repose.

But now I must bring this paper to a
conclusion, feeling, and deeply regretting
the very imperfect way in which I have
dealt with a subject deserving of the deep-
est and most careful research. But in
those days when the Physiology and
of the structures of the body in health and
in disease is making such rapid progress,
the time cannot surely be very far distant
when all those clouds and mists
that now obscure the subject of Epilep-
sy will be dispelled, when its Path-
ology will shine forth unclouded, and
when it will no longer be a dreaded and
invincible disease but one easy to be over-
come, when at least this affremonies of our
art—those generations of great and noble
men, have strenuously to dispel, will
be an affremonies no longer; then we will
cease to be blamed in warning the
Galleries of our large asylums by seeing men passing slowly, but surely, into a state of mental imbecility from which we are unable to rescue them, and from which death alone can free them, when those happy days come. The medical man will be able to speak words of hope, comfort, and encouragement, words which, alas! at present he feels but seldom justified in using either to the patients or their relatives.

Thomas Huxley