1861

Thomas Jackson

House of Natchez

Jackson

Deputation

on

Epilepsy.

Thomas Jackson
Epilepsy

In our present attempt to bring forward a few of the more recent investigations, which have been made regarding Epilepsy, it is not our intention to enter into any great degree of minuteness into this very difficult subject, because we believe that it is only within the last few years, that any correct views have been introduced upon the matter. The speculations formerly brought forward as to its nature, were alike absurd & groundless, as well as utterly at variance with the best established principles, alike of physiology & pathology. A similar change may be made against the methods of treatment which from time to time have been proposed. If one thing more than another strikes us in the contemplation of these, it is the utterly absurd & groundless principles, on which they have been recommended. If we can speak in any higher terms of the innumerable theories, which from time to time have been advanced in order to explain the varied phenomena of Epilepsy, Under these circumstances, therefore, we consider that to enter upon a minute & elaborate account of the records of this
distressing malady would simply to expose the lamentable failures of some of the most distinguished ornament of the medical profession. It may not be even be altogether out of place to commence with a short account of its early history. At the early period of medicine, Epilepsy was looked upon as of supernatural origin, and was supposed to indicate that the individual was possessed of devils. This was the prevalent idea in the days of Hippocrates who eloquently, energetically, Combats the demonic origin of the sacred disease. "The disease called sacred," he says, "arises from Causes like the other -- namely, those Things which enter & quid the body such as cold, the sun, the winds which are ever changing, and are never at rest; & these things are divine, so that there is no necessity for making a distinction & holding this disease to be more divine than the others; but all are divine to all human. And each has its own peculiar nature & power, & none is of an ambiguous nature or irremediable." No can there be any doubt that the individuals mentioned in Scripture as possessed of devils were simply epileptics or maniacs for it is a well-known fact, that many of the expres-
ions employed, were simply used in conformity with the usages & prejudices of the people at the time. This is the view generally entertained by the most enlightened commentators of the New Testament. We thus plainly perceive that Epilepsy is not a modern disease, like Cholera, plague, &c. But in the words of an eminent writer, "it belongs to all countries & all climes; it occurred in the early history of mankind & it prevails at the present day: among the untutored savage, as among the most cultivated of civilized society."

ItStartles the mother from the security with which she hangs over her beloved infant; it affright the lover, trusting in the future happiness promised him by his betrothed; it warns the son & daughter of the mutability of things, when they see a parent whom they thought healthy struck down by the convulsive paroxysm. Epilepsy spares no condition, age or sex; still there are not many diseases upon which fewer positive statistical records can be found. Under these circumstances, it may help to clear the field a little, should we bring together a few of the principal statistics bearing on the matter.

Going to the Registrar-General's tables, which are undoubtedly the most trustworthy records
which we speak upon the subject. - we find the following summary, which, however, is not to be regarded as either full or complete, because we know very well that epilepsy rarely proves fatal of itself, but that the patient generally dies from some of the sequelæ, or maybe, from the superintention of a quite different disease. the following table therefore, must be regarded as a mere approximation. the following is a tabulated statement of the mortality from epilepsy in London, registered in the December quarters for the five years 1849 to 1853.

<table>
<thead>
<tr>
<th>Year</th>
<th>Deaths</th>
<th>Total Deaths</th>
<th>Percentage from Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1849</td>
<td>13</td>
<td>12,877</td>
<td>0.36</td>
</tr>
<tr>
<td>1850</td>
<td>79</td>
<td>18,544</td>
<td>0.40</td>
</tr>
<tr>
<td>1851</td>
<td>75</td>
<td>13,964</td>
<td>0.53</td>
</tr>
<tr>
<td>1852</td>
<td>118</td>
<td>13,448</td>
<td>0.87</td>
</tr>
<tr>
<td>1853</td>
<td>117</td>
<td>17,398</td>
<td>0.67</td>
</tr>
</tbody>
</table>

In England, the percentage is nearly the same. according to Dr. farre, it appears that the total deaths throughout England & Wales from epilepsy during the seven years 1848-1854, inclusive were 12,876, or an average, 1839 annually. if we compare this with the army, we shall find a somewhat similar percentage. 46. the population of England in 1851 was 17,734,000. the
Deaths from Epilepsy the same year were 1630, at the rate of .009 percent of the total population, almost the same percentage prevails in the army. Such then is the proportion, as ascertained by the most careful minute investigation. If we examine these tables still more critically, we shall be enabled to arrive at some important conclusions. And this part of our inquiry, we regard as of even more consequence than mere investigations into the methods of cure, because lithia medicine, has to a large extent proved so utterly futile in the cure or even the alleviation of the disease, after it has once fairly established itself in the system.

It is commonly alleged, then, that Epilepsy is more frequent among males than amongst females; if we examine the table we shall find, that while the total number of deaths among males of all ages from Epilepsy is 52.28 percent of females 47.73. That therefore 4.53 percent of male deaths occur from Epilepsy in excess of female deaths from that cause; or to put it in a different way, we find that the average male deaths in one year from Epilepsy are 96.13 of females 878.1, so that annually in England
1. Wales, 83. 1 more male die epileptic than females.

If only a portion of the deaths from convulsions are included here, it is probable that this relation would become still more marked, for Dr. Tuke has shown, in an elaborate paper, which he published that the deaths of males preponderate over those of females during the first five years of life from diseases of the nervous system by as much as 20.5 percent. It seems then, that upon the whole, there is a larger proportion of epileptics amongst males, a fact which is usually explained in the following manner: Males having larger heads than females, it is considered that during parturition there is greater danger of injury to the internal parts, whence we have convulsions and its sequelae. So can there be any doubt that convulsions in youth are the precursor of epilepsy in more advanced years.

Age, also, seems to exert a considerable influence in the production of epilepsy. From a large collection of materials, it would seem that the greatest prevalence to epilepsy is to be found at the period of puberty. According to the tables of the Augusta General, the
greater mortality occurs between the ages of 15 and 25, but that it is scarcely diminished during the subsequent decennial period.

Secondary influence is known to be very powerful in the production of epilepsy. The very intimate relation that this disease bears to insanity, and other affections of the nervous system is well known. Hence we find that a very large proportion of the parents or ancestors of patients who have had nervous diseases, such as epilepsy, have themselves, been subject to the same disease. Hence in tracing the origin of this disease, we are quite authorized in attempting to discover if any of the patient's relatives have been afflicted with the malady. Lazarevich and Bonchber have made some elaborate enquiries upon this point, and they have ascertained that out of 110 epileptic patients, there were 31 who had epileptic parents or relatives, or nearly one-third. Fourteen epileptic mothers gave birth to 58 children, 31 of whom had died, the eldest at the age of 14, the remainder at a very early age, and almost all in convulsions. Twenty-one survived of these 14 who were healthy; the very young some were already epileptic.
Monsieur Kerpin, has also made some investigations on this point, in which he shows that out of 680 Epileptics, he found that not fewer than 380 of them, had relatives affected with some nervous disease or other. These can be in doubt, then, that Epilepsy is a hereditary disease. If this be true which we consider that the foregoing statistics simply prove, then, it is quite evident that the subject has some very important moral bearing. It is alleged by some, that marriage exerts a very important curative influence upon Epilepsy. In doubt, this step may tend to remove many of those evil influences which tend to produce Epilepsy, but we have no proof that in any case it has ever effected a cure, when the disease has become confined in the constitution. Moreover, we consider that such a step could not be justified by any such vague hopes of considering the great risk such persons even in exposing themselves to severe danger, by thus almost ensuring the transmission of a diseased nervous system to their offspring. The preceding statistics clearly prove that Epilepsy is hereditary, therefore Epileptics should bear in mind the great risks liability, which they incur by entering into the
Married state, or the means of bringing into the world children that will in all likelihood be a source of misery to themselves, as well as totally unfit to perform the functions assigned to them in life. Among the different dehersis in which the disease occurs, it is said that the sense of fever is by far the most brutal. Some, such as Dr. Cheyne, have even gone so far as to maintain that Epilepsy is as certain a manifestation of the chronic disposition, as Tubercular Consumption or Paresis abscessus. Had time permitted, we should have desired to go a little further into the consideration of the predisposing causes of Epilepsy, but further, time will not permit us to go. Let us now come briefly to give a description of the disease. We need not attempt to give a definition of this disease because to describe are the appearances which it assumes, that to attempt to bring them all under one head would be simply impossible. In the first place then, let us ask what are the symptoms presented by an individual about to have an epileptic attack. They may generally be divided into the premonitory or the paroxysm.
Their premonitory symptoms may be resolved into those of a sensitive, motor, or psychical character. A peculiar sensation is sometimes felt beginning in some distant part of the body and gradually ascending till it reaches the head, when the actual paroxysm commences. This is generally denominated an aura epileptica, as the patient describes it as a cool or warm puff or draught, which mounting from the extremities, passes up till it reaches the head—Bomberg considers that these premonitory symptoms occur in about 1/4 of the cases of epilepsy. In other cases, the attack is preceded by some of these indications, but we have simply a feeling of malaise—indeed the symptoms which precede an attack of epilepsy are so numerous as almost to baffle description. The following list, which is given by a very distinguished author on the subject may serve to show the utter impossibility of being able to classify these premonitory signs. Amongst others, we have:—A sense of choking, tremor of vision, a sensation extending from the thumb up the arm with spasm of the latter—head-ache,—a sensation ascending from the stomach, a sensation passing from the hand to the head.
right arm. Pain across the shoulder, top of right arm. From this list, we see very plainly, that we cannot reduce them to any general rules or principles. One thing, however, is noticeable, namely, that the sensations referred to the trunk and extremities are much more numerous, than those which are described as having their seat in the head. This difference of origin, according as it has its seat in the brain or in the spinal cord, or extremities, has given rise to a division of Epilepsy into Central and Accessory. What ground there is for this division, we shall afterwards see. Of course, there are many cases where the patient has no warning in which he is attacked at once. Such being the premonitory indications, the next question is the condition of the patient during the paroxysm. — The patient is perhaps prosecuting his usual employment, when all at once, he utters a wild unearthly scream, falls to the ground, without any regard to the locality, however dangerous to himself, in this respect. Markedly distinguishing it from simulated Epilepsy. General Convulsions supervene, the whole muscular system is thrown into a state of wild confusion. The controlling power is
Completely lost. The extremities are jerked about in all directions; the thumbs are drawn across the palm of the hand. The muscles of respiration are very strongly affected, to such an extent are the muscles in a state of clonic spasm that in some cases the teeth are actually broken, while at other times the mouth is so firmly closed that it is impossible to introduce anything into the mouth. Should it unfortunately happen during a moment of delirium that the tongue gets between the teeth, the protruded part becomes fearfully congested, when the patient presents a frightful appearance — instances have been occurred in which a part of the organ has been cut off. Hence bleeding from the mouth is one of the most common symptoms of the disease. The patient foams at the mouth, while the saliva falls in a most disgusting manner. The features are very much contorted. The eyes are turned up, so as to leave nothing but the sclerae visible. The pupils are insensible to light. The breathing is short and hurried, as in a person violently agitated; the distinction of the respiration is very great; the sympathetic system is sometimes deeply involved, involuntary defaecation and urination occur either during or toward the close
we here a large class of in which the symptoms are
m much milder. This the French designate as the
petit mal. In this latter class, we have one of
the violent paroxysms, which we have just described.
The attack is generally very slight and transient. We
have perhaps a sudden suspension of Consciousness,
a short period of insensibility, a fixed gaze, a
letter perhaps, a look of confusion, but the patient
does not fall. This state is quite temporary; con-
sciousness presently returns, the patient resumes his
former employment, as if nothing had happened.
Now, that the petit mal belong to the same
category as the grand mal is proved by the circum-
stance that for a long period before the more
severe paroxysms come on, the patient is afflicted
with the petit mal. It is said that this variety of
Epilepsy in as much as it indicates a lower tonicity or
action of the nervous system, is a more complete sub-
jection of the individual to the morbid influence, is
much more apt to be followed by disastrous consequn-
tes to the mental powers. We may now briefly consider
some of the previous symptoms in detail. This is of
importance, because though there can be no doubt
that in most of these cases, all these symptoms
May be found, yet exceptions do occur in which the individual has had a paroxysm, without their being all seen, i.e. insensibility. In this symptom always necessary. Not always. Some cases are recorded, in which a certain amount of consciousness has been retained throughout. No doubt the paroxysm may be so brief in its duration, that it may have passed off before the patient is almost aware of its occurrence. But we have other cases, in which the paroxysm is of some duration, yet the patient has retained complete consciousness. Again, in reference to the convulsions which occur in Epilepsy, we would remark that cases occur, in which no convulsions are observed at all. The patient lies in such a state that one might be very apt to mistake it for apoplexy, in which, as is well known, the treatment is very different. In such a case, it would be of the utmost importance to guard against mistake. The Epileptic nature of the attack would certainly manifest itself sooner or later. Again, the convulsive movements, instead of being general are sometimes very limited in their character. In one man, it was confined to the arm. A very important
symptoms, to which we have already referred when speaking of the Epileptic paroxysm, namely, a strongly spasmodic state of the muscles of the neck, so that the veins become visibly swollen, turgid, which doubtless imparts the dark and livid appearance of the countenance. Dr. Mr. Hall, considers this to be a very important exciting agent of the paroxysm.

As to the pulse, there is nothing very peculiar except that it is sometimes accelerated, or feeble. In this case, however, it is only secondarily affected. We know that one of the first symptoms of the fit, and as a cause of the cry, there is a spasm of the laryngeal muscles. The chest becomes contracted, and this acts upon the heart so that its beats become diminished in number, for the blood, continuing unagitated, circulates through the heart and in the number of beats is greatly increased.

As to the frequency of the paroxysm, we have every amount of variation; sometimes, the fit may come on, it may never return; at other times, so long a period that several years has elapsed between the attacks. The general rule, however, is that at first there may be an interval of a few months, but in course of time they occur almost daily. As to the period of their occurrence, they are, however, extremely irregular and uncertain.
whole periodicity cannot be said to be a feature pertaining to them. In the time of Phippocrates, it was thought that the moon had something to do with it, but of this we have not the least proof. Since we have no proof that there is any periodicity in the recurrence of Epileptic fits as to days or months, have we any proofs of periodicity as to forty-eight, forty-four hours. Certainly, here, we have marked proofs of periodicity. This is explicable on the principle that during the night, which is the period of sleep, there is a greater afflux of blood sent to the head. 2) The blood in consequence of the diminished number of the respirations becomes less oxygenated, and consequently is rendered more impure.

Without adopting any theoretical views in the subject of sleep it is quite evident that in these circumstances, the blood becomes more susceptible of any morbid influence.

Headache. This is a very common symptom among Epileptics, in connection with some others such as vertigo, it is of very great importance. Indeed, if we listen to the history of most Epileptics, we shall find that they have generally been afflicted for a long period.
with cephalalgia of the most intense character.

The next point of importance, in connection with this question is the phenomena that occur during the interval. It is of importance to take this into consideration, indeed it even surpasses in importance the mere paroxysm, anamnesis as the latter is merely the name and were of a long protracted state of previous bad health. By attending to these, we may very often succeed in the putting an end to or at least greatly modifying the force of the attack. What then, is to be tested during the interval of an attack? It is well known that the more frequent the fits the more marked will be the symptoms of the disease, which may be traced during the intervals, yet we cannot fail to notice a certain deviation from health in epileptic patients. There will be first of all the characteristics of a serious death with an unstable, frequently irritable manner; a restless eye, a quick but feeble pulse; more or less difficulty in collecting the thoughts; connecting the different links of mental abstraction, while at the same time, one or other of the organic functions
present a palpable deviation from health. The organs that are more particularly under the domain of the sympathetic ordinarily show that they are deficient in vigor, that they want that stimulus which the vascular and nervous systems supply, when the individual enjoys robust health. Hence a common symptom is a torpid state of the intestinal tract, as shown in flatulent dyspepsia, eructation, intestinal flatulence, constipation. An associated symptom is an enlarged state of the pupil, which we commonly find in persons suffering from the presence of intestinal worms, from a morbid condition of the generative organs, or from a torpid condition of the mesenteric glands. Occasional vertigo, irregular, frequent, or constant headache, with or without vertigo, last have been able to any definite exciting cause, anomalous sensations in different parts of the body, slight partial spasmodic seizures, more particularly a distending sense of suffocation or choking belong to the symptoms commonly met with in the free interval. Beside these, the patient frequently suffers from the petit mal, to which we have already referred. In some cases, the epileptic fit occurs three or
four times daily, the mouth in these cases gives way, a difficulty of articulation ensues, dysphagia is noted, difficulty is experienced in retaining the saliva, hence we have dribbling as well as other signs of approaching idiocy.

A very important point left for our consideration is, what are the sequelae of epilepsy. A single fit, as I have already noted may occur, never to return and without leaving any trace of the disease, but as a general rule, unless the disease be arrested at the habit broken, the fits recur with gradually increasing frequency; and, it is then, that the intellectual powers begin to fail. The patient complains of an utter inability to retain the recollection of past events.

Circumstances at times that happen the same day, or the day before, are more difficult to be remembered than others of a somewhat earlier date. Sometimes, we have temporary paralyses, limited not always to one part, but extending over the whole body. We have however, a predominance to one side occasionally. Occasionally, the muscles of one limb are in a state of paralysis, while those of the other limb are in a state of excitement, producing in this every conceivable deformity. Hence various forms of club-foot are
Very common. Paralysis of the muscles of articulation inducing difficulty of speech, in other cases, we have it induced by the impairment of intellect brought on by the repeated paroxysms. Besides these, which may be denominated physical effects, we have others which may with more propriety be denominated mental, which are characterized by neglect, a dull ecstatic expression, thickened and coarsened of the lips. The cutaneous circulation seems to be no longer carried on in channels possessing vitality, but rather to flow sluggishly through incomprehensible vessels. We have a similar sluggishness as the type of the animal and organic functions of the confirmed epileptic. As the epilepsy which occurs in early life is the most curable, so on the other hand, if less persistent, it more frequently and speedily induces mental derangement, characterized by imbecility.

The following is a list of some statistics made out by Esquirol, who has had great experience and great opportunities of treating this disease. Out of 385 epileptic females in the female department of Charenton, 16 were replaced of the remaining 339,

12 were insomnacious.
30 were Maniac, 34 furious, 14 5 Clemente
8 idiots, 38 habitually reasonable, but afflicted
with frequent loss of memory & 60 exhibited no
observance of intellect.

As mind & body suffer from the frequent re-
petition of the Epileptic paroxysms, we may expect
life to be sometimes curtailed, but as a general
rule death does not take place during the
paroxysms, though dullness these attacks in-
duce a condition of the constitution very fa-
vourable to the aggravation of other diseases. It is
in consequence of these that the patient generally
dies.

We may now shortly endeavour to investigate
the cause which may be denominate exciting,
the one may remark first of all, that where
Epilepsy can be developed in a constitution
the patient must have a tendency to it.

Still there are causes, which, of them-
sew, not sufficient to produce this condition
may yet in connection with the predisposing
causes to cause of which we shortly make
allusion, suffice to develop them. Among the
first of these exciting causes is neural disease.
The meaning of albuminuria upon its causation has been frequently disputed. The effect of urine in the blood in producing Epileptic fits has been clearly pointed out by Fenel, Bostock, Christian, etc. in the Epileptic seizure is common among (Epileptic) parturient females. Dr. Simpson has shown that we always have albumen in the urine. This, however, can only be regarded as an exciting cause, for we have many cases in which we have enteroe albuminemia, without there being any Epileptic paroxysms. An aborted eruption has sometimes caused an attack of Epilepsy. Thus the eruption of measles having been expelled has in many cases been the direct exciting cause of a paroxysm. With regard to the digestive organs, we have ample proof that their derangement has frequently been an exciting cause. Derangement of the bowels generally accompanies all cases of Epilepsy. Worms in the intestines are said to exert a most important influence; are considered highly exciting causes. The sexual system has doubtless a most important influence in the development of the disease. We have already seen that the Epileptic paroxysms generally supervene about the period of puberty, a period which we know very well when the whole system is in a state of excitement.
and when the generative functions are being rapidly developed. Hence any Cause, which in the least degree interferes with these functions, is very apt to cause an Epileptic attack. Hence derangement of the Menstrual functions. Consequently. The mode in which sexual derangements are supposed to induce Epilepsy is by enfeebling the system, by producing an irritability of the nervous system, which on the application of an exciting influence of sufficient strength gives rise to the Epileptic paroxysm.

Epilepsy in the female at or after puberty is very frequently accompanied by some derangement of the Catamnia, which are either wholly arrested, or they are irregular and scanty. In men again, frequently repeated sexual excursions is a very highly exciting cause of Epilepsy. With regard then to these as well as all other symptoms of derangement of the nervous system, brought on by sexual abuse, we must remove these exciting causes, as the very first step towards a cure. In addition to these exciting causes we have already mentioned, there are some others to which we may shortly refer. They may very conveniently be divided into Physical and Psychical and Mental. To the latter, we
would more particularly direct attention, for that they exert a most important influence cannot be doubted. In the published memoirs of Moneur Moreau, we have a list of not fewer than 2440 cases drawn up by M. Calmet, not fewer than 142 were directly traceable to physiological causes. They may be tabulated in the following manner.

<table>
<thead>
<tr>
<th>Emotion</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fear</td>
<td>31</td>
</tr>
<tr>
<td>Pangs of Sufferings</td>
<td>13</td>
</tr>
<tr>
<td>Disappointment</td>
<td>14</td>
</tr>
<tr>
<td>Sight of an Epileptik</td>
<td>9</td>
</tr>
<tr>
<td>Rape</td>
<td>5</td>
</tr>
<tr>
<td>Unkindness</td>
<td>4</td>
</tr>
<tr>
<td>Anger</td>
<td>4</td>
</tr>
<tr>
<td>Joy</td>
<td>2</td>
</tr>
<tr>
<td>Grief</td>
<td>12</td>
</tr>
</tbody>
</table>

Under another head, he has given a list of what may more properly be denominated physical causes. These are given as follows:

<table>
<thead>
<tr>
<th>Cause</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>1</td>
</tr>
<tr>
<td>Childbirth</td>
<td>2</td>
</tr>
<tr>
<td>Suppurated Epistaxis</td>
<td>2</td>
</tr>
<tr>
<td>Suppurated Calomonia</td>
<td>1</td>
</tr>
</tbody>
</table>
Causa et Appreciat. 21
Critical age 3
Poisoning by Camphor 1
Severe Operation 1
Enanion 3
Cancer 64.

We thus plainly perceive that by far the larger proportion of cases is directly attributable to Physical Causes. A similar result is deduced from a comparison of other tables. In addition to these Causes already mentioned, we may refer to two others which doubtless exercise a most important influence in the production of Epilepsy. Syphilis and Dehiscence. We do not exactly know the precise method in which Syphilis operates so as to produce Epilepsy, we may, however, conclude that in addition to the presence of a poison in the system, by tending to produce nodes in the interior of the skull, which thus injure the brain, they may tend to excite the paroxysms. As we have already mentioned the state of sleep tends highly to excite Epilepsy, we know very well that in this condition the cerebral circulation is in a very peculiar state, that the whole process of excitation
and metamorphosis is different during the sleeping or waking states has been fully demonstrated. Some persons suffer from these remodelling affections at the very moment they are going to fall asleep.

Sir Henry Holland, in his beautiful chapter on Sleep Paroxysms, there is reason to suppose that such effects depend on the proportion of venous blood present in the cerebral circulation, either from congestion in the great veins, or from imperfect arteriolarisation in the lung. Such, then, is a very brief account of some of the principal predisposing and exciting causes of epilepsy. These might be augmented to a much greater extent, but we think with it to be borne in mind that none of these should be looked upon as absolutely determining causes, in the sense of their creating or producing this state. That they cannot be looked upon as directly occasioning the disease is evident, because we find similar causes operating much more powerfully in the case of others, without their producing any such effect. Thus anoxia is more common than to find epilepsy in healthy children; yet we find that the instances are rare in which they induce convulsive paroxysms. The individual
predispoted to these Epileptic attacks, we believe has already got a diseased state of the nervous system; he has already got, what we may call an Epileptic Deathesis, which may remain dormant for a lifetime, but no sooner is the exciting cause applied than the paroxysm is immediately developed. To adopt a simile, this deathesis may be compared to a combustible material of more or less inflammability, which differs in the facility with which it may take fire, but which will infallibly do so if a flame of sufficient intensity is brought into contact with it. If you protect it from the flame, combustion will not take place.

The same thing is constantly found in Epilepsy. Remove the exciting cause, the fits will remain in abeyance, allow the flames to be approached to the combustible material in your patient's constitution, and certainly take fire, the proximity needful for the purpose. Comparing the two causes, there is a clear difference between the two subjects. While there is no mention or reference in one that the physician has directed his
Attention to these can be expected to meet with any success in his treatment.

Having gone so far into the etiology of the disease, we now come to the consideration of a part of the to which, not some of the greatest minds of the day have directed their attention to it, yet we regret to say the conclusions at which they have arrived have hitherto been of the most conjectural and far-fetched nature. We refer to the investigations which have been made into the expectant nature of epilepsy. We shortly refer to these, not because we believe that the mystery has yet been solved, but rather out of respect to the great names that have directed their minds to it. The first point to which we shall refer is the pathological anatomy. We would shortly remark that it is very often difficult to say whether a similar appearance, in the brain or spinal cord, has any reference to the epileptic attack, or whether we should not rather consider it as a consequence - whether in short, it is to be regarded as a cause or as a result. Besides few cases comparatively speaking, in this early stage of the disease, it is only after a protracted period that we can expect external or visible indica
eations to be left behind. Still we are not at liberty to disregard entirely these results.

Penzel states, that the pituitary body is invariably found diseased in Epileptics, the morbid condition almost invariably consists of an effusion of lymph which has become more or less indurated. The pineal gland has also been found very commonly affected.

Dr. Boys observes that altered nutrition of the brain is a very common symptom in Epilepsy. Oedematous growths from different parts of the Dura mater, but especially from the Falx cerebri are very common. Similar productions within the brain, cysts from the petrosal or other bones of the Cranium, accumulations of fluid in the ventricle, hydrops in the choroid plexus, tumours of all kinds, the different products of inflammation limited abscess. In short there is scarcely a lesion of the brain, which can be mentioned, which has not been found in the Post mortem Examination of Epileptic patients, but bellato none of them have been proved to be at all essential to the production of Epilepsy, & must be simply looked upon as predisposing or exciting causes. That
they ought to be regarded in this light may be
proved by the following circumstance, that these often
away frequently be found in cases, where we have
no such thing as an epileptic paroxysm produced.
There is a much deeper source than these, to which
the Epilepsy is attributable. It is very remarkable
that the respiration tract of nerves is so much
involved in Epilepsy, yet so far as has been ascer-
tainued, post-mortem examination has not
revealed any lesion in the Medulla oblongata.
Among the lesions most immediately connected
with the nerve centres, which at times profess a manifest
relation to Epilepsy, there are none which can fairly
be regarded in any other light than as exciting
causes, injuries to the nerves by wounds or by
the spontaneous growth of tumours belong to this
clasp: degeneration of the kidney, the chief de-
purators of the blood equally deserves mention.
Such, then, are a few of the results which
the Autopsy of Epilepsy have unfolded to us
from which it is very evident, that as yet
we have not arrived at any conclusions, which
Can be regarded as satisfactory, or such as
would enable us to draw any general conclusions.
that would give us a clearer insight into the ephemeral nature of epilepsy. This is a reason which we
ought to refrain from cultivating this part of the
subject, for we fully believe that we shall never
be enabled to arrive at sound conclusions from a
more study of the (living) body, yet still it may
enable us to reach some very important results.

Leaving the consideration of the post-mortem appearance
of epilepsy, we now come to the contemplation of
another view of the subject, which may be regarded as still more uncertain in its conclusions.

Firstly, an enquiry into the nature of epilepsy
as those may be concluded from the consideration
of the data phenomena. We certainly regard the
sections of the brain to be found in most cases of long
standing epilepsy, as a more accurate in the history
of the disease. The epileptic fit is only a part of the
total disease, still the study of this part is necessary
for the part of the system specially affected.

What then, do we observe in an epileptic paroxysm
the motor? Entire loss of consciousness. This plainly
indicates that the encephalon is involved, especially
the sensory ganglia, as this does not arise from synaps
in the state of the heart as well as any other part of the brain.
indicate. These convulsive movements indicate that the control of the brain has been withdrawn, and that the spinal cord has got beyond its control. Various theories have been proposed in regard to the Cause of Epilepsy. Some maintain, that we have a change in the balance of the circulation within the cranium. Sir Astley Cooper experiments prove very plainly that a disturbance in the balance of the circulation is a main cause of Epileptic convulsions. Brown-Squard objects to the theory of a derangement in the cranial circulation, being a cause of Epilepsy on the ground that we frequently have congestion of the brain, without any such result following. He concludes that because the result does not always follow, it has nothing to do with it—but here we think there is a fallacy for those who brings forward the view of derangement in the circulation. Confer that we must have an individual predisposing position before the tendency can be developed.

A second theory brought forward to account for these Epileptic attacks is that of Dr. R. B. Todd, who maintains that Epilepsy is due to the gradual accumulation of a morbid material in the blood, that the fit is simply to be regarded...
as an outburst of paroxysm, in which the toxic matter has accumulated to such a degree, that we have an explosion. This theory, the very ingenious, has not fact which we know of to support it. In the first place, the chemistry of the blood in disease is, but very imperfectly known, and, of its state in Epilepsy, we are absolutely in total ignorance. As is observed by Browne-Lequeur, to establish the humoral theory on a solid basis, it would be necessary to show 1. That there is always a poison in the blood of all Epileptics. 2. That this poison gradually accumulates in the blood till its quantity can be come considerable enough to produce the phenomenon of the fit. 3. That during or after a fit, this quantity diminishes, because of its action. 4. That events continue to come again and again, after a very short time. 5. That the nature of the poison varies, so that it acts either upon the brain proper alone (producing vertigo), or on the other parts of the cerebro-spinal Centre alone, or on the whole of this centre at once. 6. That this poison has quite a different effect on the brain proper & on the other parts of the cerebro-spinal Centre, destroying the actions of the former as increasing excitation the actions of the latter.
Brown Square considers that all these cases are disposed of by these examples in which the fits having a peripheral origin, they are cured by division of the nerve. Now if they originated in a person, the mere division of a nerve would not suffice to effect a cure. We have also many cases in which mere emotion has sufficed to produce fits. Besides, the poisoned condition of the blood being persistent, it is not think very easy to conceive that we must consider that this condition will be persistent. The argument, hence, adduced in favour of a poisoned state or condition of the blood is altogether erroneous. It is not denied that an impure state of the blood may induce epileptic paroxysms, but we maintain that the fallacy of Dr. Todd's reasoning consists in this that he makes a universal principle of what can only be regarded as an occasional cause. There can be no doubt, that the elimination a non-dissociation of the aura from the blood, absences from has a very important influence in the promotion of epilepsy, the difficulty of the whole question lies in this; how can we determine whether these convulsive paroxysms are to be looked upon as sequelae, or mere coincidence. Such, then, is this theory of Dr. Todd, which may
very appropriately, be denominated the humoral theory. The next theory propounded is that of Dr. M. Hall, who considers that Epilepsy, when it Commences, consists in a decrease of the excite-motor power in the spinal cord, he thinks, however, that after a great many paroxysms, the reverse exists, the patient is in a state of exhaustion, due to the loss of the excite motor power attending each seizure, while the reproduction of the power is not adequate to the loss or that the patient is exhausted in a state of extreme susceptibility to new fits. He considers that the cause especially lies in the medullary oblongation. According to him, the condition of asphyxia into which the patient is thrown, has a great deal to do with the convolution seen in Epilepsy.

We now come to the consideration of the third last theory propounded on this subject, which is that of Dr. B. Largr, whose well known treatise on Epilepsy has presented quite a new field for investigation. According to him, we have 1. A decrease of the force of the reflex property, 2. An increase of the excitability of the property, 3. An excitation of a very special kind of a very violent nature. This may serve to account for the circumstance of even a very
Slight irritation, which in a healthy state of the nervous system, we might fully expect, would be totally incapable of producing any such arrangement, may in persons in whom this reflex irritability exists, be found to produce this state. As to the cause of the reflex irritability being increased, we can only say that under certain circumstances, as when people are looked at from fright, from loss of blood, etc., they are very subject to these spasms. While, however, he admits that this increase of reflex irritability may often occur and give rise to epilepsy, when the veritable convulsions, he admits, at the same time, that there may be cases in which, from an injury to the cerebrum, without there being any irritability of the spinal cord, which may suffice to produce convulsions, he refers particularly to those cases in which the least part of the proper cerebellum and posterior part of the auditory nerve, of certain parts of the medulla oblongata, or any other part, sufficient to produce fits of a peculiar kind of epilepsy, in which the animal rotates from the long axis of the body, as consequence of the convulsion.
We now come to the consideration of the subject of treatment, which, however, we shall discuss very briefly, because we believe, we are still grooving in the dark. We may very properly divide the matter into the Medical and Hygienic in treatment.

First, then, let us briefly consider the precautions to be adopted during the paroxysm. As to these we have simply to unloose every tight thing and to take care that the patient does not injure himself. Cooling lotions to the head; cautiously guarding against any approach to active treatment. If we were called in time just before the attack had commenced, we may sometimes prevent it by compression of the carotids, which is said to have been successful in several instances. Cold lotions to the head have been said to prevent the attack during the night, whenever we find the head very excoriated, this indication is pointed out as needful. In these cases, in which an aura precedes the attack, we may by a ligature often prevent it from ascending to the head. In some of these cases, we may prevent a paroxysm coming on altogether by keeping on a ligature incessantly, and if we cannot one, possibly remove the zone from an agent, we may at least often succeed in curing the patient. Replacing
has been successfully adopted in cases, when there was reason to believe that the patient was susceptible.

With regard to the more directly medical treatment, we would say that careful attention to the moral elements is of the utmost consequence. In this respect, a great deal will of course depend upon the actual temperament of the medical attendant. If he can inspire the patient with hope and confidence, he may fully expect to be able to effect much good. In this respect, the value of these moral elements is seen in the manifest improvement sometimes seen in cases where no medical treatment is applied at all. Of course, a plain truth is, to remove entirely everything which would have the least tendency to excite the mind, whether it be of a mental or physical nature. The state of the individual organs should be carefully examined. Local derangement against Central Congestion, counterirritation, drugging to the shape of the neck, the insertion of a tincture of ammoniacal hydrate of the Cavities of the Cauda, may be tried. Hydrostatics have been very highly commended in the treatment of Epilepsy. The grounds on which they are administered are 1. To remove the normal evacuation of waste matters, 2. To exercise...
the head: to expel foreign matter or worms lodged in the intestines to promote certain physiological
secretions. The purgatives which should be employed for these purposes, ought not to be drastic
in their character, but rather mild and aromatic. Of
course, it is of the utmost importance, that we use
great discretion in their use — among those we
would recommend are Rhubarb, the Compound Colocynth,

gin, cloth, castor oil, Tarassaco, sulphur in
combination with magnesia & rhubarb. Here
we would not omit to mention water, which is coming
to be almost universal use in England, but which the
most beneficial results.

Firmentine has been very highly spoken of by
different authors. In the variety, connnected with
the hysterical constitution it is said to have been
very beneficial, from its action on the intestinal
Canal & its secondary beneficial effect. Dr. Richardson
Watson, & many others highly recommend it. It is
not to be given in large, but rather in smaller doses
frequently repeated, from 2 to 3 doses to a draught over
six hours; but besides acting beneficially in
this way, it may prove useful in the way of
acting upon the bowels, so as to soften the

Deficiency of a bromo, among other irritating bodies which may be present, from what we have already stated, it is evident that removal of the irritating body, in those cases, when it happens to be contained, we may very often succeed in curing the epilepsy entirely. Enemation has also been recommended, but here also great discretion is required. As a general rule, such a method of treatment in the present day would certainly prove fatal, as much as we know very well that instead of being able to receive much blood, epileptics are generally very anemic, as consequently require all the blood which they may have. In those cases, however, in which the patient is evidently pale, and consequently able to spare some blood, we may with great propriety, remove a little, but here the utmost caution is necessary, in case any chance do mischief. Considering that the patient is generally in a weak condition, the remedies most highly recommended are tinctures, amongst these, we find that mineral tinctures occupy a very high place, amongst these, iron, zinc are very important. The vegetable salts, potash, tartaric acid, the purgative pomatum of the Pilgrim.
Pharmacopoeia along with which we may clop
the lastate, which are preferable on account of
the facility, with which they are pulverised. When
the appetite is impaired, the crude of German
Iron, is a very appropriated method of administering
the remedy. With regard to zinc, it is said to exercise
a most important influence on the person by
rendering it less violent. It may be given in the
form of sulphate of zinc. The liquid巡monials
has been highly commented on. But on what
grounds I cannot say. The zinc may be given
in pills with 20, or 30 grains of gentian or in the form of
valerian, or other combinations indicated by the partes
calcarea. The valerianate of zinc or the valerianate
of iron present combinations of the base spoken
of with valerianic acid which may be owned
without great advantage. Amongst tonics, the
shells will not forget illeythrine, which acts as a
prosperant and diminishes the probability of the
nervous system to prevalent in persons subject to
epileptic seizures. The extract of iron vanina
to half grain doses three daily with extract
of gentian acts in a similar way. It is
worth noticing that we often observe that
Sluggish state of the bowels associated with epilepsy rectified by the exhibition of the remedies first spoken of in such a manner as to render the administration of purgatives unnecessary. The preparations of silver most highly commended have not proved so successful, as we might have anticipated, the we consider that as one is at liberty to cease them from the catalogue of drugs that ought under certain circumstances to be employed. The great objection to the use of lap, &c., and one which we consider (unlike the arguments for its adoption are very great), as quite sufficient to neutralize any little advantage which may have been derived from it. Instances have been recorded in which the whole skin has become of a tawny hue— a condition which has continued during the remainder of the patient's life. Our first object should be to remove any irritating object which may be disagreeing the system, after which we may have recourse to the tonics just referred to. In speaking of the causes of epilepsy, we mentioned that in the case of insolvent rules the influence of epilepsy gets the more directly traced then to the injurious influence of lead. We know very well that the most efficient means to
Remove the effect of the poison is done by Potassium, a fact which was established by Dr. Nelson, but since that time has been confirmed by various observers. No sooner is the poison eliminated than the symptoms are found to diminish in number, and cease altogether if the intoxication has not operated for too protracted a period. This same medicine is said to have proved highly beneficial in those cases where the seirrue can be traced to syphilitic disease of the cranial bones, or at least are connected with secondary or tertiary symptoms.

Of course, we must be careful to the administration of this medicine not to allow it to go too far. In the same manner, we would recommend the Marside of Potassium as a beneficial influence in the ejection of hemorrhois as well as in the improvement of the urinary conditions of the constitution. It is highly useful. Dr. Locke, more especially commends the last medicine, in all cases having their origin in an scanty state of the persons system, from disorders denervation. In one case he mentions that a young woman had been completely cured, after they had lastest for some years
Though it would almost seem, that narcotic agents are entirely contra-indicated from the tendency to produce a condition of congestion of the brain, yet they are highly recommended by some writers, who consider that we have an excited state of the nervous system, which can be best remedied by the administration of such remedies as morphia, nit. calis. Hyoscyamus, Conium, Belladonna, Hydrocyanic Acid, I have, perhaps in some cases, Indigo & the Cephalic umbilicus, have come into public notice. The former, which was originally introduced by Professor I. e. c. of Berlin, may be administered in the following manner.

Indigo & XV.
Pul. Cremon. 70. 11
Sperg. D. S. At first it is customary in umbilicus
Cephalic umbilicus has been presented with
some advantage according to some. Such are
a few of the drugs which the one or other man
has had recourse to in order to remove this
dreadful malady, from which it is quite
evident that no medicine has yet been
discovered which can in any degree be
looked upon as a specific.
V. Consequently, it must still be regarded as the

progress of the Medical Art. We now come to a very brief consideration of what we

believe to be even the most important part of

the treatment, namely, the Hygienic, a great

part of which will be made evident from what

we have already mentioned regarding the cura-
tion of the Malady. Everything, then, pertaining

to the patient's general health, the air he breathe,
his ablutions, his daily occupations and

habits, his amusements, the state of his

sexual system, his food, beverage, his clothing,
his mental and social habits, his prospects in life.

(i) Air. We know the immense importance of

the element in promoting the

R知晓 that they. Every Making Condition,

if not generated, is at least greatly affected

by foul air. Hence the great importance of

a pure breathing country air, as well as removal

from large and unhealthy towns.

(ii). The sponge bath is also from its

remarkable effects in giving tones to the

nerve system a remarkably powerful

tone: its beneficial influence on health.
, as well known the most highly approved and
hygienic applications by those who are in the
habit of making habitual and daily use of it.
As to hygienic applications, then, the use of
cold water wherever the patient cases from
lies is to be highly recommended. Of course, as
this is rather a powerful agent, it must require
to be attended with some precautions, such
as not too cold. Its invigorating influence
may be greatly augmented by the introduction
of a little bay salt. The shower bath
should be employed with the utmost caution
from its very powerful influence on the
nervous system, it is apt to prove injurious
rather than beneficial, particularly in
agitate subjects. If a reaction does not
follow its use, then that is a plain contra-
indication against it use. The sheets should
in all cases after the shower bath take
the precaution of carefully rubbing with
rough towels. As to Diet, the food of
our Epileptic should be moderate & simple,
for this purpose we should adopt those
which will remove atony and give tone to
the general system. As to alcohol, we should not employ them except in those cases where we have a marked development of head symptoms. It is not prudent to give any alcoholic stimulants, for when we have any well-marked tendency to cephalic congestion, this tendency is generally augmented by the administration of some stimulant like chloroform, when however, the patient is anemic, we may give some of these stimulants. Regularity in meals is a matter of very great importance, indeed we very often see parasites induced by prolonged abstinence. The quality of the food should be carefully attended to—all indigestible substances being carefully avoided. It will often be needful to enforce entire abstinence from creation of every kind for without this, we cannot expect any beneficial change to be produced. In some cases, we must even go so far as to recommend the patient to abandon his usual employment, for it is very plain that the inpatient hanging to which some are exposed cannot fail to exert a most pernicious influence on the system. In short, nothing is too extreme as
It will be devolving of the patient's earnest attention as well as that of the medical attendant. In some instances, we must even throw aside that delicacy which is so highly commendable, and may even go so far as to give minute directions regarding private matters. We must carefully learn the patient as to the consequence of any course of conduct he may be pursuing. Indeed, the mental, moral, and physical condition of every patient should be carefully considered by the medical man as to the merriest point.