

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, APRIL 8, 1851.—MR. HODGSON, PRESIDENT.

ON THE RELATION OF SLEEP TO CONVULSIVE AFFECTIONS. By WM. FREDERICK BARLOW, M.R.C.S.

THE author began by observing, that although very interesting observations on the subject would be found scattered through medical writings, it had not hitherto received any thing approaching the attention which it merited. There were a variety of cases in which spasmodic movements were well known to be wont to surprise the sleeper, as might be proved by epilepsy, laryngismus stridulus, tetanus, asthma, cramp, the muscular contractions provoked by fractures, the startings, more or less severe and general, which almost every one must have experienced on falling into slumber, &c. Epilepsy would ensue just before, during, or immediately after sleep; sometimes it was quite restricted to that period, and in so remarkable a manner, that sleep and epilepsy might, in such a case, be held to be related as cause and effect. A broad distinction was to be made between the epilepsy of *imperfect* and *perfect* sleep; the former was, most probably, oftentimes owing to troubled dreams; whereas the latter was generally, if not always, referrible to physical irritation, centric or eccentric. The sleep, too, which followed this appalling affection, should be industriously watched, as it was very likely to merge into a coma, wherein other convulsions would occur. The author then spoke of the spasmodic actions which took place, or could be excited, in paralytic limbs during the time of slumber; this division of the subject, whereof the contribution contained some illustrations, had, though very instructive, been almost entirely neglected. The author, after mentioning some indications of treatment, passed on to the consideration of the causes of the convulsions, direct or predisposing, which happened during slumber. They might be chiefly comprised under the four heads of—

1. The state of the circulation and respiration.
2. The condition of the motor-force and muscular irritability.
3. The emotion of dreaming.
4. The withdrawal of the will.

The author entered largely into the two latter topics. Dreaming had a very ample, and not seldom unsuspected, connexion with the event of convulsions. There was the horror of the dream, which was sometimes most intense, and there was the impression also which remained; and agitation of mind was surely never likely to be more hurtful than when the brain was congested, the irritability replenished, the passions ungoverned, the respiration unmodified, volition at rest. The *causes* of dreaming had a most wide, though in great part indirect relation to those of convulsions. Of this the paper contained illustrations. Great stress was laid on the withdrawal of the will. The fact had been abundantly and variedly proved that, *cæteris paribus*, reflex movements, and also involuntary movements not reflex, were occasioned with a facility that was inverse to the power of volition; but it was one, how glaringly important soever, which had by no means been duly and fully applied to the solution of the nature of certain convulsions which surprised in sleep. This was it that would furnish the key of explanation to very many of them. The author then drew the attention of the Society to some observations made by him on sleeping children; to some ingenious remarks by Professor Volkmann, which tended to support his own conclusions; to some experiments of Dr. Marshall Hall; and some others which he himself had recently made on hybernant animals; and to various phenomena to be witnessed in man, animals, and insects, which, however unlike in some respects, uniformly and emphatically concurred to show how often and how extremely a quiescent will tended to the production of spasmodic affections. Some convulsive affections of the sleeper and waker often contrasted greatly in this; in the first there could be no opposition from volition, no effort to subdue them; in the second there was, not rarely, an evident, and sometimes a successful, striving of the will. The author, availing himself of an expression to be found in the "Novum Organum," proposed to call those instances, wherein there was a manifest contention between causes of action, "wrestling instances." The withdrawal of the will had an indirect relation to the convulsions of sleep, from being the cause of dreaming, the emotion of which was more perilous, speaking generally, than that of the waking state, on account

of its being free from antagonism, for the dreamer was unable to reason on his delusion and so dispel it. The author dwelt finally on those convulsive affections which were benignly influenced by sleep, their temporary cure, and so contrasted as much as possible with those he had already discussed. The convulsive affections might be separated, as to kind, by a broad line of demarcation drawn between them by sleep. How often did it happen, in perplexing instances, that the influence of sleep directed the diagnosis! Emotion took much part in all those convulsive affections which were wont to subside when the mind was at rest. The reason of their being thus potently affected was easily readable in their history. The author instanced certain motor local nervous affections, paralysis agitans, mercurial erethism, and chorea, as being wonderfully under the sway of slumber, and concluded that some convulsive motions which had been observed in these diseases during the sleeping period, were owing to mental agitation, and formed no exception to that general law whereby the tranquillizing effects of sleep upon them were so correctly expressed. A considerable portion of the paper was, owing to its extent, left necessarily unread.

Dr. MAYO said the very clever paper which they had just heard related to a subject so full of interesting topics, that it tempted the author into a descriptive rather than an inductive consideration of them. In the latter part of it he had in some degree obviated a tendency to undervalue the blessings of sleep which was observable in the first part. There was no doubt that in certain states of certain disorders, sleep led to evil, not by producing it, so much as by preventing efforts which would obviate it; as in the accumulation of mucus, and the dryness of the fauces in bronchitis, and the accidents that in his (Dr. Mayo's) own experience had happened to the epileptic for want of assistance under paroxysms during sleep. In regard to the accumulation of power under sleep, which the author seemed to consider unfavourable to spasmodic disease, he would call his attention to the fact, that such disorders were, in great measure, instances of the presence of action without power; and that sleep as a restoring power, should have a beneficial tendency in regard to them, according to his own reasoning have overlooked the fact, that in insanity, another disease of that kind, the absence of sleep for four or five days and nights is ordinarily fatal.

Dr. WEBSTER coincided in opinion with Dr. Mayo respecting the great utility of sleep in the amelioration of insanity; it was always of the highest importance in attacks of that malady. The same result was equally advantageous in delirium tremens, as every practitioner knew; indeed, to produce balmy sleep was most essential in its management. Dr. Webster, however, dissented from the doctrine now laid down that a case of mania would end in death, if the patient did not sleep during two or three days consecutively. This was contrary to his own experience; and as any observation on such subjects by Dr. Mayo would carry much weight, he trusted there was some misunderstanding upon the point, and would therefore wish to be set right if labouring under any mistake in regard to the remark made by that gentleman.

Dr. MAYO explained that he meant entire absence of sleep during the period mentioned; a very small modicum might be sufficient to act somewhat as a restorative.

Dr. J. A. WILSON said that the paper was suggestive in the highest degree, but he could not help regretting what appeared to him to be an omission in it; the author had attended too exclusively to the nervous influence and the mechanical state of the vessels, instead of inquiring into the contents of the vessels. He had considered that congestion was the cause of sleep; but he (Dr. Wilson) thought the red face, fiery eyes, and other symptoms of congestion, were suggestive of anything but sleep. His own (Dr. Wilson's) opinion was more in favour of anæmia being the cause of sleep; and he particularly well recollected the case of a man in St. George's Hospital, who was so thin that he was almost a living skeleton; he was the subject of diuresis, making large quantities of limpid water, twelve, fourteen, and sixteen pints daily, of the specific gravity of 1002°. This man eventually died of phthisis, and he was always asleep. Dr. Wilson then referred at some length to a paper which he had published upwards of twenty years since, in which he suggested that the periodicity of sleep might possibly have to do with the large quantity of carbonic acid gas which was periodically accumulated in the system, and he referred to suicide by the inhalation of carbonic acid gas, as practised by the French; and more particularly to the narrative of a Frenchman who had fastened himself in a room with a carbonic acid stove, and wrote a history of his sensations as long as consciousness

lasted. At first he felt strong and vigorous, but he soon got confused in mind, and left off his narrative with an unfinished word. He (Dr. W.) then made some general remarks on the influence of the condition of the blood in the production of spasm, and regarded this state as the opposite one to that of sleep.

Dr. HEALE questioned whether carbonic acid acted as a sedative in the manner suggested, and related an experiment, in which he attempted to kill a cat by confining it in an atmosphere charged with carbonic acid gas. The spasms produced were so frightful, that he killed the animal with chloroform. He then made some general remarks on spasm, and its causes.

Mr. BARLOW replied to the observations of Dr. Mayo and Dr. Wilson. Dr. Mayo had remarked on his not having alluded to the subject of insanity; he had only to say that his paper was entitled, not, On the relation of sleep to insanity, but, On the relation of sleep to convulsive affections. He had to thank Dr. Wilson for his manner of speaking of the importance of the subject. Dr. Wilson had remarked that no sufficient allusion had been made to the condition of the blood. He (Mr. Barlow) in a part of the paper not read to the Society, wherein he had spoken of the causes of dreaming, had referred, as far as his knowledge permitted, to the effects resulting from changes of that fluid; but he did not doubt that Dr. Wilson, who was well known to have devoted much attention to the blood, would far more fully have observed upon its state, had the subject then before the Society been introduced by that physician. Mr. Barlow concluded by thanking the Society for the long and patient attention given to his communication.

MEDICAL SOCIETY OF LONDON.

SATURDAY, APRIL 12, 1851.—DR. MURPHY, PRESIDENT.

A NEW DISEASE OF THE UTERUS.

DR. SNOW BECK placed upon the table the uterus, ovaries, vagina, and vulva of a young woman, aged twenty-two, who died, in the beginning of last September, from typhoid fever. He did not see the case during life, but was present at the examination after death. She came under observation on the 23rd of July, 1850, and on the sixteenth day was considered to be convalescent, the notes on this day being, "Slept well; no return of delirium; skin natural; tongue moist, and cleaning; appetite returning; two stools in the twenty-four hours; pulse 96." A few days after this a slough was observed on the sacrum, and the patient gradually sank, without any appreciable cause. At the post-mortem examination no morbid lesion was found sufficient to account for death, except it were the state of the uterine organs. She was believed to be a virgin, and there were no signs in the breast or abdomen which could invalidate this idea. The orifice of the vagina was small, scarcely admitting the index-finger, and surrounded by a projecting fold of mucous membrane, which was considered to be the hymen. The vagina was contracted and rugose, as in virgins; the orifice of the uterus smooth and open, admitting the end of the index-finger to the root of the nail; the lips large, and projecting into the vagina. On withdrawing the finger, the end was observed to be coated with adhering epithelium. Examined from the abdomen, the uterus was found large, rounded, plump, as in women who had borne children; also antiflexed against the bladder. After the removal from the body, the vagina was seen of a deep-claret colour, whilst the epithelium could be readily separated from the mucous membrane as a continuous layer, having the denuded and deeply-coloured membrane beneath. Here was a puzzling condition to meet with in a supposed virgin. Being unable to solve the difficulty, the nurse was asked whether anything unusual was observed about the patient during the illness, when she replied, that during the height of the fever she was always talking about her baby, and saying she could not help it dying. Put upon this scent, it was soon discovered that she had recently had a child, thus readily explaining the anomalous conditions met with. After the removal of the uterus, it was carefully examined. With the exception of an increased number of bloody points on section, it did not present any evidence of inflammation. No fibrine, exudation corpuscles, or other inflammatory result was found, nor any heterologous deposits; yet the substance of the organ was enlarged and increased in thickness. What could this arise from? On examining a portion with the microscope, it was found to retain, in an unusual degree, the structure which is observed in the organ at the ninth month of preg-

nancy, with this exception, that the muscular fibres composing it were smaller in size. Compared with a portion of another uterus, which had been impregnated, the fibres were found to be larger than this specimen; or, in other words, that the condition of the muscular substance of the uterus under examination was midway between the tissue of the gravid uterus at nine months and the tissue of a healthy uterus after impregnation, whilst no other morbid condition was noticed. These facts pointed to the conclusion, that this affection had its origin in an arrest to the due absorption which naturally follows parturition. Sketches of the different microscopical appearances were shown to the Society; and Dr. Beck observed, that they offered another example of the error of Dr. Bennet, when he stated that the body of the uterus was void of cellular tissue; for in each preparation taken from the centre of the body of different uteri, the cellular tissue was clearly shown to exist. Dr. Snow Beck observed, that the morbid specimen presented many interesting points of view. It occurred in a case of typhoid fever. Was the inflammation of the vagina and vulva a sequence of this fever, or only an accidental concurrent disease? Was it, again, the cause of the unexplained depression and subsequent death of the patient? Unfortunately, none of these questions could be determined in the present case. An interesting case of a similar character is recorded by Dr. Hughes, in a medical journal; but in that the patient presented symptoms of uterine affection on the first day of observation; whilst no history is given to show how long these symptoms had been present. We are consequently unable to decide whether the fever occurred in a female already suffering from inflammation of the vagina, or whether it was a secondary affection from the typhoid fever. The preparation offered another example of the fallacy of the dogma of Dr. Henry Bennet, that an open condition of the os uteri was "pathognomonic" of inflammation and ulceration. Here no inflammation of the uterus was present, yet the orifice admitted the point of the finger. It further showed, that the open condition depended on a state of the organ, in no way related to the inflammatory process. It is, indeed, impossible to conceive how inflammation can open the orifice; for this process causes swelling in every direction; and especially in that where least resistance is met with. It hence causes obstruction to the orifice, and not the patent state which, when present, depends upon some new deposit taking place in the walls of the organs, or, as here shown, from an increase of the muscular structure, the consequence of a deficient absorption following parturition. This preparation also demonstrates the fallacy of the statement which has been made, that the condition of the uterine organs cannot be determined after death, for here, after soaking in preserving fluids for six months, the morbid conditions are still clearly discernible. The ready separation of the epithelium is also worthy of note, as it might be removed in the handling during a post-mortem examination, and gave rise to the erroneous idea, that this was a morbid process, instead of a mechanical one, and favour the notion of the frequent existence of ulceration. An important practical question also arises out of this case,—Can this condition of the uterus, which has been mistaken for that of inflammation and ulceration, be prevented by the management of the female during parturition? From theoretical reasoning, he was led to adopt the plan of administering a dose of ergot of rye and borax combined with hyoscyamus, after the birth of the child, with the intention of producing complete contraction of the organ, and thus, by shutting off the blood no longer required, to ensure a due absorption of the lately gravid organ. This plan had been eminently successful so far as he had tried it; but whether this is only an accidental sequence of fortunate cases, or the result of the practice adopted, must be determined by further experience.

Dr. HENRY BENNET read a paper on the

DIAGNOSIS OF INFLAMMATORY DISEASES OF THE CERVIX UTERI, AND ON THE USE OF POTASSA FUSA OR POTASSA CUM CALCE IN THEIR TREATMENT.

He began by stating that it was not his intention to enter at length into the consideration of the symptoms of inflammatory disease of the neck of the uterus, inasmuch as he had done so in his work on Uterine Inflammation, but merely to give a brief and clear synopsis of the symptoms and moral considerations which guided him in the use of surgical means of examination and treatment. The discussions which had taken place recently in their Society rendered this a positive duty on his part, as his name and authority had been appealed to by a member as a sanction for his surgical scrutiny of the uterine organs of many hundred females who had no uterine disease, and that in order to discover a comparatively limited number