ease of the sinuses of the brain. In one of the cases described by the author, the patient, who lived in Bermondsey, appeared, for a time, to be regarded as the subject of ague. This reminded him (Professor Paget) of a case which he knew, of a medical man, who frequently suffered from purulent discharge from the ear, with occasional attacks of severe ear-ache, while practising his profession. He was believed to be suffering from brow ague, and was, accordingly, for two or three weeks, treated with quinine; but the disease became more and more urgent, revealing a manifest injury about the brain. He died in a short time, with one of the ordinary symptoms of suppurative disease in the internal ear. The case was strikingly similar to one of those mentioned by the author, and might well serve to call attention to the possibility of overlooking the first occurrence of the disease in the suspicion of its being merely some ordinary intermittent affection.

Mr. CÆSAR HAWKINS referred to the hereditary nature of diseases of the ear, and mentioned the case of a lady who died from abscess on the brain, consequent upon ear disease. Seven out of eight of her children suffered from disease of the ear.

Mr. NICHOLS related the case of a man who suffered from intermittent pain over the brow and nose. Under quinine he recovered for a time, but three weeks subsequently a purulent discharge from the nose came on, which was followed by a piece of bone coming away.

Mr. HENRY LEE explained that the difference between pus and the white globules of the blood in regard to pyæmia in producing that disease, was not dependent, as has been suggested, on any mechanical obstruction in the capillaries, but that the pus acted as an irritant, and produced the mischief.

MEDICAL SOCIETY OF LONDON.

SATURDAY, MARCH 24TH, 1855.

DR. SNOW, PRESIDENT.

PROPAGATION OF INFECTIOUS DISEASE.

DR. ROUTH mentioned a fact of some importance, as he thought, in respect to the spread of disease. About one hundred years since an epidemic of small-pox had prevailed amongst the Indians at Quebec. It was most general and fatal, and the victims of the disease were buried in one cemetery. Lately the cemetery had been disturbed and opened to make improvements in the town. Small-pox immediately afterwards made its appearance, commencing in the neighbourhood of the cemetery, and spreading from thence throughout the city.

DR. GIBB had knowledge of the fact mentioned, and was about to publish an account of the matter. In addition to what had been mentioned by Dr. Routh, he might observe that the first epidemic of small-pox amongst the Indians had been two hundred years ago, the second had occurred a century later; but in both visitations the dead had been buried in the same cemetery. There could be no doubt of the nature of the disease in these two instances, as an account had been kept of each by competent persons, and these records were extant.

Mr. R. HARRISON, Dr. ROGERS, and Mr. MILTON doubted if the present epidemic could be owing to the cause specified; but Mr. DENDY thought it could, particularly if the persons had been buried in leaden coffins.

Mr. WM. ADAMS read a paper on

INFANTILE PARALYSIS.

The author began by observing that the form of paralysis to which children are liable presents so many peculiarities, is of such frequent occurrence, and so full of practical interest, that the little attention it has received even from high authorities on infantile disorders was to be much regretted. He now brought the subject before the members of this Society, in the hope of eliciting information with respect to the earlier stages of the affection, its causes, treatment, &c., and of making more generally known the advantages of surgical and mechanical treatment in the late stages of the affection usually accompanied with consecutive deformity. In this stage the cases frequently came under his observation. Whether paralysis of particular muscles or limbs, independent of traumatic lesion, is ever congenital, he considered to be at least doubtful. The cases related of limbs remaining flaccid and useless in infants born asphyxiated after difficult and instrumental labours, of facial paralysis, usually of one side, and sometimes accompanied with loss of power in the corresponding arm, &c., which had in some instances been satisfactorily traced to traumatic lesion, could not be admitted as examples of the

affection now described. Infantile paralysis usually occurs between the ages of six and eighteen months, generally during difficult dentition, and often preceded by fits or convulsions. It may, however, occur at earlier and later periods. In one of the author's cases it occurred at the age of five years, and both arms as well as both legs were paralysed. It is said frequently to happen without any convulsive disorder, and when the children are in robust health. He, (Mr. Adams,) however, considers that in many of these cases the children have fits which pass away unnoticed in the night, (when the seizure generally occurs,) and careful inquiry has convinced him that in most cases the children are at the time suffering from a slight febrile condition. He mentioned one case of paralysis of the deltoid muscle in which the mother said the child was in good health, and the paralysis took place in the day-time, whilst the child was eating an orange and sitting in the room with her. Upon asking the mother why she gave the child the orange, she said, "Because it was thirsty and a little out of sorts," but not more so than children frequently are. The author referred to the frequency with which many children, apparently in good health, get into a heated feverish condition during the night, the skin, especially of the face, hot and burning, the head freely perspiring—a condition which he thought might be sufficient to produce the slight, partial, and imperfect forms of paralysis frequently seen. It may result from intestinal irritation caused by worms, indigestible food, &c. The cause may be either centric or eccentric irritation. It not unfrequently follows marked febrile disorders, especially measles and whooping-cough. The author considers that in cases in which many muscles or entire limbs are affected, and in which the paralysis is persistent, it depends upon structural lesion of the nervous centres, brain, or spinal cord; that in similar cases, in which the paralysis is transient, it depends upon congestion of the nervous centres, sometimes accompanied with effusion, which afterwards becomes absorbed; and that in cases in which single muscles, or a group of associated muscles are affected, it depends upon some local failure of nutrition in the nerves supplying the muscles, under circumstances of a general, though perhaps slight, febrile condition, as in the case above related. M. Bouchut, who has recently written upon this affection, which he describes under the title of "myogenic or essential paralysis,"* admits as a cause lesion of the nervous centres and cords only in those cases which succeed febrile convulsions; in all the other cases, which he groups in two classes—viz., those accompanied with pain in the affected limb, and those following eclampsia, or convulsions, without febrile excitement, he considers the cause to be primarily and essentially "an alteration of the elementary tissue of the substance of the muscles." The nature of the affection in these cases he regards as "entirely rheumatic," and traces it as a frequent result of exposure to cold from low dresses, throwing off the bed-clothes, &c. He (Mr. Adams) has not seen any cases accompanied with pain, but upon the ground of deficient evidence doubts the rheumatic character of the affection under any circumstances, and regards it as probable, that the children who in restless nights throw off the bed-clothes, are frequently suffering from febrile or eccentric irritation. No evidence whatever is given of any alteration in the elementary structure of the muscles in the early stages, and the author considers the myogenic theory to be advanced without sufficient evidence. M. Bouchut states that the development of the paralytic affection is usually slow and progressive. In his (Mr. Adams') experience, it has always been sudden, and he considers that the cases of supposed slow development are cases in which the consecutive phenomena, such as contraction and atrophy, have taken place. In these cases, the limb is often said to get weaker, and when it occurs in the leg, the lameness increases, but this is due to the super-vention of contraction, and not to any increase of the paralytic affection, which, indeed, is not infrequently improving. In one observation made by M. Bouchut—viz., that "whether at the beginning or at the end of the myogenic paralysis, sensation remains quite perfect"—he (Mr. Adams) entirely concurs. He (Mr. Adams) has also noticed another peculiarity—viz., that there does not appear to be any disposition in the paralysed muscles, in this affection, to become rigid, as in cases of adult paralysis recently noticed, more particularly by Dr. Todd. The muscles either remain flaccid through life—he (Mr. Adams) has witnessed this condition at the age of forty-two—or, by the spontaneous cure and disappearance of the paralysis, they are restored to a healthy condition, or the complete recovery is arrested at some stage, and the muscles remain in a state of partial paralysis through life. This latter the author believes

* Practical Treatise on the Diseases of Children, translated by Mr. P. H. Bird.

to be the most frequent termination, the complete recovery second, and the persistent flaccid condition third, in relative frequency. The paralysis most frequently affects one leg, and then only some of its muscles—very frequently the leg and arm of the same side were affected, occasionally both legs, and very rarely both legs and both arms. When single muscles were affected, those most frequently suffering were, first, the extensor longus digitorum of the toes; secondly, the tibialis anticus; thirdly, the deltoid; fourthly, the sterno-mastoid. When particular groups of muscles were affected, the most frequent to suffer were, first, those on the anterior part of the leg, forming the extensors of the toes and flexors of the foot; secondly, the extensors and supinators of the hand, always together; thirdly, the extensors of the legs, and with them generally the muscles of the foot, in the first class. At the time of seizure, he (Mr. Adams) was unable to say whether any other muscles were affected; but if so, they completely recovered, as in the late stage the cases described presented themselves as well-marked examples of paralysis of single muscles or groups of muscles. Sir B. Brodie lately mentioned to the author a case brought to him, in which the muscles of deglutition were paralysed in a child. The attempts to swallow were very painful to witness. He did not know the result, but death from starvation probably took place. In respect to the muscles subject to this form of paralysis, one very important fact, in reference to the treatment in the late stage, was, that, in the experience of the Royal Orthopædic Hospital, where these cases apply in considerable numbers, no case had been seen, in which the muscles of the hip-joint were involved. Some patients—viz., those in which both legs are affected, the rectus and the muscles of the thighs, as well as those of the legs, being paralysed—have never walked at all, but the existence of power in the muscles of the hip-joint enables us to make those patients walk, mechanically fixing the knee- and ankle-joints, with considerable comfort and freedom. The most satisfactory feature in the history of this affection generally is the strong tendency exhibited towards spontaneous cure. In some cases, the paralysis completely disappears, even when entire limbs are involved; but in reference to complete recovery in some cases, he (Mr. Adams) concurred in an opinion recently expressed to him by Sir B. Brodie, that unless it takes place within a few months, the paralysis is generally persistent through life. In slight and moderately severe cases the rule is, that either complete recovery or very great improvement takes place, and this frequently several years after the seizure. Numerous cases are seen at the Orthopædic Hospital in all stages of spontaneous recovery. The second stage is marked by the production of deformity, and Mr. Adams described the mode in which this is produced by adapted atrophy of certain muscles, determined by paralysis of the opponent muscles and position of the part, as seen in the commonest form—viz., elevation of the heel. The author advises the removal of contraction in the lower extremities by division of tendons, whenever it exists to an extent sufficient to interfere with the free use of the mechanical motions of the joints necessary to progression, and the erect posture. Loss of power can be subsequently compensated for to a great extent by mechanical means, and the joints either rendered available in progression, or fixed, according to circumstances. The extent to which these objects can be accomplished, and the great advantages to the patients, appear to be very little known. The benefit to be derived from treatment may be said generally to be in proportion to the severity of the case. Infantile paralysis lays the foundation of a very large proportion of all the non-congenital deformities, itself being frequently only a transient condition. Where the paralysis has disappeared, and the deformity alone remains, the cure is of course perfect; yet even in these cases the lameness is frequently thought to be due to a persistence of the paralytic affection. Mr. Adams then referred to the possibility of preventing these deformities, and stated that if the mode of their production were rightly understood their prevention would be found so easy that there never need be another example of deformity in the scases. Passive muscular exercises, to be determined according to the circumstances of the case, and properly adapted mechanical supports, are the preventive measures indicated. With regard to medical treatment, Mr. Adams recommends gentle mercurial remedies for a few months after the seizure, if not injurious to the general health; but beyond this period has no confidence in any internal remedies, except those calculated to improve the general health. Febrile irritation must be allayed if existing at the time of seizure, and where difficult dentition is obvious the gums may be lanced. Although this cannot remove the mischief done, it may contribute to this end, and diminish its effects. Mr. Adams had not seen benefit from blisters or other counter-irritants, though he

had used them. He preferred shampooing, galvanism, warm clothing, sea-bathing, and passive exercises, as likely to aid the vigorous and frequently successful effort made by Nature during the early period of life for its removal. Mr. Adams has found the hæmospatic apparatus, invented by Dr. Junod, extremely useful in maintaining a natural temperature in the paralytic extremities, and has used it during the last two years, in the hope that by keeping a good supply of blood in the muscles their atrophy may be prevented, and restoration of power favoured. To some extent the apparatus had been useful in these respects, but its power of maintaining the temperature is alone sufficient to recommend its use.

Dr. WINN thought that infantile paralysis presented itself in three forms: First, as congenital, of which one case had come under his notice, the paralysis affecting the neck, and lasting throughout life. The second form of cases were those which occurred during dentition, and made their appearance after slight cerebral disturbance or cold, and were usually curable. His mode of treating these cases consisted in placing the extremities in hot water, morning and evening, and the exhibition of alterative and tonic medicines. The cure was usually protracted but certain. The third series of cases was that in which there was facial paralysis from pressure exerted on the affected nerve by an enlarged gland.

Dr. O'CONNOR referred to the literature of the subject, all mention of which had been omitted by Mr. Adams, except only an allusion to a case recorded by Dr. Kennedy and quoted by M. Bouchut. Dr. O'Connor mentioned that the subject had been ably written on by Drs. Ivory, Kennedy, Doherty, H. Kennedy, Hardy, and West. In his own (Dr. O'Connor's) practice, he divided these cases into two classes, those dependent upon organic lesion, and those resulting from functional derangement. The latter cases mostly occurred in healthy children, and were occasioned by constipation of the bowels, the removal of which cured the paralysis. Where organic lesion existed the case was incurable. As a local application he preferred the plan of "firing," by passing a heated button over the paralysed muscles (a plan first recommended by Dr. Corrigan) to any other. Exercise of the paralysed limb was also most important. He related the case of a child, in which the application of "firing" had been most successful.

Mr. WEEDON COOKE related the case of a boy, seven years of age, who had been paralysed in the lower extremities for four years. He had been subjected to various plans of treatment and was regarded as incurable. He was admitted into the Royal Free Hospital, rather as an object of charity than with any expectation of cure. He was galvanised in both legs and along the spine for one hour daily, and in one month got quite well. He related another case, of a child twelve months old, who was cured by the employment of the sesquioxide of iron, in scruple doses, for four months.

Dr. WILLSHIRE agreed to some extent with Dr. O'Connor, that the author had scarcely done justice to the literature of our own country in reference to his subject. With respect to M. Bouchut's views, he would observe that they were substantiated to a certain extent by his own experience. When paralysis followed a fit of convulsions, there could be but little difficulty in assigning—proximately, at least—its cause; this class of cases might therefore be left out of the question, and to it M. Bouchut's views could not, of course, apply. In another set of cases, arising whilst the child is yet an infant, and when the paralysis is not very evidently a sequence of, or associated with, any lesion of the nervous centres, but has more apparent connexion with those conditions usually regarded as causative of rheumatism, he believed the mass of the muscles was rather affected than the nervous centres, or the nerves leading to such muscles. But under any circumstances, as the paralysis continued, atrophy of the muscles and relaxation of the ligaments ensued to a remarkable extent, and this complicated the treatment and hopes of cure, as *two* elements of disease now entered into the question. Under the latter circumstances he had found counter-irritation over the muscles and joints, and the use of the more powerful metallic and vegetable tonics, like zinc, iron, quinine, &c., most advantageous.

Dr. BARNES observed that the defective classification of Mr. Adams arose necessarily from the great obscurity which still surrounded the pathology of paralysis in infants. Classification was the condensed expression of knowledge. The question of greatest interest was undoubtedly the pathology of this affection. He thought classification that rested on the period of life at which the paralysis occurred was quite arbitrary, and threw no light on the question of causation. Because paralysis often occurred during dentition, it did not follow that dentition was the cause. His experience agreed with that of Dr. Willshire, that paralysis could not be always traced back to

convulsion. He believed that the cases in which convulsion preceded were rather the exceptions. There were undoubtedly cases in which the cause was centric, and others in which it was peripheral. Dr. J. A. Wilson, it was known, had dwelt much upon the existence of a form of paralysis, which consisted primarily in an affection of the muscular fibre as distinct from nervous lesion. He (Dr. Barnes) did not recollect whether Dr. Wilson extended his views to infantile paralysis, but he thought they were worthy of attention in reference to this subject. The treatment was difficult and tentative in character, because the pathology was obscure. He had seldom fewer than eight or nine cases under his care. In those cases which did not get well in a moderately short time under the use of simple remedies, he had derived more advantage from galvanism than from anything else. The true and most promising method of sustaining the nutrition of paralysed muscular fibre was by exciting it to activity, and for this purpose we had no agent of equal efficacy with galvanism; and believing as he did in this physiological law, he did not anticipate any advantage from the application of M. Junod's apparatus. He thought Mr. Adams' theory upon this point was a bad one. Mr. Adams had not been able to inform the Society that he had derived any success from the application of this machine. He (Dr. Barnes) ventured to say that further experience was not likely to supply better evidence. Of what avail was it to attract a mass of blood, of nutritive material, into contact with inert muscle? Mere contact would not lead to nutrition. The stimulus to nutrition was organic action; galvanism would excite this, and thus might be an effective aid in promoting the return to a healthy condition, or at least of preventing atrophy. In conclusion, Dr. Barnes remarked that the subject was one of great interest and importance; that it belonged especially to the physician to observe the disease, and to unravel its etiology. If this were done, early treatment might obviate much subsequent suffering and deformity, and go far to diminish the glory of the Orthopaedic Hospitals.

Mr. HUNT spoke of the little satisfaction which was experienced in the treatment of protracted cases of the disease under discussion. In some instances he had found great benefit from tonics conjoined with the daily application of small cupping-glasses along the course of the spine from the neck to the sacrum.

Mr. DENDY agreed in the main with Dr. Willshire, but thought that the disease must yet be admitted as *primarily* dependent upon a state of enervation.

Reviews and Notices of Books.

The Pathology and Treatment of Leucorrhœa. By W. TYLER SMITH, M.D., Member of the Royal College of Physicians, Physician-Accoucheur to St. Mary's Hospital, &c. 8vo, pp. 217. London: John Churchill. 1855.

"It is a fact which cannot be denied," says an author writing twenty-five years ago, "that there are no diseases to which the female system is liable, so likely to be disregarded, in their incipient or early stages, as those of the womb and its contiguous parts."* Happily this reproach—so true when put forth, notwithstanding Sir Charles Clarke's classical work had been published some twelve or fourteen years—cannot be made against practitioners of the present day; and although, in the opinion of some, we may have gone from one extreme to the other, and now attach too much importance to the investigation and treatment of diseases of the female sexual system, yet no one capable of judging can doubt that real advances have been made, and solid advantages gained, by the investigations of the many able men who now attend more especially to the pathology and treatment of uterine affections. Pretenders to knowledge have been rife in every age, and perhaps never more so than in the present. The student, however, must not confound those who have traded on the speculum—those who have grossly abused the use of this and similar instruments, with men who have had but one object in view in pursuing their investigations—namely, the relief of pain and suffering, and the advancement of professional knowledge. The former class—small in number, let us hope—in their

struggle for gain, will achieve notoriety at any cost—at even the price of their honour; the latter are the workers, who, often in the midst of difficulty and discouragement, fix their eyes on the point of duty, labour constantly, according to their strength and talents, to decrease the afflictions of their fellow-creatures, and determine, at least, to deserve success, though they do not regard it as the great end or aim of their exertions.

The investigation of the pathology and treatment of leucorrhœa is a task that may well engage the time and energies of the most philosophical and skilled physician; and there are few men more capable of conducting and deducing important observations from such a study, than the author of the present treatise. Dr. Tyler Smith's previous researches, not less than his devotion to physiology and scientific medicine, point him out as one eminently calculated to throw light on many subjects which less able men might fail to elucidate. We consequently took his work in hand with high expectations, and we have not been in the least disappointed.

Dr. Smith commences his treatise by showing good reasons for adhering to the term leucorrhœa, explaining, that although a leucorrhœal discharge is a symptom of different, and often of opposite conditions of the uterus or vagina, yet, in its chief form of discharge from the glands of the canal of the cervix, it is the disease itself; and, moreover, that by ignoring the discharge, and employing the words inflammation, hypertrophy, induration, ulceration, &c., we merely shift from one set of prominent symptoms to another. He then proceeds to give the details of his investigations into the minute anatomy of the vagina, and os and cervix uteri, particularly as regards the epithelium, papillæ, and glands of these parts; and we are bound to say, that the pages devoted to this part of the subject are replete with novel and interesting views, which deserve the most careful perusal, more especially as the descriptions usually given by anatomists of these structures are so insufficient as to be generally absurd. The drawings—made from microscopic examinations instituted by Dr. Hassall and the author—will enable the reader easily to comprehend the opinions broached; and since without them it is impossible to do justice by analysis or quotation with this part of the subject, we must leave it.

In the succeeding chapter, on the secretions of the vagina and uterus, it is shown that the vaginal mucus—which, in health, is secreted only in quantity sufficient to keep the mucous membrane lubricated—is always acid, as is also the mucus of the os uteri and cervix, while within the labia uteri the secretion is alkaline. The author apparently confirms the opinion of Dr. Whitehead, of Manchester, that the acid of the vagina, while it coagulates the vaginal mucus, prevents the coagulation of the menstrual fluid, which, but for this provision, would putrefy in the vagina instead of flowing away. If the unimpregnated cervix uteri be examined in the dead subject, its canal and mucous crypts are generally found filled or blocked up with a clear viscid mucus, which is washed away at each menstrual period. After the commencement of pregnancy, however, Dr. Smith has noticed that the plug continues unremoved until the beginning of labour; and as it is readily seen through the speculum, somewhat resembling a plug of white paint inserted into the os, we have a symptom of pregnancy which may often prove of value in the early months, when the ordinary signs are doubtful.

The two principal forms of leucorrhœa are the cervical or mucous, and the vaginal or epithelial:—

"In cervical or mucous leucorrhœa, the glandular portion of the canal of the cervix uteri is the chief source of the discharge. This form of leucorrhœa is, when simple and uncomplicated, the result of a morbid activity of the glandular cervix. A follicular organ, which should only take on an active condition at certain intervals, becomes, from a variety of causes, constantly engaged in profuse secretion. Instead of the discharge of the plug of mucus at the catamenial period, an incessant discharge is set up. This discharge, it cannot be too often repeated, is a special glandular secretion, elaborated by the glands of the canal of the cervix uteri. In the first instance,

* Jewel on Leucorrhœa. London. 1830.