

The next day (Wednesday), in the evening, I was asked to see the patient with Dr. Dixon. We found her depressed, with frequent vomitings, no action of the bowels, and thirst, with a dry tongue; pulse small, wiry, 90. The hernial tumour was hard, hot, incompressible, tender, and not distended by coughing. The right iliac region was sore on pressure, and tympanitic. Under these circumstances, I made a very cautious but ineffectual trial of the taxis; and we then decided that an operation offered the only means of safety to the patient. Previously, however, I was anxious to try the effect of inversion of the body. The patient was placed in the vertical position, with her head on the floor. A careful employment of the taxis produced no sensible effect. She readily consented to the operation; and when, after a short interval, I was about to perform it, she said that the swelling was softer. On examination, this appeared to be the case, and we decided upon another trial of inversion. In this posture, with flexion of the thigh, the taxis produced a partial return of the hernia; and in a short time the whole passed into the abdomen. Comparative ease and relief from vomiting soon followed. Calomel and opium were given; and subsequently one grain of calomel effected the free action of the bowels. The pulse sank to 72, and she had good sleep.

I did not again see the patient; but Dr. Dixon kindly furnished me with details of progress and treatment. She had a narrow escape from alarming prostration, and it was only through the instrumentality of unremitting care and judicious treatment that she gradually recovered. Some difficulty still attends her wearing a truss.

As a means of reducing hernia, the inverted position with the taxis has long been known, and is especially adverted to in Mr. Hey's valuable work *On Surgery* (pp. 123-131); but he does not speak encouragingly of it. Recently cases of it, with a successful result, have been reported by Messrs. Jessop, Power, and Bowman; and it will probably be now admitted as one of the remedial measures to be employed before resorting to an operation. It must in a degree act by gentle traction on the contents of the sac, and probably still more by opposing the influx and facilitating the efflux of blood—an observation made by Mr. Bowman in speaking of the case under his care. This would best explain the fact in the above case of softening of the swelling after the first inversion, and would suggest the repetition of the procedure, should a first or second trial of it fail.

**M. PASTEUR ON PUTREFACTION.** As a natural sequence to his investigations on fermentation, M. Pasteur is now engaged upon *Researches on Putrefaction*. His present paper relates exclusively to the cause of putrefaction, which he says is determined by organised ferments of the genus *Vibrio*. The author has investigated the nature of the putrefactive changes which take place in matters exposed to, and protected from, air. These it appears are effected by two classes of infusorial ferments, one of which cannot exist without oxygen (*e.g.*, *bacteria*) and the other cannot exist without—*vibrios*. In some cases, when the action of the former causes a pellicle to form on the surface of a liquid, and so prevents the absorption of oxygen, two distinct chemical processes go on simultaneously. In the interior of the liquid *vibrios* transformed nitrogenised matter into more simple but still complex bodies, while on the exterior the *bacteria* burn these matters up, and reduce them to simple binary forms, as water, ammonia, and carbonic acid. Gangrene, M. Pasteur says, is not putrefaction properly so called, but a condition of a part in which the liquids and solids react chemically and physically on each other without the normal acts of nutrition. Death, he adds, does not put an end to the reaction of liquids and solids in the body,—a sort of chemical and physical life continues to act.

## Transactions of Branches.

### LANCASHIRE AND CHESHIRE BRANCH.

ON THE TREATMENT OF RHEUMATIC FEVER.

By J. BIRKBECK NEVINS, M.D. Lond.; Lecturer on Materia Medica, Royal Infirmary School of Medicine, Liverpool.

[Read June 24, 1863.]

THE plan of treatment about to be laid before you is one for which I am not able to claim the credit of originality, but it is a method which I have adopted for above fifteen years both in private practice and in an union hospital containing above one hundred and fifty beds; and I think that, if its advantages were more generally known, it would be more frequently practised. During this period I have made trial also of the various modes of treatment which have prominently occupied the attention of the profession; viz., the opiate, the alkaline, the lemon-juice, and the do-nothing treatment; but I always return to my accustomed plan, with confidence rather increased than diminished by the comparison with others. At the same time, I am bound to confess that this treatment will come before you with one very serious defect, which it is vain now to attempt supplying—viz., the absence of detailed clinical reports of the cases treated; and I am unable, therefore, to say how many have been cured, or how many days have been required before the patients could walk about, how many before they could leave the hospital, or how many before they could go about their work as usual. Such phrases as "I feel very confident", "I am thoroughly convinced", and the like, are the nearest approach to accuracy now attainable; and I am well aware how much this absence of exactness lessens the value of any conclusions respecting the result of treatment in such a disease as rheumatic fever. With these preliminary remarks, I will now proceed to the details of the method.

It is impossible to observe many cases of rheumatic fever without being struck by the periodicity of the disease, as shown by the general aggravation of the pain and other symptoms as night comes on, and also by the copious sweating, which enfeebles the patient, rather than relieves him. The long continuance of the illness, and its liability to return after apparent recovery, and the length of time requisite for regaining strength, are also well known features. In some of these particulars, but especially in its periodical exacerbations and in its sweatings, Heberden and others, and Dr. Davis of University College, in a very able paper on the subject, have at different times noted its similarity to ague, and advocated the employment of cinchona or quinine for its cure; and it is this drug upon which I look as the basis of the treatment to be proposed to you. At the same time, the experience of the profession generally has shown the great value of iodide of potassium in chronic rheumatism; and, remembering the tendency of this disease to become chronic, I always combine this medicine with the quinine, and commence their administration from the earliest date at which the patient comes under my care. The presence of acute pain and high febrile excitement does not, in my experience, form any objection to their employment; and the thick creamy fur upon the tongue disappears more rapidly under their use than under the different methods which I have compared with it, either in my own practice, or when noticing that of my brethren in the profession. The dose never exceeds two grains of quinine four times a day, with five grains of iodide of potassium added to each dose.

The pain and loss of rest are, however, so distressing to the patient, that we have been advised to administer opium in quantities only limited by the effect produced. And the employment of this drug as far as may be necessary for subduing the pain is a very important point; and I therefore always leave two or three doses of opium pill or of Dover's powder with the nurse, which are to be given successively, if the patient is in severe pain; but I very rarely indeed find that the patient has even asked for more than a single dose in the twenty-four hours, which I attribute to the speedy and more permanent relief obtained by the following element of the treatment, to which I attach very great importance. This is, *the employment from the very first of steam-baths, even when the patient is so helpless that it is impossible to move him from the bed on which he is lying.* These steam baths relieve the pain and check the distressing perspirations in a degree which I have failed to obtain by any other mode of treatment; and they are administered with the greatest ease in the following manner.

A couple of common red bricks are to be placed in an oven hot enough for baking bread, and in half an hour or little more they are sufficiently heated for the purpose. The patient's body-linen having been previously removed, these two bricks are to be folded up in a piece of common thick flannel thoroughly soaked in vinegar and laid upon two plates; and one is to be placed about a foot distant from one shoulder, and the other about equally distant from the opposite leg;\* and the bedclothes are then to cover the bricks and the patient closely round his neck. A most refreshing acid steam bath is thus obtained; and the supply of steam may be kept up, if necessary, by removing one brick and replacing it with another hot one kept in reserve. When the patient has been in the bath for about fifteen or twenty minutes, the bedclothes and plates should be removed, and the patient instantly mopped all over very rapidly with a towel wrung out of cold water, and then should be quickly rubbed dry.† Dry warm linen must be put on at once, and dry bedclothes must replace those which were on the bed previously. The patient generally experiences great and speedy relief from this bath. The exhausting acid sweats are materially diminished; and the necessity for opium, as already mentioned, is almost at an end.

But here the objection naturally presents itself: a patient in rheumatic fever suffers so severely from the slightest attempt to move him, that we are frequently obliged to leave him several days without changing his linen, from the pain occasioned by the attempt to remove it even leisurely; and we have just been told to change it quickly, which implies that the case cannot be a very severe one, or this direction could not be carried out. The difficulty is really of the most trifling character, if the simple precaution is adopted of tearing the night-shirt open from top to bottom down the back. The sleeves are then slipped over the patient's arms almost without moving them; and the torn edges of the linen are gently tucked under his sides, from which they can be just as easily withdrawn the next day. And by this means he is freed from the discomfort of lying day after day in linen soaked with acid perspiration; and this is done without the smallest pain to himself or trouble to his nurse. For many years I used large lumps of quick lime, and wrapped them up in clothes soaked with cold water; and, as soon as the lime began to slack, the

patient was enveloped in a steam bath from simple water; but in many places it is difficult to obtain quick lime, and the vinegar is also more refreshing to the patient; so that the vinegar and hot bricks have now quite superseded the lime-bath.

These, then, are the essentials of the treatment: *quinine and iodide of potassium from the first, and the steam bath, with the subsequent cold sponging*; and, as an adjunct, opium in small doses, when necessary to procure sleep.

It now remains to speak about the success of the treatment. During the fifteen years it has been in use, I have only had occasion to apply a blister over the heart in three instances; and this was done because the patient complained of uneasiness in the chest, not because there was any distinct evidence of pericarditis. There has not been one case of distinct rheumatic affection of the heart; but the absence of clinical reports puts it out of my power to state how many cases have been thus treated. I can merely say that they have been numerous.

Next, as regards the duration of the disease; it is extremely rare that it is necessary to give two steam-baths in bed, the patient being almost always able to have the second whilst sitting upon a chair; from which you will draw your own conclusion as to the rapidity of improvement. I am surprised when the patient is not able to walk about the room, a little at any rate, in little more than a week; and I have a strong impression that he is more frequently able to do this within the week than not. But here, again, the absence of exact reports must be taken into account. I further think that from two to three weeks is the average duration of the case before the patient is able to walk up and down stairs and to go out of doors for exercise or pleasure. Relapses are not common; and the patient has not the lingering convalescence which I have observed under other methods of treatment.

The steam-baths and subsequent cold douche should be continued after the patient is able to walk about, as they contribute to the healthy action of the skin, and promote the free mobility of the joints.\*

If there is great tenderness of any one particular joint, an opiate embrocation, containing in addition either chloroform or tincture of aconite, should be gently painted over the part two or three times a day; but, in the early stage, the employment of friction appears inadvisable whilst the pain is very acute.

The recommendations of the method now presented to you are: that the patient's strength is husbanded from the first, and he has neither the protracted disease nor the lingering convalescence often observed. Pain and sweating are more quickly relieved than by any other treatment I have seen. Relapses are very rare; and so far I have not seen any case of cardiac affection occurring as a consequence of the rheumatism. I have a strong conviction that, if the method is fairly used in two or three cases, it will leave the same favourable impression upon the minds of those who try it that it has produced upon my own, and upon the students who have watched its employment in the hospital to which I have alluded.

\* These baths are very easily given by placing the patient naked upon a chair, and putting a can containing a couple of gallons of boiling water under it. Blankets are then to be folded round his neck, and made to surround him like a tent, reaching to the floor. In about five or ten minutes, a red hot brick should be put into the can, which renews the supply of steam. The patient soon perspires, and in fifteen or twenty minutes the blankets should be removed, and a couple of quarts of cold water should be poured over his shoulders; or, if he is afraid of such heroic treatment, he should be mopped from head to foot with towels wrung out of cold water. By this means he is invigorated instead of feeling weakened, and depressing perspirations do not follow the bath. The patient should sit upon a pillow or doubled blanket, on a close bottomed chair, not upon an open cane-bottomed one. I have known a patient scalded by the accidental neglect of this precaution.

\* Care must be taken not to put the bricks too near the body. I have known the thigh blistered in a patient who was unable to move away from the heat which was accidentally very near it. A dry napkin thrown over the wetted one will prevent this accident, if the bed is too narrow to allow sufficient space.

† The under sheet can be removed, and a dry one substituted by fastening the corners of the dry sheet to those of the damp one. Very little difficulty is generally met with in simply drawing the old sheet from under the patient, when the dry one follows it, and is left in its place.

## MIDLAND BRANCH.

## NOTES ON HÆMATOMA OF THE EXTERNAL EAR IN THE INSANE.

By W. PHILLIMORE STIFF, M.B., Physician to the County Asylum, Nottingham.

[Read at Derby, July 2nd, 1863.]

THE subject which I am about to introduce to your notice, that of sanguineous cyst of the ear in the insane, is of importance in a medico-legal point of view. Some writers allege that these hæmatic cysts are the result of injuries either self-inflicted or from the employment of violence on the part of attendants and nurses. The statement of Gudden, in support of the latter view, has been most extensively circulated (see BRITISH MEDICAL JOURNAL, May 1861, page 469; *Medical Critic*; and New Sydenham Society's *Year-Book*.) He maintains that these swellings are entirely owing to mal-treatment; and points out that ears closely resembling those of the insane are not unfrequently met with amongst sculptures depicting pugilistic athletes. Singularly enough, in his efforts to bring this home to the attendants, he avers that he has never met with an instance in which the injury could be traced to the patient himself or to other patients. How this can be reconciled with the fact, that patients frequently fall on the ear in fits, and are struck on it by their own associates, I am at a loss to imagine. Again, in the lately published work of Dr. Kramer, *On the Aural Surgery of the Present Day*, the observations of that author are calculated to encourage the theory of the physical origin of the disease. He says: "The causes of these bloody tumours on the cartilage of the ear are unknown, though we must admit that they are especially likely to be produced by violence (blows on the ear), which, perhaps, explains their more frequent occurrence on the left ear." (New Sydenham Society's edition, page 41.) In the *British and Foreign Medico-Chirurgical Review* for January 1858, I published a short memoir on this peculiar disease, illustrated by engravings after photographs of the altered ears; and I therein advocated the contrary opinion, based upon observation and inquiry, that the lesion is not occasioned by physical injury, but that it is the result of a spontaneous hæmorrhage arising out of a pre-existing diseased condition of the vessels of the pinna of the ear.

Two cases came under my notice last autumn, strongly confirmatory of this opinion. Both were to be seen running their course together, but distinct in their appearance and characteristics. The one was a well marked example of hæmatoma, arising without any external interference; the other, a case of severe contusion of the ear after a blow, not presenting any appreciable swelling, but only ordinary interstitial ecchymosis, although this patient was pre-disposed to hæmatoma, and was the subject of partial ossification of the cartilage of the opposite ear.

CASE I. September 30th, 1862. R. H., aged 71, had confirmed chronic mania. He had been insane fifteen years; he had the appearance of having been a free liver; was phlegmatic; inert; muttered to himself; had hallucinations about spirits, that they pulled his inside out. This morning I observed that the left ear was thicker than usual, owing to a circumscribed hæmatoma; not noticed the day before. There was no discoloration; no bruise. The ear had not received any blow, nor been interfered with. The swelling was of about the size of a broad bean; it felt tense and elastic, and was limited to the scaphoid fossa, antihelix, and concha, partially; was not painful. The fluid could be displaced slightly. There was no pitting on pressure; nor external inflammation. As usual, the posterior surface of the ear was not implicated, although the skin was more lax and not so firmly attached as on the anterior sur-

face. On Oct. 20th, the hæmatoma was less swollen; it was flabby; and its fluid contents were diminishing. On Dec. 20th, the swelling had been apparently stationary during the last month. On Jan. 15th, 1863, it was undergoing the shrivelling process. On March 16th, it had become firmly indurated; ossification had taken place; the skin was adherent to the cartilage; elasticity was lost. No treatment was required.

CASE II. November 26th. T. B., aged 58, had confirmed hereditary chronic mania; he said that he wrestled with the devil; was mischievous and disorderly; and attacked his neighbours viciously. He received during the night a violent blow with the fist over the left ear, which produced a well marked bruise of irregular shape. The concha and greater portion of the anterior surface of the pinna were discoloured. There was no appearance of hæmatoma; no blood was effused between the cartilage and skin, but the latter showed interstitial ecchymosis. The posterior surface was similarly affected, as also the integument over the mastoid process against which the ear had been driven; skin nowhere broken. This patient was predisposed to hæmatoma, and had the characteristic appearance of old ossific deposit in the unbruised right ear. The bruise lasted about six weeks, when the ear regained its natural colour, and left no further evidence of having suffered injury.

It is admitted on all hands that these effusions occur most frequently amongst the insane, or in patients affected with serious lesions of the nervous centres. It has been shown by several pathologists that there is a pre-existing state of disease before the occurrence of the sanguineous effusion. The disease may be observed in both ears in different stages; and occasionally the cartilage may become ossified without the occurrence of the stage of effusion. When blows are received by the same class of patients over the analogous structures of the eyelids and nose, the same morbid changes do not take place. Epileptics are less liable to it than chronic maniacs. Cartilaginous nodules are sometimes developed after wounds of the ear; but their history, course, and pathology, are quite distinct.

In two specimens of hæmatoma occurring in the ears of the same patient, Mr. Toynebee informed me that he had found the cartilage of the right ear greatly hypertrophied, and in some parts ossified. It had Haversian canals and corpuscles like normal bone. Bony matter was deposited in the left ear, which did not pass through all the various stages.

I entertain no doubt that the disease depends upon internal or centric causes; and is, probably, one of the results of the atheromatous diathesis. It runs a well-defined course; the duration varying from a few days to several years; and, unlike contusions, leaves structural alterations and disfigurement of the organ.

These two cases corroborate, in a remarkable manner, the views of those who consider that the phenomenon is the result of disease and not of accident, and they may be regarded in the light of a crucial experiment, decisive of the question at issue; confirming the fact, in the one instance, that hæmatoma may be developed without the intervention of external violence, and disproving, in the other, that it could be produced by a blow in a person predisposed to the affection.

TEST FOR GREASE. If whilst camphor is actively moving on water, the most minute particle of certain greasy substances only touch the water, instantaneously, as if by some magic shot, the camphor is deprived of all motion, and repelled. The scene of previous activity is changed to the immobility of death. By availing ourselves of this curious property of camphor, we may detect grease in quantities so extremely minute, as would almost appear fabulous. (*Chemical News*.)