and may be worth relating after a sufficient length of time has elapsed to say whether relief only or cure has resulted from the treatment.

REMARKS ON CARIES OF THE SPINE; THE HISTORY AND TEACHINGS OF A MORBID SPECIMEN.¹

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In considering the prognosis of caries of the spine, I believe we may assume that in every case in which the health of the patient has not been already undermined, cure of the disease without any increase of the deformity may be obtained. If the disease has affected the health of the patient very severely the prospect of cure may be materially reduced, but the case described below is an instance in which very complete repair has taken place, notwithstanding extreme severity of the disease and almost complete exhaustion of the patient. In this instance the local affection was cured, although the severity of the illness had probably produced the tubercle of the membranes of the brain, which ultimately caused the death of the patient.

The accompanying woodcuts represent the portion of the spine where the caries had chiefly existed. Among the facts which this morbid specimen illustrates I wish especially to point out the following:—

1. The extent of gap which may occur from dissolution of the bones without their usual coalescence, the spinal cord being left exposed in the thorax and abdomen unprotected by a bony covering.
2. The extent to which repair may take place while the undestroyed vertebræ remain separated from one another.
3. That repair of this kind *can* progress in spite of the most adverse circumstances in respect to the general health of the patient.
4. That in such a severe case the new bony growth requires a much longer time to become thoroughly solid than in ordinary cases.

Fig. 1.

Fig. 1 shows the remains of the seven lower dorsal and four upper lumbar vertebræ united together by new bony growth. This new growth appeared to be fairly solid, and had been sufficiently so to allow the child to walk about comfortably for many months. In the preparation of the specimen, however, the new bone crumbled away almost completely, leaving the attenuated vertebræ in the condition in which they existed before the spine was fixed and repair began.

Fig. 2 shows the appearance of the vertebræ as they remained after the loss of the new bony growth, and as shown to the meeting. The history of the patient from whom this specimen was obtained is as follows:

¹ The specimen was shown and described at a demonstration of orthopedic surgery given at the Annual Meeting of the British Medical Association at Bournemouth, August, 1891.

January, 1882. A. W., aged 8, had caries of all the dorsal and lumbar vertebræ, and apparently also of the lower cervical. The disease had existed for five years, and was attri-

Fig. 2.

buted to a fall. The boy had been treated for six months by means of plaster-of-paris jackets carefully applied at one of the general hospitals, but they were not successful, and he had been in constant pain while wearing them as well as subsequently. Abscesses occurred (both lumbar and psoas) on

Fig. 3.

both sides. I first saw him in January, 1882. His legs were partially paralysed (it was twelve months since he could walk). He had been supporting himself day and night for six months upon his arms and knees in the prone position, his

Fig. 4.

mother not being able to persuade him to rest in any other way. He was in an extremely emaciated condition, and

neither Mr. Curgenven nor I thought that he could live many days.

On January 11th I fixed his spine completely with the form of instrument described in the *BRITISH MEDICAL JOURNAL* December 8th and 15th, 1883, and March 31st, 1888. At that time the slightest movement of the body caused great pain, and the appearance of the back, when such movements were made, gave the idea that it would require very little force to break the spine completely. I believe there was little or no attempt at repair of the bones at that time.

On January 13th I found the patient very comfortable and able to turn in bed for the first time for a long period. I then placed him on a prone couch, which he greatly appreciated. Many complications arose which required attention and frequent alteration in the adjustment of the instrument. He gradually rallied.

My report September 3rd (eight months later) states "he can now walk about comfortably, the abscesses are healed up, and the health has improved in every respect; destruction of bone seems to have ceased from the time of commencing this treatment." There was no record of tubercle in the history of the patient or his relatives. He continued to get about, and improved in health in every way until September, 1884, when he died from tuberculous meningitis.

Fig. 3 shows his appearance when I first saw him.

Fig. 4 shows him as he appeared in September, 1883, twenty months later and a year before his death. This patient's health was evidently undermined from the long continuance of the disease before his spine was thoroughly fixed, and it seems probable that deposits in the membranes of the brain took place during the period of extreme emaciation.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

CASE OF COMPOUND DEPRESSED FRACTURE OF SKULL.

F. M., aged 10 years, was brought into Tewkesbury on October 7th, 1891, from Apperley, a village some five miles distant, suffering from a compound depressed fracture of the skull.

The patient had been sent to take some horses into a field at about four o'clock in the afternoon, and it appeared that one of the horses on entering the field had kicked the boy on the right temple. As he did not return home at the proper time a search was instituted, and he was found lying in a semiconscious state in the field. He was immediately conveyed to Tewkesbury, where he arrived at 11 p.m.

On examination, the patient was found to be suffering severely from shock; he had evidently lost a very considerable quantity of blood, and over the right eyebrow was a somewhat crescentic wound of about two and a-half inches in length, having its convexity downwards. Chloroform and ether were administered, and the wound was thoroughly cleansed with warm carbolic lotion 1 in 40. Dr. Turner and myself examined the seat of injury, and found that a piece of the right frontal bone, measuring about $1\frac{1}{2}$ inch in length by one in breadth (being the tract of bone lying between the frontal eminence and supraorbital ridge) had been detached and beaten into the lower frontal convolutions of the brain, so that its anterior surface looked downwards, and its plane was parallel to that of the roof of the orbit. The right eye had escaped injury altogether; the dura mater round the upper margin of the fracture was still intact; this was snipped through with a pair of scissors, and by means of a fine elevator and a pair of Spencer Wells forceps, the fragment of bone was gently withdrawn. There was some slight loss of brain substance during the operation, but no more bleeding than could be readily controlled by forcipressure; the wound, the base of which was formed by the lacerated brain, was very gently irrigated with warm carbolic lotion 1 in 40, and a little iodoform was dusted in; a fairly thick layer of alembroth gauze soaked in glycerine was laid in, and over this a good-sized pad of alembroth wool, the whole being lightly bandaged with carbolic gauze.

Unfortunately, it was absolutely necessary to convey the boy back to his home at Apperley: this was done at 12 midnight in an open waggonette, the boy being well wrapped up in blankets. He was put into bed with his head between sand-bags, and, as no skilled nurse could be obtained, he was attended by his mother, an agricultural labourer's wife, in a very poor and small cottage. The wound was dressed daily under chloroform for a fortnight, the same form of dressing as had in the first instance been applied, being used, and irrigations by warm carbolic lotion (1 in 40) carefully applied. The boy rallied well from the initial shock of the injury and operation, his temperature never exceeded 99° F. and he made an uninterrupted recovery within six weeks from the time of injury. During the whole of that period, and up to the present time, there has been no affection of motion or sensation of any part, nor have the intellectual faculties or disposition undergone any noticeable change.

The case seemed interesting in that it showed a striking ability to recover from shock, and the tendency to heal in the country air, although six or seven hours of exposure elapsed between the times of injury and operation, and the subsequent conditions of nursing, etc., were unfavourable.

Tewkesbury.

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THE KNEE-JERK IN SCIATICA.

IN about one-third of the cases of sciatica which I have seen during the past eight years, I have found that there has been loss of the knee-jerk on the affected side. For the most part the cases in which I have observed this have been of exceptional severity, but I have also witnessed really sharp attacks when the reflex has not been altered.

An elderly man had a very acute and protracted attack of sciatica. Early in the course of the illness I found that the knee-jerk was lost. This was eight years ago, and when, about three years since, I last had an opportunity of examining the limb, there was no return of the reflex. The same thing occurred to a man, aged 75. He had, during his attack of sciatica, herpes zoster femoralis, following the course of the internal saphenous nerve. The knee-jerk was never recovered until his death, which occurred four years later. A middle-aged man had a severe attack. The knee-jerk was lost, but in the course of two years it was gradually returning. A man, aged 30, lost the knee-jerk on the affected side during an attack of sciatica. Having lost sight of him I cannot say whether or not it has returned. A woman, of middle age, recently under my care, suffered acutely from neuralgia and was laid up for five weeks. The pain affected the scalp and neck, but was most sharply felt in the regions of the lumbar and sacral plexuses and down the back of the left thigh. Pain was also felt in the opposite limb. The left patellar reflex was, and still is, completely lost, while, on the right side, only a slight tendon reaction can be elicited. I have witnessed the same thing in three other cases of sciatica, but it is unnecessary to refer to them in detail.

As the great ischiatic nerve has no part in supplying the rectus muscle it seems strange that such a symptom should appear in sciatica. The explanation is, I should think, that other nerves, including the anterior crural, are involved in the neuritis as well as the great ischiatic, although pain is referred to the latter nerve only. I say neuritis, because whether or not there are any pathological changes in the nerve or its sheath in neuralgia, some lesion must, I should suppose, exist to account for the loss of a reflex. As to the pathology of simple neuralgia I venture to bring myself forward as a *corpus vile*. Suffering one day from sharp hemi-crania, I entered a church in which the organist was practising. So long as his foot was upon one of the lower pedal notes my pain was completely relieved, but it returned the instant that the pedal was disused. This practical experience of a "lost chord" strongly suggested to my mind that in neuralgia there is something of an abnormal vibratory process going on in the nerve. Whether, in my case, a non-vibrating nerve was set in action by the vibrations communicated by the pedal note through the medium of the ear, or whether a too rapid series of vibrations was reduced by the incidence of slow undulations from the organ; on these points I would not hazard a guess.

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