ORIGINAL COMMUNICATIONS.

INTERNAL DERANGEMENT OF THE KNEE JOINT.

By A. B. STEELE, Esq.

[Read before the Liverpool Medical and Pathological Society February 8th, 1855.]

INTERNAL derangement of the knee-joint is the appellation given to an injury, the precise nature of which, as may be inferred from its vague title, is not very clearly understood. The accident, however, is not very uncommon, nor is it unimportant in its consequences; for, if overlooked, it may prove very embarrassing to the surgeon, and may lay the foundation of more serious disease. The elder William Hey has the credit of having first called attention to this injury. It is noticed by Sir A. Cooper, in his work upon the joints, and by other surgical writers; but the subject appears scarcely to have received the attention which its importance deserves.

I have no recollection of seeing a case or hearing one mentioned during my attendance on hospital practice in London and elsewhere, and it was only recently that my attention was particularly drawn to it by a clinical lecture of Mr. Smith of Leeds, which appeared in the *Lancet* of the 20th September 1851. A short time after perusing that lecture, I met with a case, which I at once recognised from his description. I was also then able to explain satisfactorily to my own mind cases which had come under my notice previously, and which had puzzled me a great deal. The accident is generally produced by some slight fall, slip, or sprain. Sir A. Cooper observed that it occurred most frequently when a person in walking strikes his toe, the foot being at the same time everted, against any projecting body, as the fold of a carpet; he also relates cases in which the accident happened from a person having suddenly turned in his bed, when the clothes not suffering the foot to turn with the body, the thigh-bone has slipped from its semilunar cartilage. The symptoms, when the accident is recent, are very characteristic and readily recognised, when attention has once been drawn to these cases; but yet so slight, as very likely to be overlooked or misunderstood by those who are not aware of their occurrence. There is little or no alteration in the appearance of the joint; no swelling or effusion; and no pain when the limb is at rest. The patient walks with a limp, with or without pain, and cannot bring the heel to the ground, from inability to accomplish full extension of the limb; the motions of the joint are unimpaired, except that extension either by the patient's efforts or those of the surgeon can only be partially effected, so that the limb remains constantly a little bent. In some instances, the cure takes place suddenly and accidentally; in others it will continue for days, weeks, or months. Some patients are liable to a recurrence of the accident, as is recorded by Sir A. Cooper, and which I have observed in one instance in my own practice. When accompanied by other severe injury or disease of the knee-joint, as may happen either from the violence producing the accident, or from rheumatic or scrofulous inflammation consequent upon it, the case assumes a more serious and complicated character, is less readily detected, and less easily remedied.

The exact condition of the internal structures of the joint, which is subjected to this derangement, is not accurately known. Mr. Hey says, "an unequal tension of the lateral or cross ligaments of the joint, or some slight derangement of the semilunar cartilages, may possibly be sufficient to bring on this complaint." Sir A. Cooper regards it as a "partial luxation of the thigh-bone from the semilunar cartilages." Mr. Smith of Leeds thinks that "the edge of the semilunar cartilage is turned upwards."

The treatment to be adopted in recent uncomplicated cases of this injury is exceedingly simple and usually very satisfactory in its results. It is clearly and graphically

described by Mr. Smith, in the lecture before alluded to; and I cannot do better than give it in his own words. "If the right knee be the one affected, I place the patient at length on a sofa on his left side, I then take hold of the right ankle with my right hand, and by slow and gentle means gradually flex the limb till the heel presses upon the buttock; now is the time that a little cunning and art is required to perform the full extension, for if you attempt this without manœuvring properly you are foiled, the muscles resist the action, and you can only succeed by cheating them. I now take care the patient does not see what I am about. I place the left hand above the knee, grasping the vasti muscles, hold the ankle above the heel with the right hand, make several gentle extensions, but no further than to a right angle; and when my patient seems fully impressed with the belief that I am going to proceed no further, when I am satisfied I have caught him off his guard, I suddenly and powerfully perform the full extension of the limb. Generally I succeed; sometimes I fail, and have to repeat it once or twice. When the full extension is accomplished, the cure is usually complete."

Where this plan fails, and especially in cases of long standing, Mr. S. Hey recommends "flexing the leg fully, placing the arm under the popliteal space as a fulcrum, to separate as far as may be the head of the tibia from the condyles of the femur, and at the same time to produce rotation of the tibia." I will now relate some instances of this affection, which have fallen under my own notice.

CASE I. The first case which I recognised was that of a young female, who stated that she sprained her knee six days before by a trip while going up stairs; she had consulted a surgeon, who ordered her an embrocation, but she was still unable to walk without great difficulty. There was no pain or swelling of the joint; but the patient was unable to place the heel flat upon the ground, or fully to extend the limb. I adopted the manipulation described by Mr. Smith, and the limb was at once restored to its natural condition, except some weakness, which remained for two or three days, after which she had no return of the complaint.

CASE II. The next case was that of a mechanic, who fell down a steep bank while carrying a rocking-horse; he had contusions on various parts of his body, and suffered severely from the general concussion of the fall, and was confined to his bed for some days; on attempting to walk, he found he was unable to put his foot flat to the ground; and on examination, I was satisfied that the knee was in the condition peculiar to these cases: there was also in this case acute pain when firm pressure was made on the inner side of the joint. Manipulation, as in the former case, enabled the patient at once to place his foot firmly to the ground, and in a few days he walked as usual.

CASE III. The next case I shall relate was of a more complicated nature. An iron-moulder, aged about 40 years, of intemperate habits, and very liable to rheumatic inflammation, fell down and sprained his ankle, which became hot, painful, and much swelled; but these symptoms subsided in a few days, and his knee became similarly affected, and he then applied to me for advice. The knee-joint was leeches and blistered repeatedly, and the treatment appropriate for rheumatic synovitis, carried out under which the case slowly improved; and the joint was, with exception of some thickening of the synovial membrane, restored to its usual state, except that the patient was unable to extend the limb completely; flexion and extension gave no pain; but he was unable to walk across the room, from inability to put the foot to the ground. After carefully examining the limb, I became satisfied that the peculiar derangement of the joint we are speaking of had occurred probably at the time of the accident; but my attention being drawn to the more evident acute affection, and as semi-flexion was the position I wished to preserve as most conducive to the relief of the pain and inflammation of the joint, it had escaped my notice. I adopted forcible extension in the same way as in the other cases, and the patient at once jumped out of bed, and walked across the room. It was

some time before the whole of the thickening about the joint was got rid of; but there was no more difficulty in placing the foot to the ground, or of fully extending the limb.

I can call to mind two instances in which I have no doubt this peculiar derangement of the joint had occurred, but in which I failed to recognise it, not having had my attention previously drawn to the subject. The first was a carter, who consulted me "for something which was wrong with his knee". He stated that it came on suddenly when he was at work, and he found himself unable to walk without pain and difficulty; but after a short time the joint got all right, and he felt no inconvenience, until it returned again, and this happened on several occasions, and at last he became permanently unable to walk without a considerable limp: he described the sensation as if he felt the joint suddenly locked. At first, I suspected it was a case of loose cartilage in the joint; but after a careful examination of the joint, I could detect nothing unusual. It was quite moveable and free from pain, and I was at a loss to account for it. I prescribed rest and an embrocation. The patient returned in a week, precisely in the same condition, and I again examined the joint, without being able to discover any deviation from the ordinary condition of the parts. The limb, however, in a short time without further interference, recovered its usual functions, and the patient was able to resume his employment. I have no doubt that this was a case of internal derangement of the knee-joint, occurring as it sometimes does spontaneously. It is probable that finding the motion of the joint free, I might have omitted to try full extension of the limb, and thus the only indication which exists in these cases was overlooked; and this is a point of practical interest. Full extension of the limb is interfered with to so slight an extent, that unless special attention is given to this peculiarity, it may readily escape observation—more especially as the patient is sometimes able to move the affected joint naturally when sitting down, although he is compelled to keep the leg stiff in walking.

The second case, in which I believe this derangement of the joint escaped observation, occurred when I was house-surgeon to the hospital at Newark-upon-Trent, in 1842. A girl, of strumous habit, was admitted as in-patient, with acute inflammation of the synovial membrane of the knee-joint, which, under the usual treatment, was very much relieved; but before the joint was in a fit condition, she left the hospital of her own accord, and while walking home had a fall, and the joint became again inflamed, excessively painful, and much enlarged, from effusion into the synovial cavity. She was unable to walk, as the least motion of the joint gave her acute pain. This second attack was much more obstinate than the former; and she derived so little benefit from leeches, blisters, lotions, rest, etc., that she resolved to consult a celebrated bonesetter, whose name I forget, but who enjoys in that locality the same celebrity, with about equal merit, as our worthy friend Evans Thomas monopolises in Lancashire. I was not apprised of her intention of going to the quack until a day or two after she had done so, when I met her walking in the street, and she told me the story herself. He said, as usual, that the knee-cap had slipped upwards, and he used considerable force in what he called "putting it in"; but the patient declared that immediately after she was able to walk; and the joint now appeared nearly in its usual state. I was quite unable at the time to explain or satisfy myself what was the real state of the case; but I could not deny the facts that I had been treating the case unsuccessfully for several weeks, and that in a few days, by some means or other, an ignorant pretender had removed the difficulty. I have now little doubt that in addition to the synovial inflammation (or rather perhaps at the time she went to the quack), as the exciting cause of that inflammation, this girl's knee was affected with this internal derangement, and that the man, by his manipulations, practised with the pretended object of replacing the patella, had effected all that was necessary to remove the real cause of the mischief. It is possible that some of the wonderful cures we hear of, and

which, in some instances, are difficult to explain, may be analogous to that just related.

A similar derangement of parts may occur in other complicated joints, as the shoulder or hip, and these eluding the ordinary examination of a medical man, are unconsciously remedied by the rude handling and rough manipulations of these ignorant pretenders. A small balance of good to place against the incalculable amount of mischief which these unscrupulous gentlemen inflict upon the limbs and lives of those who entrust themselves to their care.

Liverpool, February 1855.

ON THE ORIGIN AND TREATMENT OF CHRONIC DISEASES OF THE SKIN.

By THOMAS HUNT, F.R.C.S., Surgeon to the Western Dispensary for Diseases of the Skin.

NO. VI.

ORDER V. PUSTULE (CONTINUED).

DIAGNOSIS OF PORRIGINOUS DISEASES. Although it is often impossible to diagnose some of the varieties into which Willan has divided the genus porrigo, it is quite practicable, in every case of disease of the scalp, to form such a diagnosis as shall determine the proper treatment: and in order to make this task the more easy, it will be convenient to study these diseases respectively as they affect children and adults; for although no absolute rule can be laid down, still it is so exceedingly common for certain forms of scalp disease to attack children only, that the division will be found useful in practice.

I. PORRIGINOUS DISEASES IN CHILDREN.

Children of all ages, like adults, are subject to an eruption of almost every kind of skin disease in the scalp, in common with the general surface of the skin. Leprosy, eczema, lichen, and most other cutaneous diseases may appear in the scalp, and are for the most part easily diagnosed, because they generally appear at the same time on the limbs or trunk; but it may be observed that the hair, by entangling within its folds the scales or crusts, tends to obscure the primary form of the disease. Besides these general affections, children are subject to certain forms of scalp disease which rarely attack the adult subject. I have observed three diseases of this kind, sufficiently distinct from each other, but as I cannot identify each of them with Willan's varieties of porrigo, I find it difficult to give them a name. Two of them are contagious, the third is not so.

1. The first variety I shall describe is that in which the hair falls off in small patches, leaving a smooth, white, and sometimes shining surface, without the slightest pubescence or eruption, the hair surrounding the patches retaining a healthy luxuriance. This occurs, it is true, in adults, but it is not the same disease; for in children it is almost invariably contagious, in adults, never. Willan describes a disease which he calls porrigo decalvans, the description of which includes both the infantile and adult diseases: neither of them exhibiting visible pustules.

2. Children are often affected with an eruption of papules or minute pustules on the scalp, which appear in an annular, serpentine, or circular form, in separate patches. One or two only appear at first; afterwards, several. These spots appear nearly bald at first sight, but a crop of hair covers them, which, as compared with the natural hair, scarcely deserves the name. It is scanty, short, discoloured, coarse, stiff, and without gloss. The appearance is that of pale yellowish tow. Each hair grows from a small papule or pustule, and is easily detached. The parts generally itch. A patch or two will occasionally be seen on the neck or shoulders, and more rarely on the arms. It is eminently contagious, and is almost entirely confined to children under the age of puberty. It is rarely seen except in schools, and of these establishments it is the very pest. This form of disease only, deserves the name of ring-worm. It is described by Willan under the name of porrigo fur-