

of the bones, when the cartilages are unaffected, may exist without any pain whatever; and over and over again I have examined cases where children died affected with scrofulous disease to a great extent in one hip-joint, but where they have never complained of pain in the other hip, although the *post-mortem* examination proved that to have been affected also. Even when the cartilages begin to ulcerate there is at first only a trifling degree of pain. The disease is, indeed, most insidious in its origin. I was called to see a child, many years ago, in consequence of the parents having observed him to limp in walking for some time previously. That was all; he had never complained of pain, nor were there any other symptoms. I examined the joint, and found that I could push the head of the bone into the socket of the acetabulum, and move the limb in any direction without producing the smallest uneasiness. I took a great deal of pains to make out the case, and told the parents that if we did commit an error it was better that we should make it on the safe side, and I therefore advised them to lay the child up, as if the hip was diseased, although I was by no means certain that it was so. It was well that I did give that advice, for the next account which I had, some months afterwards, was, that there was a considerable abscess in the hip. I believe the poor child ultimately died. I have seen similar cases since, in which children have been brought to me in consequence of their limping, but without pain, and it has proved to be this scrofulous disease of the hip-joint. The disease may then go on for weeks and months, the child having some pain, but not a great deal, and very often when the relations are careless, the disease is quite unobserved for a long time. But by and by the child begins to make greater complaints, sometimes of pain in the hip, but more frequently of pain in the knee, and you observe him putting its hand to the joint last-mentioned. Then the pain becomes greater, but I suspect that in these cases the pain is never very considerable till an abscess is formed in the joint, and then certainly the child suffers enough. At this period it cannot bear to be moved, it lies in one position in bed, and generally twists itself round into a very awkward posture, making one hip very much bulge out, and the knees crossing each other, so that there is a great deal of deformity. The child screams from pain in the day, but he suffers chiefly at night; he wakes out of his sleep screaming, and complaining of frightful dreams. Bad dreams in children, and, I believe, in grown up persons, generally depend upon something wrong in the physical system. That which would be pain in the knee from the diseased joint if the child were awake, becomes a frightful dream if he be asleep. You must not wonder at this when you consider that even acid in the stomach is a frequent cause of disagreeable dreams in an adult. By and by an abscess presents itself in one place or another. Sometimes it makes its way on the inside of the thigh; sometimes backwards, showing itself behind the little trochanter; sometimes outside under the nates; and sometimes it penetrates by ulceration through the bottom of the acetabulum, into the cavity of the pelvis. In the latter case it not unfrequently bursts into the vagina or rectum; and I do not see why,

in some instances, the matter should not make its way into the urinary bladder, though I do not recollect having met with an example of this myself.

When an abscess presents itself externally from this disease, there is invariably another change in the condition of the limb. It becomes shortened, and this occurs in two different ways. If the head and neck of the bone be destroyed, and especially if the margin of the acetabulum be destroyed also, it is no matter of wonder that the muscles should pull up the thigh-bone, and that the limb should be shortened. Here is a drawing of the head of the thigh-bone where there is only a small part of the neck left, and where a very little action of the muscles would pull the thigh-bone out of the socket and lodge the remains of the neck upon the dorsum of the ilium. In these cases the limb is shortened just in the same way in which it would be shortened in a case of fracture of the neck of the femur. The toes, if left to themselves, turn outward, and the thigh may remain in a line with the trunk. But at other times the shortening of the limb takes place in another way. The cavity of the acetabulum is filled up by lymph or pus, or by lymph and pus altogether, the capsular ligament of the joint in consequence is dilated, the patient having undergone a great deal of suffering from the tense state of the capsule previously. Then the round ligament is destroyed by the ulceration which has already consumed the cartilage. The head of the femur is pushed from the joint until it passes beyond the margin of the acetabulum, and then the muscles pull it upwards, and lodge it on the dorsum of the ilium. Sometimes, when the head of the femur is dislocated, it will be nearly entire; in other cases it is partly absorbed. The dislocation is generally in the same direction, and here as in those other cases, in which dislocation arises as a consequence of inflammation of the synovial membrane; the dislocation being upwards and outwards the limb is much shortened and the toes are turned inward. There is one circumstance which favours the escape of the head of the femur from the socket of the acetabulum, and also favours the escape of the remains of the neck wherever the head has been destroyed; and that is, the position in which the child generally lies if left to himself, with his knee bent inwards so as to cross the sound limb. This cannot be done without making the trochanter project on the side of the disease, and this favours the escape of the head of the bone.

There are a few cases in which dislocation takes place in another direction. I had a patient under my care who has now recovered, but who had, a few years ago, disease in the hip-joint, and there the head of the femur has been dislocated forwards. It may be felt upon the ramus of the pubes, the great trochanter being, of course, placed farther back than natural, and the toes being turned outward. The child is better off than when the dislocation is upwards and outwards. There is, it is true, a little shortening of the limb, and the child has the toes turned out, but she can walk very well nevertheless.

I need not tell you that these cases of the hip-joint, if they proceed to the last stage, are very dangerous. But why should the disease

be dangerous? The hip-joint is not a vital organ. The fact is, that disease of the hip-joint is very rarely the immediate cause of death; but when an abscess has burst externally, discharging matter, and has continued to do so for a long time—when the patient has been long exhausted by suffering and night perspirations, disease takes place in the thoracic and abdominal viscera. Such circumstances are always favourable in bad constitutions to the production of disease, especially in the lungs and mesenteric glands. In like manner scrofulous persons may become phthisical when the constitution has been weakened by ague, by a course of mercury, by the venereal disease, by scarlet fever, or measles, or anything else.

I mentioned that a great aggravation of pain takes place when suppuration is established in the joint. The escape of the head or neck of the thigh-bone from the acetabulum tends not at all to diminish the patient's sufferings, but rather to increase them. When this has taken place, the patient, of course, is relieved so far as the tension is concerned; but he now suffers from another cause. The head of the thigh-bone in some cases, and the ulcerated neck of the femur in other cases, coming in contact with the soft parts in the vicinity of the joint, keeps these parts in a state of irritation, and every attempt to remove the limb, even the slightest, is a source of torment.

LECTURE XXXI.

ON DISEASES OF THE HIP-JOINT. (*Continued.*)

THERE are two important circumstances in the history of the scrofulous disease of the hip, which I neglected to notice. One is, the shrunk, flattened appearance of the nates. This appearance is not, in fact, an absolute diagnostic mark of disease in the hip-joint, though it does usually accompany it. It arises simply from the wasting of the muscles. If you tie up one arm the muscles will waste; if it be painful to use the knee, and it be not employed, the muscles of the thigh waste; if it be painful to use the ankle, the muscles of the leg waste; if it be painful to use the hip, the muscles of the hip waste; and the largest muscles of the hip are those situated posteriorly, the glutæi. These are the muscles of which the wasting is most perceptible, and thus you will understand the reason of the altered form of the nates. The flattened appearance of the nates may occur, not only in cases of diseased hip, but wherever there is anything which prevents the hip-joint from being moved; as, for instance, in that paralytic affection to which young children are liable. I have known a painful tumour in the groin, and disease in the thigh-bone produce the same effect, although the hip-joint was perfectly sound.

In some cases there is an alteration in the appearance of the nates from another cause. If the acetabulum be filled up with lymph, the head of the thigh-bone must be pushed more or less out of the socket, and this being the case, the great trochanter must project farther on the side of the disease than on the other, so that the nates become actually widened. Then, again, if the head of the thigh-bone be quite pushed out of the socket, and lodged on the dorsum of the ilium, the appearance of the nates must be different from what is natural. The great trochanter is prominent behind, and the head of the thigh-bone may be felt or even seen through the wasted glutæi muscles lying on the dorsum of the ilium.

Another of the symptoms of this disease is an apparent elongation of the limb. In the advanced stage of the disease the limb is always shortened; and I have explained to you how that occurs. But in the early stage of the disease there is sometimes the appearance of elongation, and there may, indeed, be some absolute elongation, though it cannot be much; for if you look at the skeleton you will see that the acetabulum looks a little downward, but more outward. If the acetabulum be filled with lymph or matter, and the head of the thigh bone be pushed out, this must be in the direction outwards rather than downwards. The absolute elongation of the limb can never amount to more than half an inch, yet it appears sometimes to be elongated to the extent of two inches. This arises from the distorted condition of the pelvis. It makes with the spine an obtuse angle on the side of the disease, and of course an acute angle on the other side. The tuberosity of the ischium is lower on that side than on the other. Observe the position in which the patient places himself when he stands. In order to save the diseased hip from supporting the weight of the body, as much as possible, he throws his principal weight on the foot of the sound limb, while he advances the other foot merely to steady himself. But this cannot be accomplished without the tuberosity of the ischium being a little depressed. The apparent elongation of the limb often vanishes when the patient has been some time in bed. Occasionally I have seen an apparent shortening of the limb, without a real shortening, produced by the pelvis being twisted in an opposite direction.

In order to know whether a limb is shortened or elongated, it is not sufficient to look at a patient as he lies in bed. You must lay him flat on his back, and take care to place the two limbs parallel to each other, so that a line which passes from the patient's chin straight over the navel and the symphysis pubis, should go exactly between the knees. When you have placed him in this position, the two thighs making exactly the same angle with the pelvis, you measure with a tape from the anterior superior spinous process of the ilium to the patella. It is only by this method that you can acquire a knowledge of the comparative length of the two limbs. If you trust to your eye, and not to the measurement with a tape, you will be continually deceived.