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*CLINICAL LECTURE—DEFORMITY OF HIP AND
KNEE FOLLOWING ACUTE OSTEITIS; LUMBAR
ABSCESS RESEMBLING INCIPIENT HIP-
JOINT DISEASE.*

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THE orthopædic case I bring before you this morning is one that presents a number of very interesting features, not only in its orthopædic aspect, but also, I may say, as a case of interest to the general practitioner in its severe deformity, following comparatively slight traumatism. Fourteen weeks ago the boy, aged 13 years, was in sound health, working in a factory, and proceeding in his work at hard labor in a way that showed he must have been robust and strong. While scuffling with another boy he fell to the floor, striking upon the hip and knee of the left side. He is not positive of the actual site of the injury, for he says that he felt very dizzy. The necessity of working urged him to continue for the rest of the day in the discharge of his duties, although he was complaining of a slight pain distributed over the left leg.. This occurred on Thursday. On Friday and Saturday he continued to work, but Sun-

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day, being an off-day, he remained in bed. On Sunday afternoon he had some severe rigors. On Monday he went to work, and continued at his labors until ten o'clock, when he says he became so sick that he was compelled to return home to bed, where he has remained until he was brought to this hospital. The pain in the hip and knee became more and more marked. He was admitted to the hospital two weeks ago. During my temporary absence Dr. Mann detected pus, a considerable quantity of which he evacuated through an incision made over the great trochanter; washed out the cavity, and dressed the part aseptically.

Let us look at his temperature chart. On admission his temperature was $103\frac{3}{8}^{\circ}$; three days later it was 102° . Then the pus was evacuated, and the temperature fell to normal, and remained normal for two days. Subsequently it rose, especially at night, to a point near 101° . During the last week the temperature has zigzagged between 99° and $100\frac{2}{5}$, indicating thus that, while recently there has been no severe inflammatory action going on, there is still some condition present which prevents the temperature from becoming normal. I could account for his extreme emaciation by the presence of a coexisting depressing condition, which was due to pyæmia.

It appears that there has been an acute osteitis of the hip and synovitis of the knee-joint. The knee is flexed; the hip is fixed and immovable in the position of a right angle. On Tuesday last I asked Prof. Forbes to see the case with me, as his condition demanded prompt action and his depression was so great, and on

consultation we decided that the best we could do in his present condition was to enlarge the incision and remove any dead bone which might be found. Should a form of osteitis or synovitis exist, we would let it alone in preference to excising the head of the femur. The reasons for this decision are largely dependent upon the boy's condition. To perform at this time so serious an operation as excision of the head of the bone would, while not necessarily proving fatal, tend at least to shorten the boy's life. In reviewing some of the statistics of excision of the hip-joint, it might be interesting to you to know that, until recently, upon the introduction of aseptic surgery, the mortality of the operation was from 65 to 68 per cent.—that is, about two-thirds of the patients have died from the operation. Since the introduction of asepsis the mortality has improved considerably, so that now it is approximately 35-40 per cent. It therefore is clear to be seen that a good constitution is required to enable the patient to recover. You will see now that the knee-joint is flexed at about a right angle. In excision of the hip-joint it is necessary that the leg be placed in nearly a straight line, or but slightly flexed on the body. In this boy's case this would almost be impossible from the position of this knee. Therefore the indications here are towards the least operative measures possible to satisfy the process of resolution. We know that there is dead bone here from a previous examination, when it was discovered by Dr. J. P. Mann at the time he evacuated the pus. As soon as we can get the boy in a good condition we will do what we can to improve the position of the

limb. Our hope was that by the evacuation of the pus alone we could secure a satisfactory conclusion to the pathological process, but in this we have been disappointed. I cannot say whether this operation to-day will result satisfactorily or not. What I can say is that it is all we feel justified in doing. As to the necessity of using drainage, that will depend largely on what we find at the bottom of the sinus. If there is no diseased bone or unhealthy matters left, we shall close the wound and leave no drainage. If dead bone is found and we are able to remove it entirely, we may resort to drainage for twenty-four hours to permit of the evacuation of any exudation which may take place, and then remove it. The extent of the abscess is clearly indicated by the positions of the opening and counter-opening on the thigh. The upper one is where the fluctuation was most clearly felt. The lower one was made to permit of drainage at the lowest extremity of the abscess. As the boy is turned upon his side, you can see a bed-sore clearly developed at the point of the coccyx, which formed before his entrance into the hospital, and will receive attention. This is due to his profound emaciation and the long-continued position on the part, which was necessitated by his pain on any attempt at movement.

I shall now enlarge this incision, and trace the sinus down to the bone. Below the deeper fascia I find pus welling up from some cavity as yet unexplored. I come upon the femur at a point almost one and a half inches below the end of the trochanter. The best probe in these cases is the finger, if the sinus is sufficiently large

to enable you to enter. I find that this sinus passes over the femur anteriorly down to a point under the lower opening. The tissues are all in a disorganized state, indicating extensive destruction, but as yet I fail to find dead bone. By means of a very delicate probe I shall endeavor to trace the track of the sinus anteriorly, and now I come against a portion of dead bone. By extending the probe still further I find that the neck of the femur is involved to a very considerable extent. As I premised, it will be impossible just now for us to proceed to an excision of the head and neck of the bone. What we shall do will be to render this sinus as aseptic as possible, and then close the wound, with drainage. Then we shall do all that we possibly can to build up his general condition. I can now introduce into this cavity a Volkmann's spoon, scrape out all unhealthy tissue, and, by removing it, put the parts in the best sanitary condition. By removing this we leave the parts in such a condition that they will tend to granulate in a proper manner. I place the irrigator nozzle into the lowest opening, so as to wash back through the larger orifice the detritus that is lodged in this sinus. It is a great temptation to enlarge this wound and remove the dead bone, but we must bear in mind our result, and do only that which will improve the boy's condition. I shall introduce drainage down to the spot of the dead bone, so as to start a sinus, which will, I have no doubt, be maintained by the condition which is present. There is a considerable amount of oozing from the sinus which I have made, and this we had better remove now than at-

tempt to operate on later. A small muscular artery, which had been almost necrosed through, has been broken by the spoon, but the bleeding is readily controlled by the hæmostats. I shall insist upon the patient remaining in the position in which he now is, for the reason that the large bed-sore forbids his lying on the back. This sore shall be treated with care. As to the deformities themselves, those of the hip- and knee-joints, any operation is contra-indicated until the trouble now being treated is in such a condition that it can bear further operative procedures. We shall put the boy on tonics, iron, quinine, and strychnine, together with a liberal diet. This shall include what I like very well, "half-and-half," *i.e.*, equal parts of fresh milk and cream. This is better than pure cream, and approaches the good milk of the country. It is better than pure cream, which is not so well borne by the stomach. By using cream in small quantity on oatmeal or toast the stomach will tolerate it, and this, I find, is better than cod-liver oil, which is apt to cause some disturbance of the stomach, and which requires pepsin or some other digestant in addition.

The action of the skin has not been controlled in this case as it should have been, owing to the severe pain which the boy suffered preventing the proper amount of washing. As a result the sweat glands and pores have become stopped. We shall from this time on douche him gently every day. When his system will permit it, we will remove the dead bone which is present. You can see from what has been said that we have before us a case of very great gravity. In such cases it is

always wise to call a surgeon for consultation, and I feel gratified in having had the advice of Professor Forbes. I shall hope to have primary union throughout the wound, except at the point where the drainage is applied, at which point I shall hope to have a sinus formed, to afford egress for the pus, which is sure to come from the unremoved dead bone.

Lumbar Abscess Resembling Incipient Hip-joint Disease.—You will remember the young girl who came into the hospital with incipient coxitis, the beginning stage of a purulent synovitis of the hip joint, due to an osteitis. The case presented all of the elements of coxitis. She was put to bed, and an abscess shortly showed itself on the back of the thigh, which was evacuated. Soon after three abscesses formed on her back; each was carefully opened and aseptically treated. Yesterday, when I examined the girl prior to discharging her from the hospital, I found that the hip-joint on the right side was not involved in the morbid process. This was gratifying to me and will teach you a valuable lesson. If there is the slightest doubt in the diagnosis as to one of two conditions, invariably treat the case for the more serious condition. The patient will thank you for your careful consideration, and you will have the gratification of knowing that you have given the patient the best chance for a thorough recovery. I so treated this case, and with a result with which I am very much pleased. She has made a complete recovery with a good joint, whereas, if not thus carefully treated, there might have been a disastrous result from the ignoring of a serious condition. If

you slur over the trouble by calling it growing pains, or neuralgia, you will be doing a serious injury to your patient, and, what is more, a serious injury to yourself. Remember this case, because it shows the impossibility of making a diagnosis in every case in the incipient stage. The disease develops with such variable symptoms, and symptoms often remote from the place, that it is better to treat the case with the greatest of care to avoid any unfortunate results.