

very rare cases of spontaneous cure of hepatic abscesses, just as there are occasional instances of spontaneous cure of empyema, but we know now how many cases of empyema formerly died from this let-alone treatment. So it is with liver-abscesses. I have seen a case of acute liver-abscess due to local cause which perforated the diaphragm and discharged its contents into the pleural cavity, yet the patient recovered perfectly without operation, and remained in excellent health for thirty years afterwards.

**INCIPIENT COXITIS; SUBLUXATION OF CLAVICLE IN RICKETS, AND COXALGIA; THE PREPARATION AND APPLICATION OF PLASTER-OF-PARIS JACKETS.**

CLINICAL LECTURE DELIVERED AT THE NEW YORK POLYCLINIC.

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CASE I.—This child, whose case I present this morning, has had pain at night for two weeks or more. Suppose we look over this case carefully and pronounce on the sickness. In the first place, there is no defect in the gait; the back is perfectly straight. There is apparently no defect in the back or limbs. There are no preputial adhesions: so the child has no genital irritation. The ankle-joint seems perfect; you can flex and extend the hips; you can flex and extend the back and rotate it with perfect ease. Now let us take the left side. Here also we get good movement, and can abduct and rotate. I get my fingers well down into the iliac fossa, but find no abscess there. I can hyperextend each thigh, and the spinal column is quite flexible. There is no fever. The child has pain in the abdomen and in the left lower extremity. The measurements are—right side, fifteen and one-half inches; left side, fifteen and one-half inches: so the limbs are of equal length. The right thigh, four inches from the anterior spine, is ten inches; left thigh, at same point, ten inches: so there is no atrophy of the limb. The mother says the child has had pain for the last two weeks. There is a little more resistance offered on the left side than on the right side; it requires a little more time to get the thigh flexed. Reflex pain at night causes the child to scream during sleep. The characteristic of the night terrors of hip-disease is this,—that you will hear the child shriek, and will go to his bed expecting to find him awake, but he will be sound asleep. When the child first drops asleep after going to bed, the spasms start at once and will wake

him, and when he wakes he can control the spasm. In Pott's disease of the spine the child does not wake, but will moan in his sleep and toss in the bed. These signs are important in making the diagnosis where you have as few signs as are present in this case. It is next to impossible to have as perfect flexion as this in tubercular osteitis of the hip, or what is known as "hip-disease." He is two years and four months of age. Yet it is possible for a small spot of osteitis to be present in the head of the femur or in the left acetabulum of this child. If he had only this small amount of osteitis, it would be compatible with the symptoms. You can flex his thigh perfectly. Hyperextension on the sound side is good, and is not bad on the left. The ilio-femoral creases are symmetrical. In making the diagnosis we must differentiate between malarial neurosis and incipient osteitis of the hip; there are not enough symptoms for a clean-cut diagnosis. There are some things against hip-disease,—namely, the freedom of flexion and extension. On the other hand, there is a limited rotation, that function not being as good on the left as on the right side; there is no atrophy that would not be present in the beginning of hip-disease: so it is early hip-disease, or neurosis of some kind depending upon some toxic influence,—malaria, perhaps. Children who are malarial have pain about the epigastrium. It is quite common in the masked form of malaria. A child with hip-disease will always halt; from the very first there is a little impediment in the gait: a child that walks across the floor as this one does would show it at once. Then, again, there is no change in the femoral crease. Then there is a resistance to rotation on the left as compared with the right side. In hip-disease the child always cries at night and goes to sleep again easily. The thing to do with this case, I think, would be to put on a snug spica bandage of muslin, and instruct the mother not to let the child walk too much in the next few days, then have the case report to us again on Wednesday. It is a good plan to do something of this kind, for the parents think you are making an effort, and they will be better satisfied.

CASE II.—This boy is twelve years old. He tells us that in the middle of January, 1890, he became lame, but previous to that he began to have pain in the hip and knee, which was first noticed in June, 1889. He would complain of pain for a day or so and would go a little lame, but in another day or so he would be quite well again. So his history shows that the disease began with attacks of slight pain and lameness, which would last a few days and disappear, but in January, 1890, he became permanently lame. He can walk pretty well.

Notice how he stoops to pick up anything; he bends the left knee, but not the right; it is not a spinal stoop; the spine is normally flexible, but he keeps the hip stiff. You all can see how he favors that right hip. He flexes the left hip and bends the spine, but keeps the right hip stiff. The mother tells us that he has had pains at night. As I lift him by the waist, you see how freely the spine is flexed. He bends over towards both sides very well, and there does not seem to be any limitation of movement. You see the external end of the clavicle projects a little more than that on the other side; that is a subluxation of the external end of the clavicle. Sometimes these project to a considerable degree.

That reminds me of a case that occurred in this city several years ago. The father of the patient got the Elevated Railroad to pay out twenty-five hundred dollars, convincing the company that the accident occurred in a collision on Forty-Second Street and Third Avenue. The girl got judgment against the company for this sum, and the money was put with a trust company. The girl was nineteen or twenty years of age. She was seen by some of the best surgeons of this city, among them one now dead who has a world-wide reputation. After about a year, the company's lawyers learned that this girl had been to the Hospital for Ruptured and Crippled several hours before the accident had happened. They found that she was there on a certain day about a month before the accident for this very trouble, and that a splint was made for her to hold the external end of the clavicle in place. It was also shown that she had been there on the morning of the accident to have the splint fitted; that after she had left the hospital the accident occurred and she had got into the crowd. She went home somewhat frightened by the commotion, and the parents thought it would be a good way to get some money out of the company. The father was sent to the State prison afterwards, and the girl was let off with a light sentence.

It was formerly thought that subluxations of the clavicle were rare, but rachitic children often present this deformity. I find a number of cases of lateral curvature in rachitic subjects who have this luxation, and I find it aggravated by certain exercises used for the correction of the curvature. Hence I have had to dispense with the exercise altogether. Lately we have a way of curing these that is very good. My attention was first called to it by Dr. Stimson, who had injected alcohol around the articulation, binding the parts with a roller bandage. Two or three injections serve to set up an inflammation around the joint. Several successful cases have been reported.

We have got thus far in the examination of this boy: the spinal column is normal; one hip is affected; while the history shows that he has been lame for over a year, but has been ailing for a longer time than that. We will now measure his limbs and test their functions.

R. A. (which means from the anterior superior spinous process of the ilium to the lower border of the internal malleolus) is  $30\frac{1}{2}$  inches; L. A. is  $30\frac{1}{2}$  inches.

R. U. (which is the measurement from the umbilicus to the lower border of the internal malleolus) is  $33\frac{1}{4}$  inches; L. U.,  $33\frac{3}{4}$  inches.

So we have nearly one-half inch of practical shortening, but no real shortening. Now, if I measure the thigh at a given distance from the anterior superior spinous process, the circumference of the right is thirteen and one-half inches; the left, at the same point, is fourteen and one-half inches: so there is a difference of one inch. The right knee measures eleven and one-quarter and the left eleven and one-quarter inches. The right calf measures ten and one-half and the left calf ten and three-quarters inches, showing a difference of one-fourth inch. Now, suppose I take the left limb, which is the sound one, and see what he can do with it; then we can compare the right limb and the functions of the joints very accurately. If we flex this sound limb, we can bring it up to at least forty-five degrees. If we extend it, it comes down perfectly straight to one hundred and eighty degrees. If the limb be abducted, the outer side of the thigh can be brought over so that it lies on the table. If you rotate it, it rolls quite easily externally and internally. So the functions of this joint are perfect. Now on the diseased side. When we begin flexion the whole pelvis moves; we cannot flex beyond one hundred and thirty-five degrees. Now suppose we try to extend; we cannot extend quite down to one hundred and eighty; the popliteal space does not quite touch the table, while on the healthy side it comes down quite easily. We cannot adduct much to speak of, and we cannot abduct at all. There is no rotation, or but very little. Now, having the patient lie on his face, we will try hyperextension, and you see that I can hyperextend the sound limb, but not the diseased limb. I find some cicatrices here on the hip; they are from the injection of carbolic acid for an abscess, which he tells us was treated in that way. The abscess, as the cicatrices show, was just behind the trochanter major. Now we will test for joint-tenderness. I will make a lever of the femur by placing my hand as a fulcrum at the junction of the upper and middle thirds on the outer side; then, grasping with the other hand the limb at the knee, I abduct, and, as I do so, move the lever, which will at once show if there is any

tenderness in the joint. There is no tenderness as I make the test, and when I crowd my fingers into the iliac fossa there is no tenderness there. There is no sign of any abscess. From this history, and from the examination just made, we are warranted in making the diagnosis of tubercular osteitis of the hip. Although his age, twelve years, is a little beyond the age for the development of the disease, still there are cases that develop in adult life. Cases that develop at this time are usually exceedingly chronic; the onset may, on the other hand, be very acute and we have osteomyelitis.

I proceed to measure him for a hip-splint by taking the circumference of the pelvis just below the anterior superior spinous process. It measures twenty-four inches, five-sixths of which give us the length of the pelvic band,—twenty inches. For the stem, take the sound limb and measure from the anterior superior spinous process to the border of the heel; the length is thirty-three inches here, but make the stem two inches longer, thus allowing for a two-inch-high shoe. The order for a hip-splint, right side, without a rack and pinion, will be a twenty-inch pelvic band and a thirty-five-inch stem. Order at the same time a two-inch-high shoe for the left foot. The shoemaker can make this by the time the splint is completed.

The limb can be pulled down with adhesive straps, and buckled on to the foot-piece of the splint. With such a splint these children can walk about and play, can climb fences, and even, after a fashion, skate. They are, as a rule, free from pain. The splint is worn *night and day*. If an abscess form, it can be opened if it get in the way of the splint, or it can be aspirated and strapped. The main thing is to keep up the traction; keep the joint protected, and keep the patient out of doors.

CASE III.—This boy was operated on last Wednesday, a week ago to-morrow, for rectangular deformity of the hip. I divided the femur subcutaneously. His highest temperature, which was low, was  $100^{\circ}$  the second day. It has been below that point since that day. He had some discomfort the second night, but has had none since. His limb is now down very nearly parallel with its fellow. He will need a small lift on his shoe, probably half an inch or an inch, and he will be able to ride horseback later on.

CASE IV.—I had a case this morning of a girl who was well apparently except for this slight deformity. I divided the femur below the trochanter minor. I knew very well that when she got out of the hospital the adduction would increase, and by the time she was fifteen or sixteen (she is ten now) she would have a degree of deformity something

like this [illustrating]. So I thought it best to perform the operation. It is an operation that has not been attended with any bad results, so far as I know. I do not know of a case where the union has failed to take place perfectly after the division of the femur; out of a large number of cases I have never had any trouble. I put on a good compress of sublimate gauze over the little wound, have some one hold the limbs perfectly parallel, lay the child on a hip-rest and a shoulder-rest, put on a plaster-of-Paris bandage from the axilla down to the heel, taking in the foot, reinforcing the plaster in front with a piece of bar-steel, not removing the dressing until four weeks have elapsed.

CASE V.—I took down yesterday a hip in a girl sixteen years of age, who had a deformity of one hundred and twenty degrees in flexion by measurement. I operated on her just four weeks ago to-day and left her in this plaster bandage. When I took it down yesterday I found the union firm. I got movement in the trochanter and shaft perfectly. I used the Polyclinic splint with adhesive strips along the sides, peroneal straps, a pelvic band, and it came just to the bottom of the foot. In this case all I want is to protect this union a little longer, until it gets firm and strong enough to support itself. I use this splint, say, for two months after I take the plaster off.

#### THE PREPARATION AND APPLICATION OF PLASTER-OF-PARIS JACKETS.

We use plaster-of-Paris jackets in all forms of Pott's disease, and in lateral curvature of the spine where the deformity is very great. In all forms of Pott's disease the plaster-of-Paris jacket is a luxury. I use it here on account of the completeness of the splint, and because you do not have to depend upon instrument-makers for apparatus: all the responsibility of the case will fall upon your own shoulders. The solid plaster-of-Paris jacket should be used in all stages of Pott's disease. The corset should not be used except after a solid jacket has been applied for one or two years. If you recognize the fact that Pott's disease is really a broken back, that you have a serious and important breaking of the segments of the back, just as surely as when you have a fracture of a limb, I think you will have no trouble in properly treating the case. In fracture of the limb you require that the fragments shall be kept in place for five or six weeks, and in Pott's disease (broken back) you require one or two years. Nobody can arrest the progress of tuberculosis of the spine. Koch's lymph has practically failed, so far as this is concerned, so we are left just where we were before its discovery. Surgery at the present day

does not dare to go into the vertebræ, generally speaking. There are some who do it, but, as a rule, it is not practised. Then you have to put on something that will keep the spinal column in the normal position, or the best position you can get it in, and prevent further deformity, or, if deformity has not appeared, prevent it. You ought always to be able to diagnosticate Pott's disease before deformity arises. If I fail to enable you to do that, we shall not have gained what I hoped, so I shall take the next lecture for the consideration of the early diagnosis of Pott's disease, because you cannot over-estimate its importance. You ought to be able when you see a child walk peculiarly to tell whether it has or has not Pott's disease of the spine. If there is no deformity and you can diagnosticate it, so much has been gained. You ought to be able to cure such a case without deformity, and you can do it with a plaster-of-Paris jacket. You ought to make yourself expert in putting on such a bandage. It is one thing to make a jacket and another thing to put it on. You use a swing which can be ordered from an instrument-maker for six dollars and which will be all that you need for putting on plaster of Paris. Fasten this head-gear, made for the purpose, around the neck so that the head rests upon it comfortably (we seldom use the arm-piece now), then draw up the rope and pulley until the toes and heels just rest lightly on the floor, the child meanwhile holding its arms well up over the head. You require a seamless undershirt. For padding, Canton flannel answers very well, cut in strips. If you cannot secure that, common surgeon's felt will answer. Cotton is bad, because it lumps. The next thing you want is the best plaster; and it will pay any man, although he should have only one jacket to apply in the course of his life, to send to the S. S. White Dental Manufacturing Company for the best. They have offices in Chicago, Philadelphia, and New York, and will send you a six-quart can of plaster for seventy-five cents, or twelve quarts for one dollar and a quarter.

Let me illustrate the method by this child who has just been brought in and suspended in the swing. I will apply a plaster-of-Paris bandage from below upward, protecting the bony prominences by carefully padding them under the shirt. The bandages have been first soaked in warm water. The patient should be made perfectly straight. It is a good plan to make the lower and the upper part of the jacket a little extra thick. Keep the bandages perfectly smooth, and overlap the lower turn about half the width of the bandage. Four bandages have been sufficient. We will now have the child carried to this table and laid on its side; the bandage

will be trimmed, and after it has hardened the patient will be ready to go home. Leave the bandages on as long as they will stay; they usually last about two months; but never allow a child with Pott's disease to stand or sit up without good support.

The case of this little boy who comes in next, with the disease high up, will also require a jacket, with a head-spring in addition. The jacket has been put on just as in the first case, except that about three of the outside turns of the bandage were carried over the lower portion of the head-spring to fasten it in position.

The crinoline used for bandages must be sized with starch. If it is not sized with starch it is better to wash it. If sized with glue it will not stay on, no matter how good the plaster of Paris is. You can test it by trying it on somebody's arm, or by tasting it, or by the starch test. Cut it into six-yard pieces, two, two and a half, or three inches wide, according to the size of the patient. Roll or rub the plaster in its meshes the same day you are going to use it, if possible. When you take the plaster out of the can, seal the can carefully, and it will keep indefinitely in good condition. Rub it well into the meshes of the cloth, and then you are ready to use it. Roll in a loose roll the same as any other bandage, and you then have every requisite for a first-class jacket. If you prepare your bandages in this way the jacket will be set by the time you get through putting it on. Trim it under the arms and around the thighs, so that the patient can sit down with comfort.

### SYNOVITIS OF THE KNEE-JOINT; PROCTITIS; PRIMARY SYPHILIS—BUBO; VARICOCELE; CYSTIC GOITRE; LIPOMA.

CLINICAL LECTURE DELIVERED AT THE RUSH MEDICAL COLLEGE.

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#### SYNOVITIS OF THE KNEE-JOINT.

GENTLEMEN,—The first patient I show you this afternoon is a lady seventy-four years of age. She has some trouble with the knee-joint, which is considerably swollen. We have an antecedent history of "rheumatism," and she says that there has been a good deal of pain in the joint. The probability is, therefore, that this was originally a case of synovitis, and that we have at present an effusion in the joint of synovial fluid. There is a chance that this condition is due to the presence of pus in the joint; and, in fact, at a hurried examination a day or two since, I presumed we had pus, but on examining the joint more carefully to-day I am sure that it is a synovial effusion. I infer it is synovial because the swelling follows the direct outline of the synovial sac. You remember that this sac passes above the upper border of the patella a distance of an inch and a half to two inches in some cases, and occasionally even farther. In this case the synovial sac is fully distended. There is not pain enough in the limb for us to conclude that we have to deal with pus. If it was a cold abscess, as it is termed, we should have had a pretty violent inflammation in the joint, and there would have been the constitutional signs of pus. As it is now, there is only a history of some pain such as a woman of the age of seventy-four, subject to rheumatic pains, might have in any of the joints.

We will now make an exploratory puncture by inserting a rather coarse hypodermic needle—after passing the point through a flame to disinfect it—directly into the swelling at the side of the patella, and by withdrawing the piston of the syringe, if the fluid is not too thick