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MR. ABERNETHY'S

PHYSIOLOGICAL, PATHOLOGICAL, AND SURGICAL OBSERVATIONS;

DELIVERED IN THE

ANATOMICAL COURSE OF LECTURES,

At St. Bartholomew's Hospital.

Accidents occurring about the Hip Joint.

You know the numerous obstacles that oppose a dislocation upward and backward; but, notwithstanding those obstacles, forces are so continually occurring to dislodge the thigh bone in that direction, that really the dislocation often happens; the bone is thrown out of the socket through the thick part of the *articular* ligament, and it slips over upon the dorsum of the *ilium*, generally with the head turned backwards. Now whether it lies on the dorsum of the ilium, or slips down into the *sacral* notch, does not appear to me to be a point of importance; therefore I make no distinction between those two cases. Then here is a dislocation characterised by the following circumstances: the limb is shorter than the other, and inverted; it is beyond the limits of the *acetabulum*, which shortens the length of it, and it is inverted. You cannot turn it out; the head strikes against the bone; then, I say, it is clearly indicated by those circumstances, and there is no difficulty in the method of using force to a dislocation so simple. You have nothing to do but to pull the knee with the thigh bent at a half right angle upon the pelvis, then the head of the bone will come down below the acetabulum, and having got it there, it generally slips into the socket. You cannot pull it over the acetabulum; you cannot pull it over the great ridge that is there, but you bring it down where the bone has no great rise in it, for there is below the acetabulum a groove, between the acetabulum and the tuberosity of the *ischium*, in which the *obturator* moves, and it is along this groove, provided you pull at the angle specified, the bone will come; and when it gets below the brim of the acetabulum, it slips in. I say, I cannot make a distinction in those two cases; there are some, however, who say, you must lift the head of the bone over the socket, but I know nothing about that, nor have I ever found any necessity for it. All I have seen of such cases have been easily reduced, and I can say this, that I have reduced the dislocated thighs of very strong and muscular men, in inns, and at such places, where they have been brought after having been pitched off coaches, with no other assistance than that of a waiter or two, and a four-post bedstead.

Now the first thing is, to steady the pelvis of the subject; and this is done by putting a sheet round the thigh, crossing it round the groin, putting it over the pelvis, twisting it hard and tight, and then securing it to the bed-post. Mr. Hey, of Leeds, has told a good thing with respect to how you are to make soft cords for pulling dislocations: get any number of yards of calico you please, roll them up into a rope, and it is a cylinder of calico, soft and pliant, and, egad, of enormous strength; clap it round, as I have described, twist it harder and harder; then, when it is of the length you wish it, you can put one hand between the ticking of the bed and the posts of the bed, bringing it round one of the bed posts, and tying some hard knot—a *bowling* knot, or something of that kind. And you must learn to make these knots, for, egad, any thing giving way when you are pulling, is the most vexatious thing that could possibly be. Well, I fix my patient, and let one bed-post be diagonally opposite to the knee; then I put the rope round the knee, and then I put it round the bed-post; then I say, Come and lean upon this. Now this is unremitting pulling. I see his muscles giving way; then I say, Come, let us only have another hitch or two; then you twist it round the bed-post again; and then, by going on perseveringly, wearying the man, it has come in, in six or seven, or eight minutes. But if there is a case of difficulty,

you must have pulleys; still you pull with pulleys upon the same principle.

Is it possible that the head of the bone should be thrown out of the socket, and that the head should be thrown forward? It is possible. Such a case has happened; but I don't see any difference in the mode of reducing it. I don't think that the bone will come over the head of the acetabulum: I should, therefore, pull at a half right angle. But this case of the head of the bone being thrown forward, is so contrary to all we meet with in dislocations, that a man might be inclined to say this is fracture. Now here the head of the bone can be felt upon the dorsum of the ilium, and that was what made me so continually think of the head of the thigh bone, of the *trochanter major*. You know the head of the bone in a full grown man, is about three or four inches off, and a little raised up; but if you feel the trochanter major, you know where the head of the bone should be; and I say, if it were on the dorsum of the ilium, it should be palpable; but if you did not feel it there, what 's the inference? That it is a fracture—that the body of the bone has been driven up, and that the head is wanting. Again, I think you can distinguish a vacancy in the acetabulum, when the head of the bone is out of its place. But I do not know any special mode of reducing the one or the other dislocation. In the one case, the limb is turned inwards, and you cannot turn it outwards; in the other case the limb is turned outwards, and you cannot turn it inwards; and it is that case which chiefly characterises the dislocation from the fracture.

The dislocation downward into the *obturator foramen*. I say, there is little guard against this, for force does not frequently operate to throw it down; but a man may be struggling with his legs, may be hit by something, thrown down, and the bone may be knocked out—the *ligamentum teres*, however, may remain entire, or it may be torn; but in either case, as I think, the limb will be elongated, for it is below the socket, and it is inverted. If the leg is inverted, then I know what the case is—if it be not, there may be some difficulty; but I have generally seen it inverted. Then what's to be done in this dislocation? Why, to be sure, a man who set himself to pull at the leg, would be pulling it further from the socket. You would perhaps say, *pushing* would be the best thing to be done; but you cannot push it over the brim of the acetabulum. Well, this can only be reduced by making a lever of the dislocated bone, applying a prop at the head of it, and a power at the other end; and thus would you lift it into the socket. And, unquestionably, if the patient was a pigmy, and the surgeon a giant, the surgeon would never do more than use his own hand for this purpose; but if the surgeon was the pigmy, and the patient was the giant, then what does he do? Why, he uses tackle and pulleys, and the *distal* end of the bone being across the other thigh, he pulls it at a half right angle downwards; and he ties a sheet upwards, and pulls the upper end upwards and outwards, and by the compound action of those forces, the dislocation is reduced. Now, I think there is no difficulty in persons reducing those cases, if they only understand what they are about, and keep applying the force, as they ought to do, steadily und unremittingly.

It does happen at times, that the head of the thigh bone is thrown out of the socket directly upwards; and here the thigh is shortened, and there is no bending it. Well, then, you are to pull it down into the socket, you are to extend it, and if you depress the head of the thigh bone, making a sort of lever of it, that would be a very considerable auxiliary in the reduction. However, it may be brought down by simply pulling, but a little pressure at the one end, with a sort of lever at the other, would very considerably tend to assist it.

Fractures.—Now, whoever reflects on the mode in which the weight of the body is to be borne, will see how liable the neck of the thigh bone is to be broken. We jump from on high, and the force is on the head of the thigh bone; the force below, throws us up, and breaks this arch, and this is exceedingly common; but where does the arch break? O, generally, off from the thigh bone. Again, people fall upon their hips, strike the *trochanter major*, and what 's likely to give way? They shove off the thigh bone from the arch it supports. The cases are often very complicated; sometimes the bend and neck of the thigh bone split, and the thigh bone gets wedged in between them; the cases are therefore often complicated. That splitting of the neck of the thigh bone is not at all uncommon; but when the fracture is on the outside of the *articular ligament*, the bone may crack, and be simply cracked, where the neck of the thigh bone is joined on to the body of the bone, and there may be very little suppuration between the parts, but the patient is unable to go one step forward. I have heard of cases where they have walked, but then it must have been cases, I am sure, of the neck of the thigh bone having been wedged into the body of the bone, not where it is simply cracked; because, where it is simply cracked, if you were to have a red hot poker at their buttocks, I am sure they would never bear on their legs to get one step forward. If a man, woman, or child, has leaped from on high, and fallen on their hip, where there is no retraction of the thigh, no eversion,

nothing apparently wrong,—but if, from the moment of that fall, they are unable to move one step forward, what further evidence would you want of the neck of the thigh-bone being broken? I should want none; and I should treat the case as such. I know, for want of doing this, a great deal of mischief happens; the patient is not confined in one position, the motion goes on, the thigh becomes contracted, and the surgeon discovers, when it is too late, that it is a fracture; when it is too late, indeed. Now, there was a gentleman who came from India to this country; he had just arrived, and was coming by the Dover Mail to London, and was then going to set off into Suffolk; designing to set off immediately, he thought he would arrive just in time for a family ball; egad, this Dover Mail broke down, and he was pitched off from the top, at Blackheath, and a surgeon was sent for. The surgeon arrived, but could find nothing wrong with his thigh; however, the patient was in the state I have described of pain and uneasiness. Another surgeon, an hospital surgeon, was sent for, and he also joined with the former surgeon, that there was nothing wrong,—that it was only a sprain, or something of that kind. Well, but the man could not stir out of bed, and his thigh gradually got shorter, and distorted, and turned out by the action of the muscles; then it became evident to the surgeon who had attended him from the first, that it was a fracture; and at that juncture I was sent for. I said, unquestionably, it is a fracture, and you must put it right, and keep it steady; that's all. And the case did perfectly well. Now he has no appearance whatever of having had a fracture of the neck of the thigh-bone. And I could tell a number of these cases. There was a lady who was pitched out of a gig, at a distance of about eight miles from London, and was attended by a very good surgeon, but he said, I can find nothing wrong about your hip. They wrote to me, desiring to know if I would go down; it was in the winter time, and I said I could not possibly go down on the Sunday, but that I should on the following day. I went, and I found the woman in a state in which there was apparently but very little wrong; but I measured from the trochanter major, to the *crista* of the ilium on each thigh, and I said, what is the distance of the sound thigh? He said it was of such a distance; then said I to the surgeon,—Well, and measure the other attentively, and observe exactly what the length of it is. He said, unquestionably, it is nearer. Well, what's the inference, but that there is a fracture of the neck of the thigh-bone. Well, with respect to that lady, I said to him,—Now, Sir, suppose we do nothing in this case, and suppose the woman never walks any more, what will the public say of us? They will say we did not understand the nature of the case, and that she had a fracture of the neck of the thigh-bone, which we never adverted to. But suppose we put her bones into the right place, and keep her steady, then what will the public say? They will say, we did every thing we possibly could have done, and that it was the nature of this case never to get well. I therefore put her into a right position. Then comes the question, what is the right position? I may differ from all great men of authority, but I have no hesitation in saying, lay them on their side. I would treat the fracture of the neck of the thigh bone as I would treat a fracture in any other part of the bone, and lay them on their side. If a person can be fairly laid on the side, and a splint put on the bone, so that the weight is supported by its own gravitation, then that will do; the rule is, that every longitudinal inch should press equally on the splint, so that you should be able to take up the limb, and carry it about on the splint as if upon a tray. Well, you have to put a counter splint. In the fracture of the neck of the thigh bone, where there is a counter splint, why the pressure of the pelvis on the head of the thigh bone keeps the bone steady, and causes it to press against the part which is broken. But all half measures are bad. I do assure you, I tell you no lie when I tell you that I have attended many cases where there have been fracture of the neck of the thigh bone, and where people have gone about without the possibility of knowing that ever there had been such a fracture; but all half measures are bad. You must therefore turn them fairly upon the side. And how are they able to go to sleep without moving? Why, by lying fairly on their side, the gravitation fixes them in that position; attend to the points of the pelvis, and I am sure they will never move. For my own part, I have no objection to people lying on a soft feather bed. All the trouble I have with patients is for the first dozen hours, in watching them that they do not move; and if they are laid on a feather bed, they get sunk and fixed in that feather bed in such a way, as that out of it they cannot move afterwards. Well, that is all I wish you to attend to upon that point.

I am attending a child; I put the child in this position; the child lies there for three weeks and never moves,—it may be longer,—and after that time the child gets to the other side of the bed; you cannot confine it any longer; and, indeed, when the bone is knit, there is no necessity for longer confinement. And why does the child, or why do patients, lie for so long a time without moving? Say the case was mistaken, and

that it was not a fracture, is any position so comfortable as lying on the side, with the knee half bent? Is there any position in which, in the case of a sprain, for instance, the parts could be kept so still, and the persons be so comfortable, as lying on the side? I believe not. And if you put them on the side, you put a drawn sheet under them, which may be removed at any time, for the purpose of putting clean sheets, without disturbing them. That is the position I should put patients in, and it has the advantages which I tell you.

As to fractures not uniting when people are laid on their backs, why, I don't wonder at it, for unless you have beds for the purpose, there is a necessity for keeping a bedpan under them, and then the motion of the pelvis causes the parts to move. I do not wonder, therefore, that there is no case of the fracture within the articular ligament which has united, because, till of late, they have not had beds, by which the bones can be kept still. It is not particularly with respect to the thigh bone, but there is no bone in the body that would knit if there was a little motion.

But they say the bone cannot unite if the fracture is within the articular ligament, and for this reason, that there is no *periosteum* covering it, nothing but a shadow; and that no blood can be received but through the ligamentum teres, and the synovial membrane. Now, I do say, and will maintain, that this reasoning is not according to the principles of sound physiology. Let whoever reason it that will, I will say, and even though it were in opposition to the fact, I would still say, the same thing; because, granted that this part of the bone has but little power of life, much powers of life are not necessary for union, if there be life in the other parts. It requires but very little powers of life indeed, to unite with other parts that have life; for instance, you put the testicles of a cock into the body of a hen, and yet they live there; and again, you put the spurs of a cock into his comb, and they grow there. Well then, here are all the vessels necessary to nourish the parts, and why should they not be adequately supplied. Now it certainly is a case of rare occurrence, and no positive proof has as yet been offered to us, of any such union taking place; I hope, however, such proofs will arise in the after part of surgery, for the honour of the profession, and I now say, if I were to look for them at any time, it should be in putting the patient into that situation in which his body will never move, and in which the weight of his pelvis will make a steady pressure against the top of the bone from which it has been broken. When I say a little pressure, of course I mean so that a very little motion cannot disturb it.

As to your feeling fractures with your fingers, at all times, and making them grate and so on, it is out of the question; I myself have examined cases, and could not tell them, but the patients have done it, and then I have seen that they were fractures. There was a very old man who slipped down and broke the trochanter of his thigh bone; I was sent for, and I put it in; but he was a very old man, and not of sound bodily health, and the poor fellow, though he had no pain, sunk away, from confinement or something, I don't know how it was, but he died. We fed him as well as he could be fed, and we gave him medicine for his bodily health, but he died. When he was dead, I begged permission of the family to look at him, which they granted me, and I found that it was broken.

I remember a case in this hospital, where a man had fractured the neck of his thigh bone, and had got his head knocked all to pieces. We were attending to the fractured skull, but seeing the man uncovered, I said—Ah! poor soul, he 's broke the neck of his thigh bone into the bargain. Well, he died, and we were examining the brain, in the dissecting room, in the dead house; and one of the pupils, who had been examining that thigh bone with a freedom which is done when a man is insensible of pain, said to me, I remember your saying he had broke the neck of his thigh bone, but it was not so. Well, then, said I, he was a cripple before. I had occasion, however, to go out for a little time, and just at that time the youth went and cut down into the thigh bone, and sure enough he found that the neck of it was broken.

Diseases.—Diseases here are so deeply seated, that you cannot have that assistance by sight and touch, which you have in other joints; but it is my firm persuasion, that there is no difference in the diseases of hip-joints, and the diseases of joints in general. What did I say about diseases of joints in general? I said, that sometimes the diseases began in the joints, and were eventually communicated to the bone, whilst, in other cases, they began in the bone, and, eventually, got into the joint. Then, again, in some diseases of the bones, there was a kind of inflammatory matter found, which really did considerable mischief; which caused the absorption of cartilage, the growth of fungus, and so on. And that there were other diseases of joints, more of a constitutional nature. The question, then, is, have you any such diseases in the hip? And the answer is, yea, very clearly there are. Now I will tell you first of all, common inflammation will happen in this joint. The case I mention for this purpose, was the case of a boy whose parents thought they

would consult Mr. Abernethy upon a *lumbar* abcess. Now you know, in diseases of this kind, it is usual to have a collection of fluid at the joint; and there was a considerable quantity of fluid here, which they had taken for a lumbar abscess. But the gait of the boy immediately disclosed the nature of the disease,—it was that of a limp. Now, here I would say, it would be well for surgeons to study the gait of a person, as a horse jockey does the gait of a horse. A horse jockey puts the horse to move, in order to see his gait; and if a person has a diseased hip, the limb is only used as a crutch to help him forward, and, therefore, the disease cannot be mistaken. But if any further evidence is wanted, I will tell you how to get it,—just press upon the acetabulum. In this manner I have detected a number of those cases. Well, but as to my case: I told the patient he ought to go to bed; we put leeches on the part, washed him, ordered him doses of calomel to keep his bowels regular, and so on; and then, when there was no more pain or pressure on the acetabulum, I put on a blister; and this was just about the time when a new cerate came out, and I told the surgeon to dress it with this cerate; it was, certainly, a new mode of dressing it, but one dressing sufficed, for whether he put too much on or not, I don't know, but there was a slough came away, and a large ulceration, and that was, perhaps, fortunate enough, because it kept the boy quiet until the leg became quite well, and he walked about. I urged upon them the necessity of being very careful to keep him quiet, and the boy was taken down into the country, and sent to school. Two years afterwards, that boy came up to London, and was put into a merchant's counting-house, where he had to go up and down Cheapside every day with bills, and, in short, had as much going backward and forward as a two-penny post-man. His thigh got bad again, and it happened that he lodged in a house in Smithfield, in which one of the students also lodged. I again went to see the boy, and I then told the father,—you ought to be aware of the serious nature of this malady in the hip; the hip may get well enough to bear a moderate exercise, but it won't bear the exercise the boy has now to take; you must take him away from this situation, and, in the meantime, nothing is to be done, but what was done on the former occasion. Well, all this was done, and I then said to the father, now if any thing goes wrong again, if you see the boy limp in the least degree, you must let me know immediately, for it is a most important case, and you should certainly not let him go into his situation any more. I saw no more of him for about three months; I then observed the father going up Chancery Lane, and the boy limping after him. Now I was rather rough with the father, and I said,—Pray, Sir, how is this; did I not tell you, the instant you observed your son limping, to let me know? I hope he is not still in the same situation? Yes, indeed, Sir, he is, he replied. Well, then, Sir, said I, I shall have no hesitation, whatever, if this boy dies, to declare that you are his murderer; and that was the case sure enough. Matter formed; dislocation took place; the father got the boy into this very Hospital, and here the child died. The ligaments got destroyed, the action of the muscles dislocated the bone; and there is no mistaking a case of this kind.

I remember a case where the bone was diseased, and it had gone on till it had got into a very bad state. I said to the patient he ought to use some swathe about him, to keep his socket still, or, egad, it will be thrown out. The man said, "Lord bless you, Sir, I am obliged to be awake all night, and watch it, or I am sure the bone would be thrown out of the socket."

Now this is a common disease; well, but is there not disease of a constitutional nature? Unquestionably; and I will just bring those cases before you, and then I shall have done for to-day. And how am I to tell you the number I remember of them? I am in the habit always of selecting those cases which are best calculated to impress the anatomical facts on your memories; and I have no better case than that of a young lady, who was known to one of the students here, and he requested me to go and see her. She had a limp, but she had the most agitated state of breathing possible; her pulse exceedingly frequent; and how did this lameness happen? Some of her relations had been in a naval action, and she was uncertain of their fate. There had been a very severe fight somewhere, in which some of her relations had been, and she had not heard whether they were dead or living; this disturbed her very much: she got excessively wrong in the state of her health, and her hip became painful. I said, I could not suggest either leeches or any thing else, but that you must foment your hip, keep it quiet, and attend to your diet, and the regulation of your bowels. I left her, and saw no more of her for about a month, when she was brought to town in order to see some other medical gentleman; I also was desired to be at that meeting. She then stood supported on each side, without being able to move. We agreed that it was a case in which leeches would not do good. After a time, that girl went to the sea side, and she eventually recovered. Sir Charles Blick (for it was he and I that met) had a villa at the place to which she went, and he was always looking out for patients where he was; he attended her, and he afterwards

told me it was all very well, and that she had recovered. If you set to work manfully with your leeches and blisters on irritable subjects, you will only make bad worse, that I am certain of, in any of these cases of constitutional disease. And this I will endeavour to show you by mentioning another case. There was a lady who had consulted surgeons of great eminence, and who had an ulceration which broke out into a tremendously large sore; she lived about a dozen of miles from London. When I saw her, I said to the surgeon who had attended her, It is evident that this leeching and blistering has done no good; I should foment it; but it is her health that is necessary to be attended to. It luckily happened, that as the wound was healing, she had an attack of disease in her knee, and that so occupied the attention of the surgeon, that he never again looked at the wound until it got healed; then she got better, and went about on crutches. Now that is what I should recommend, that they should be allowed to exercise on crutches, never bearing weight on the joint. She went round awhile on crutches, afterwards got well, was able to walk perfectly in less than a year, and is now a perfectly straight woman, and walks as uprightly as if she had never been lame. Now I mention this case, on account of this other curiosity which is attached to it:—a brother of hers got ill in the same way, and I do verily believe, that if he had been laid in bed, and treated with leeches and blisters, and so on, his hip would have got into precisely the same situation; but by not doing this, and only guarding against any motion that might aggravate the disease, and by putting his bowels right, egad, the boy did very well. Now, then, in these particulars, I see no difference in the diseases of the joint of the hip, to what I see in the joint of any other part of the body: and I have nothing more to add at present.

LECTURES

ON THE

Diseases of the Nervous System,

BY

DR. CLUTTERBUCK.

Lecture III.

Gentlemen,

At the conclusion of the last Lecture, I said I would endeavour to explain to to you the nature of *intoxication*, as produced by the excessive use of strong drinks. Now as this state is referrible to disordered vascular action in the brain itself, and not to the general circulation, I must again call your attention to the peculiarities of the brain in regard to its circulation, without which it will be difficult to understand the different and even opposite conditions produced in the state of the *sensorial functions*, by merely different degrees of the same cause. For, while a small quantity of wine, or other fermented liquor, produces an increased activity in all the functions, but primarily and essentially in those termed *sensorial*, a larger quantity of the same stimulus soon renders the organ altogether incapable of performing its office, inducing, at length, that suspension or annihilation of the cerebral functions that we call *intoxication*, and which in reality is but a variety of apoplexy.

It is easy to conceive a general increase of action to take place in the arterial system of the brain, though it is not easy to say what *causes* would produce so general an effect, and that equally with regard to every part of the organ. Among the causes of pretty general excitement to the arterial action of the brain, may be mentioned, *external heat, muscular exertion, certain emotions of mind,* and *wine* in moderate quantities. Now that these do actually increase the arterial action or the brain, is almost a matter of demonstration. The increase of size, and of pulsation, perceived in all the external arteries of the head, as well as those of the neck,—and the flushing of the face and eyes,—are sufficient proofs of this, as far, at least, as regards the external carotid and its ramifications; while the increased heat of the whole head, the throbbing head-ache that attends or follows, and which is often referred by the patient to the centre of the brain; these, together with the excited state of functions, leave no room to doubt that the *internal*, no less than the *external* vessels, are in a state of inordinate action. Still, as there is some difference of effect observable in the state of the functions, in these different cases, it is probable that the excitement is not absolutely *equal* throughout the whole arterial system of the brain; but rather, that the vessels of different parts of this organ, are unequally affected, and their functions also, as a natural consequence of this inequality.

All these causes then, *moderately* applied, produce an increase of action in the arteries of the brain, though still not with perfect equality. This increased arterial action will produce a more rapid flow of blood through the organ; and this, as in other cases, will be accompanied with a more energetic performance of functions; not merely those that are proper to the brain, but, *secondarily*, those of the general system likewise. Thus, from a moderate quantity