A NEW METHOD OF TREATING FRACTURES OF THE SHAFT OF THE FEMUR.

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Fractures of the shaft of the femur are among the most difficult to deal with satisfactorily that the surgeon is called upon to treat and the results of mal-union are often very serious to the patient. Any shortening in the thigh will of necessity bring the knee joint out of alignment on the thigh with its fellow and so make a difference in the level of the two joints. Thus patients with shortening above the knee walk more lamely than would be the case with a similar amount of shortening below it. There are several reasons which make these fractures particularly difficult to deal with. The bone in a well-developed subject is covered with a thick layer of muscles and is a long way from the skin surface; it is, therefore, difficult to ascertain the exact position of the fractured ends with any degree of certainty and to manipulate them into position when found. The muscles pulling on the fragments are probably the most powerful in the body (the glutaei, hamstrings, quadriceps, &c.) and tend to make the fractured ends override each other and unless counteracted by means of a thumb-screw and with a flat metal hook fixed to the cradle to support the leg; this strap must not be too tight or it will depress the upper end of the thigh on that side lifted off the bed; when the strap is sufficiently tight it ought to be possible to pass the open hand beneath the buttock on the injured side. Another strap is then passed round the lower end of the splint and fixed to the cradle to support the leg; this strap must not be too tight or it will depress the upper end of the splint. The upper strap will need tightening from time to time to make up for stretching, &c. All that is necessary in order to examine the site of fracture is to remove the anterior thigh splint.

By this method very powerful extension can be easily secured and with very little attention will remain efficient. The weight of the thigh and buttock tending to slide off the splint acts as the extending force. (The "double incline plane" has the twofold objection that it is very troublesome to nurse patients with and there is no method, which is in a sense a modification of both, is, I think, more and more necessary to have some method of splinting the knee bent nearly to a right angle and the limb is fixed in the bent position of semi-flexion. 4. The apparatus is simple and easily applied. Movement of the knee-joint can be carried out from time to time by screwing the splint to one side and the strap is tightened until the buttock and the anterior thigh splint. The upper strap will need tightening from time to time to make up for stretching, &c. All that is necessary in order to examine the site of fracture is to remove the anterior thigh splint.

More or less powerful extension, however, is almost always necessary in treating fractures of the femur, for it is not to be expected that weights of a few pounds will overcome the pull of such powerful muscles as those involved. The best way of obtaining sufficient extension is undoubtedly by making the distal portion of the leg the fixed point and allowing the body-weight to act as the extending force; powerful extension can in this way be secured by very simple apparatus. Probably the best splints at present in use which attain these objects are "the double incline plane" and "the Hodgen's splint"; in both of these the weight of the upper part of the limb tending to slide off the splint acts as the extending force. (The "double incline plane" has the objection that it is too long for the thigh.) The Hodgen's splint is, however, somewhat tiresome to adjust and entails a good deal of rather complicated apparatus, while "the double incline plane" has the twofold objection that it is very troublesome to nurse patients with and there is no easy method of adjusting them. It is now a well-known practice to endeavor to bring the bones into place by position rather than by force and to bring the distal fragment into line with the proximal one, the joints being so bent as to relax as far as possible the muscles tending to displace the fragments. (This was particularly pointed out by Sir William Bennett in an article in the Practitioner for August, 1901.)

The chief advantages of this method are: 1. The nursing is very easy, as there are no weights, &c., and the cradle is the only thing that rests on the bed. 2. There is less tendency to movement at the site of fracture than with the older methods, which render these fractures particularly difficult to deal with. The bone in a well-developed subject is covered with a thick layer of muscles and is a long way from the skin surface; it is, therefore, difficult to ascertain the exact position of the fractured ends with any degree of certainty and to manipulate them into position when found.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

EXPECTORATION OF A TOOTH THIRTEEN MONTHS AFTER INHALATION INTO THE LUNG.

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In the middle of December, 1901, the patient, a marine engineer, aged 28 years, had 12 stumps removed from the upper jaw on two consecutive days, gas being the anaesthetic employed. He now recalls the fact that after the second day's operation he experienced a slight feeling of uneasiness.