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A NEW METHOD FOR REDUCTION OF FRACTURES OF THE LOWER END OF THE RADIUS.

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The particular method of reducing fractures of the lower end of the radius, to be described, has proved so satisfactory during the past few years in my services at the Pennsylvania and the Polyclinic Hospitals and elsewhere, and in the hands of others to whom I have from time to time demonstrated it, that I now feel justified in giving to it wider publicity. The method is as follows:

The surgeon stands in front of the patient and interlaces his fingers beneath the supinated wrist and palm of the injured member, so that his two index fingers lie parallel crosswise beneath the lower end of the upper fragment of the radius. The palms of the surgeon's hands are then closed in upon the thenar and hypothenar portions of the patient's hand respectively, while the surgeon's thumbs rest parallel lengthwise upon the upwardly displaced lower fragment of the radius. The parts are thus firmly grasped by the surgeon while the following movements are made: The patient's wrist is excessively extended by carrying his hand upward. When hyperextension has thus been secured the surgeon makes powerful traction upon the wrist in the line of hyperextension. While this traction is maintained the hand is suddenly carried into full flexion, and at the same time powerful downward pressure upon the upwardly displaced lower fragment of the radius is made by the surgeon's thumbs opposed by the interlaced index fingers beneath the lower end of the upper fragment.

The excessive extension of the first portion of the movement has always, so far in my experience, loosened or disentangled the dis-

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placed lower fragment, while the subsequent traction, flexion, and direct thumb-pressure have not yet failed to accurately force the lower fragment into its proper position. Separated epiphysis of the lower end of the radius is likewise easily reducible by this manipulation. For comminuted or complicated or very oblique fractures extension and moulding alone are called for in most instances.

Anæsthesia is unnecessary for making a single effort at reduction by the proposed method. The patient does not anticipate what is coming, the two movements are made with lightning-like rapidity in a small fraction of a second, and, in nearly every case, perfect reduction has been accomplished before the patient realizes that he has been hurt. Should the manipulation fail to secure perfect reduction at the first attempt, I would not repeat the manœuvre until anæsthesia had been induced, for the pain of repeating it would be intolerable. Failing in one effort, then, I would etherize and try again, first, this, and afterward, if necessary, any other method that seemed advisable to secure perfect reduction. But thus far in cases that have been seen within a week of the accident I have never had to anæsthetize since evolving the method mentioned; all have been reduced at the first attempt.

In cases older than one week, with displacement persisting, I anæsthetize before making any effort at reduction. The new method may then first be resorted to, and will often be found the best means of performing both refracture and reduction.

For making a diagnosis I have also found a modification of this method most useful. If the surgeon will take the hand and wrist in which fracture is suspected into his hands, as above described, and, while the thumbs press firmly upon the lower end of the radius or first row of the carpus, make a series of gentle, quick, short flexions and extensions of the joint—rocking it through an arc of perhaps 25 or 30 degrees above and below the forearm as a horizontal plane —he will be astonished at the ease with which crepitus of the bones of the joint and of any small or large bony or cartilaginous fragment will be elicited. And, best of all, the diagnosis of these obscure fractures about the wrist can thus, after some practice, be brought out without giving unbearable pain to the patient. Indeed, I have often in this way, by the most gentle and practically painless manipulation, been able to clear up the nature of intricate injuries about the wrist.

By practising the method upon a normal wrist a sufficient degree of expertness can readily be acquired; by it joint crepitation can

be brought out in any wrist. It is well, however, not to practice too much or too often upon the same extremity, as excessive stirring up of the joint contents might originate a synovitis.

In conclusion, the writer desires to say that he will be gratified to have reports of the experience of others who may be tempted to employ the method here put forth.