

was removed. Probably if a bandage of plaster-of-Paris casing could have been applied immediately after the accident, but little effusion or œdema would have occurred. Certainly compression of a recently sprained joint gives results, both as regards expedition and thoroughness, with which those obtainable by the system of evaporating lotions cannot be compared.

If the sprained joint be in the thumb or finger much pain and want of pliancy may result. A small splint should be moulded on; firm compression with a pad of cotton wool and a soft bandage exercised; and the hand worn in a sling—it should not be left free except for the cold douchings. A few days' absolute rest is expedient.

Even long years after all the local signs of a sprain have passed away, a jerked or sudden movement of the joint, or a change in the weather, reminds the subject that the part is not absolutely sound. Nearly twenty years ago, I severely sprained my left wrist at football, and to this day it has not absolutely recovered. I cannot flex or extend it as I can its fellow. A sudden movement of it is often accompanied with audible crackling and discomfort. From a close and interested observation of this joint I feel convinced that in the crevices between the articular surfaces of the bones, and against the attached parts of the capsule out of the way of pressure, there are growing delicate and injected fringes of the synovial membrane. The synovial fluid is thin in quality and in excess of the normal amount; there are no adhesions inside the articulation, but there is probably some shortening of the extra-articular fibrous tissues which were implicated in the inflammation—a shortening secondary to inflammatory thickening. Probably this shortening of the fibrous tissues plays the important *role* of a perpetual splint shielding the enfeebled synovial membrane from further shock and distress. On no account, therefore, will these adhesions be broken down or stretched by manipulation; such a treatment is contra-indicated by the pain which closely attends any attempt at more than the accustomed movements of the joint. The very audible crackling, which even a bystander may sometimes hear on working the joint, is the result of the altered synovial fluid being quickly driven by the movements of the joint between the vascular fringes.

Occasionally when a joint has been wrenched by a recent accident, and is in consequence painful and useless, the manipulative examination which it receives from the surgeon is the means of removing much of the pain, as well as of restoring a good deal of the lost function. I am satisfied that such improvement is real, and not merely subjective. Yet because in the weakly and ailing such a therapeutic measure might probably be attended either immediately or remotely by disastrous results, and because of its utterly speculative nature, it is not to be recommended as routine practice, though it may well be kept in reserve for rare and special occasions. It certainly has a close

and important bearing upon the question of bone-setting. A man sprains his ankle; the surgeon examines and reports accordingly; but, because no bone is broken, he perhaps speaks of the lesion in a careless or off hand manner, and does not insist on the necessity of rest and of other appropriate treatment. So the ankle does not get sound, and the faithless patient resorts to a quack, who at once finds "a small bone out of place." Then come a sudden twist and a crack, and lo! "the bone is in again." The patient believes that a bone has there and then been restored to its place because he is at once absolutely more comfortable, and can not only move the joint freely, but can even accept the advice to throw away his crutch or his stick, and walk on his damaged foot without further help. Perhaps he is told to go home and apply ice; and at any rate from that time he considers himself to be and indeed is—cured. Forcible manipulation is, of course, the bone-setter's panacea. I have known him employ it in the case of fracture of the surgical neck of the humerus, and as may be expected, with very serious results. In the case of recent sprain, however, the patient cannot but believe that the bone-setter's statement is true, because, beyond a doubt, his manipulation has proved effectual.

The following report illustrates the point: A gentleman of highly nervous temperament came to me with considerable bruising of the deltoid, the day after receiving a fall which might have been attended with much more serious consequences. The arm was so stiff at the shoulder-joint that he could not raise it to dress himself, nor could he touch the ear of the opposite side whilst his elbow was brought towards the front of the chest—it remained permanently though slightly abducted. Any movement of the arm was attended with pain and distress. There was no definite hollow beneath the acromion process, nor any other unequivocal sign of discoloration. There was a great element of obscurity in the case; the patient was in pain and apprehension, and expressed his fear that the shoulder-bone was "out."

A consultation on the case was not obtainable, and the course of action had to be decided. So, to err upon the safe side—if error there might be—and in order to make a thorough and practical examination of the joint, I agreed with him that there was "displacement of the shoulder-bone," and laying him upon the floor, with my heel in the axilla, I flexed the fore-arm to slacken the biceps, rotated and pulled down the arm, and then adducted it *vi et arte* and in a most determined manner. There was no click, or the sign of a readjustment having taken place, but immediately on the patient rising from the ground he said that he was much more comfortable; he had lost most of the pain; he could move his arm with comparative freedom; and to his delight, and my satisfaction, he dressed himself without assistance. He was convinced that I had reduced a dislocation. In my own mind I was sure that I had not, but for obvious reasons