

oil, as chance, experience, or advice may suggest, seeking the surgeon's aid only for the remote and often intractable complications. In unhealthy subjects, and especially in children, want of treatment often entails articular troubles which run a lingering course and may end disastrously; and even with the strong a severe sprain is apt to involve a long continued enfeeblement of the part.

Immediately after the sprain there is want of pliability in the joint, due in part to the pain and tenderness caused by the violence, in part to the tension of the sensory nerve filaments from the sudden effusion, and in part also to the mere mechanical effect of the presence of blood and other fluids in and around the joint. In certain situations a serious wrench of an articulation may give no visible sign upon the surface of the body; especially is this the case with the hip, the shoulder, and the spinal articulations, all of which are thickly covered; stiffness will then be the only objective sign indicative of the lesion.

If a joint in the lower extremity be seriously sprained, temporary but absolute rest for it should be insured by, if practicable, putting the patient at once to bed; by raising the limb on a pillow, or in a swing cradle, until the heel is above the level of the chin, so as to hinder capillary and venous congestion, and by applying firm and even compression. I am convinced that judiciously applied compression not only checks further effusion, but also promotes the absorption of fluid which has been already poured out; and, as a rule, the patient experiences immediate comfort from it. At times, however, it is possible that from the tenderness of the skin, or from mere apprehension, the patient will not submit to the compression immediately after the injury. Then one must be content to apply either the ice-bag or an evaporating lotion. Cold plays a double part: by stimulating the vaso-motor nerves it causes a contraction of the small arteries, with the effect of checking further hemorrhage and inflammation and limiting the effusion, and by numbing the sensory nerves it diminishes pain. The lotion should not be used, however, as is often done, as a water-dressing under oil-silk. It must be applied on a single fold of lint with the fluffy side outwards, so that evaporation may proceed with energy. The lint must never be allowed to get dry, nor should the limb be covered over with bed-clothes. If a man sprains his ankle when out in the fields it should as quickly as possible be put into running water, and then be firmly bandaged with strips of wetted handkerchiefs; the boot should be worn, if he can get it on again, for the sake of the compression it affords, but it is better not to remove the boot at all until the joint can be bandaged. Nothing short of absolute rest in bed suffices when a child sprains a joint in the lower extremity; he must not be trusted to lie on a sofa, for he would soon be off of it. Where the hip-joint is sprained the limb should be raised and rest insured in the extended position by the application of the weight and

pull-y; so that if matters do not clear up there will be no need for further change of position. A sprain is often the beginning of an attack of hip joint disease.

In the case of the knee being sprained, the leg would be extended; in the case of the ankle being sprained, the foot would be put up at a right angle. But in each instance the limb should be carefully bandaged upwards before the compression is applied, or edema may follow; complete rest would be still further ensured by adjusting a splint to the side or back of the limb. Compression may be applied by means of a roller of domette, or by the additional aid of plastic splinting moulded on. With children a well padded flexible metal splint is of great service, but a casing of plaster of Paris and house flannel answers even better.

I have at present two men under my care, each with a severely sprained ankle, the part being swollen and discolored, and the foot stiff and useless. The foot and leg have been immobilised in well-lined plaster of Paris casings, and thus the patients are quickly enabled to get out of bed and go about with crutches, without risk or discomfort. In neither of these men was a fracture to be detected.

When an ankle is greatly swollen from a recent injury, and signs of fracture are not evident, it is not advisable to conduct the examination for obtaining a knowledge of the exact nature of the injury in too inquisitive a manner. If the limb be treated on the principles enunciated above, it will be well either for a severe sprain, or for a fracture without displacement. Possibly the patient might be unsettled at not being definitely informed whether there be fracture or not, for the oft-repeated question of the patient or parent as the surgeon examines the part is, "Is the bone broken?" But I am speaking merely of the principle involved in the surgery.

Absolute rest is demanded as long as heat of the surface or intra-articular pains persist. As the pains subside, recourse must be had to frictions and rubbings, and the use of stimulating liniment and cold douches. The rubbings should be executed always in the direction of the venous and lymphatic return, and may be combined with firm fingerings about the part, and with the rubbing-in of oil. When effusion persists in the painless joint, one may apply over the joint the even compression of a Martin's elastic roller for a certain length of time each day, the skin being duly protected by a soft covering. This is a highly satisfactory method of treatment in cases of chronic thickening and effusion. Leslie's soap-strapping, too, when evenly and liberally applied over a sprained joint, is an excellent therapeutic measure in the days following close upon the injury.

At other times, nothing seems to render such efficient aid as a wetted calico bandage. Compression in some form is needed.

On physiological grounds, the early treatment of a sprained joint by fomentation or poultices is