

A gloomy picture, indeed! Certainly there are different degrees of sprain, and the very mild may recover promptly by the employment of simple means. Dr. Gross doubtless had reference to the severe forms treated by the methods then in vogue—leeches, fomentations, etc. I well remember this accenting the lead and opium lotion. Since his day quite a revolution has occurred in the treatment of sprains. Martin, of Boston, brought forward the rubber bandage applied to the foot and ankle to prevent effusion, hasten absorption, support the parts, and to partially immobilize. In some cases I have had fair results by the employment of the elastic roller. Again, there was the introduction of the immovable apparatus, usually of plaster of Paris, whereby continued rest to the joint was enforced. The application of continuous cold, with the idea of subduing and preventing inflammation had advocates. Baudin treated five hundred cases of sprain by means of cold water, with an average period of recovery amounting to twenty-eight and one-half days. Others went to the opposite extreme, immersing the parts frequently in hot water. Methodical rubbing with passive motions, massage with equally active use of the joint, found enthusiastic advocates; and lastly, electricity, with its occult potency, was evoked. All these methods singly have been employed, and all contain elements of therapeutic value.

But why be exclusive? May not a combination of the best of these means afford a rational treatment that will shorten the time of some of the simple cases and prevent untoward results in the more severe? I believe so, and my conviction is founded on the pathological conditions present, and upon experience.

As previously suggested, a sprain is a subcutaneous injury, which, as Hunter long ago demonstrated, is little liable to inflame, even though the parts rapidly swell from blood congestion, blood extravasation and from exudation of fluid from the dilated vessels. It is true if this condition of enlarged vessels and stagnated blood and unabsorbed exudate is prolonged, then the first step in the inflammatory process is inaugurated; and if this state continues, then the coagulable lymph contained in the serum increases and may harden and cause adhesions, or early, while still fluid, it may be reabsorbed, the sooner the better for a favorable termination. Stimulation of the parts by heat and rubbing will hasten such absorption, increase the circulation and overcome the blood stasis. If from neglect or improper treatment adhesions have occurred, then free motions are necessary to break them up; earlier movements would have prevented their formation.

When a voluntary strain or force is applied to a joint, the act is regulated and controlled by the power of the muscles and tendons, but often during the occurrence of a sprain the muscles

are taken off guard, surprised, and the force of the wrench or twist falls directly on the ligaments, which unequal to the task, strain and rupture, from the powerful leverage of the weight of the body.

It is remarkable, at times, what a slight force will produce this injury. Recently, an old lady on arising from her chair, at the sound of the dinner bell, stepped on the side of her foot and caused a severe sprain, tedious in its recovery. I have observed that sprains in the old are slower in their repair than in the young.

In the majority of cases the foot is turned inward, thus rupturing fibers of the external lateral ligament of the ankle joint. Rarely is it turned out. Or the foot may be caught between two opposing forces in such way as to unduly twist or bind the tarsus, as occurred in my practice recently in a young lad.

In consideration of this subject, we necessarily exclude bruises and contusions of the joint, occurring from direct application of mechanical violence, as in a fall from a height, lighting on the feet. Such injuries producing dislocation or fracture would be thrown out. We suspect such cases were included when Baudin made the remarkable statement before the Academy of Sciences, that of seventy-eight amputations of the leg and foot sixty had sprains for their origin. Either the injuries were severe or the treatment most lamentable.

As noted above, very mild sprains usually recover after a slight rest. The more severe forms of the accident require elevation of the limb and support to the foot, a local bath as hot as can be borne, to be repeated every three hours, after each bath enveloping the ankle generously in cotton batting and applying over it a flannel bandage tightly or a rubber bandage loosely. After the third day, the stage of active hyperæmia having passed, massage may be used on the parts, and when the swelling has somewhat subsided, a gypsum or starch bandage applied. The splint should include the foot, excepting the toes, and extend one-half to two-thirds up the leg, and when hardened be cut open down the front and thus a removable splint be made. The hot foot-bath is continued several times during the day, from ten to twenty minutes at a time, the limb dried and then well massaged. If the skin is moist a little vaseline may be used on the hands as a lubricant. A precaution should be used in working the foot not to turn it in, otherwise the external lateral ligament fibres, of which were torn and stretched, now undergoing repair, slowly because of their low vitality or meagre blood supply, may be re-torn, the tender parts bruised, pain caused and repair delayed. A patient thus suffered severely; while his foot was in the bath, he turned the sole in and pressed upon the outer side, violently twisting the foot inward, causing exquisite pain and retarding recovery.