but evenly. This dressing is left undisturbed, except for additional roller bandages applied outside, for two or three days. At the end of this time, if the swelling has disappeared for the most part, if the sprain was a severe one, a circular plaster-of-Paris bandage is applied from the toes to below the knee. This bandage is split and removed every two or three days to note the progress of the joint. With the subsidence of the acute symptoms massage is begun, and the plaster at once reapplied for twenty-four hours. The plaster is discontinued gradually, to be replaced by a flannel bandage. Douches of hot and cold water are used in connection with massage.

The aim of the treatment is at first to quiet the general and local circulation by general and local rest, and thus to limit the effusion and joint irritation, and then at the earliest moment to revert to stimulating measures and restricted use of the recovering joint.

The immediate application of plaster-of-Paris is objectionable, because in twenty-four hours the swelling subsides somewhat, and leaves the plaster loose; or, if the swelling increases, discomfort or constriction may occur.

Half-way measures have little to commend them. Cotton bandages and hot water, however faithfully applied, are but poor makeshifts. Sticking-plaster is better, but lacks precision, although affording partial fixation; and in the ankle, applied as a figure-of-eight bandage, it often affords excellent support. But, in general, it may be said that a sprain is either slight enough to be treated by massage from the first, or severe enough to receive for a day or two, at least, the most complete and efficient fixation.

THE TREATMENT OF SPRAINS BY MASSAGE.

BY J. G. MUMFORD, M.D., BOSTON.

THE profession doubtless owes no slight debt to Dr. Graham for his enthusiastic devotion to massage and his aid in the revival of that ancient procedure based on logical and scientific principles.

Such treatment of sprains is probably the oldest in surgery. It has always been practised among the Orientals and was used by the ancients.

More recently Le Dran, early in the last century, wrote: "Impending inflammations about sprains may be checked and dispersed by the use of massage and kneading."

Sir Astley Cooper taught: "When there is much dispersed inflammatory exudate after fractures and dislocations use electricity and rubbings. It is the rubbings that do the work, and they should be deep and thorough."

Modern text-books scarcely mention massage of dislocations, and certainly do not give to it its proper importance.

For several years it has been my custom in both hospital and private practice to employ massage on sprains and dislocations as well as in certain fractures. Most surgeons are doing so to-day, I believe; and the results are interesting.

The old practice of immobilization of sprains is now generally conceded to be improper, for more than a few days. My routine practice, even in those cases in which there is considerable laceration, is to first use the hot and cold alternating douche for ten minutes to

allay pain, then to gently rub and knead about the injured joint for some fifteen minutes, and to apply a flannel bandage. Perfect rest for twenty-four hours is enjoined. On the second day more thorough kneading and stroking is done and a little passive motion is employed; and this is followed up daily.

As explained here the other night by Dr. H. P. Bowditch, it is in maintaining the proper nutrition of the parts by keeping up the flow of lymph that massage and passive motion act most effectively. Inflammatory exudate is thus carried off; but, more important still, proper nutrition of the parts is supplied by a passive motion substituted for the active motions of health.

In the case of a "sprained ankle" in which there is much extravasation of blood, teno-synovitis and escape of synovial fluid, the immobilizing treatment is most objectionable. By its use adhesions are apt to form, impairment of function with pain results, and where there is a tubercular taint proper conditions for a localized tuberculosis are established. The same is true of the wrist, knee, shoulder and other joints. By the use of properly applied massage these complications are obviated or overcome, and commonly a sound joint quickly results. I use the words "properly applied massage" advisedly, for this community abounds in illy instructed operators.

I believe the use of a skilfully applied flannel bandage is a very important and often neglected adjunct to this treatment. The surgeon should see to this himself. I have never found a masseur who was familiar with the proper principles of bandaging. The bandage should be broad, cut on the bias, and should cover with firm and evenly distributed elastic pressure all the parts as far as the adjacent joints on either side, with an extra pad over the injured joint itself.

After the first day I have the patient go about on crutches, in the case of a sprained ankle; and after the third day I encourage him to begin bearing a little weight on the foot. Two to three weeks often suffice to put such a sprained joint in a condition for careful use. We have all seen cases in which the immobilizing treatment resulted in an enfeebled limb after two or three months.

It is in the case of young and vigorous persons, football and tennis players and such others, that this treatment is most gratifying; and I have seen such men about their sports again after eight or ten days. In the case of sprained knees, with acute synovitis, these same statements are true.

With sprained wrists, in which there is a teno-synovitis, my experience with massage is not so happy. How often these cases develop tuberculosis, in comparison with similar injuries to the ankle I do not know. There are no statistics, I fancy; but I have seen a number of cases that went on to serious chronic disease under both methods of treatment.

I recognize the fact that statistics as to time of convalescence in all cases of sprains are of no great value, for convalescence must depend greatly on the character and extent of the injury; but I believe I am in accord with all who use massage in saying that clinical experience convinces one of the great usefulness of this method of treatment in properly selected cases.

A BILL has been introduced in the English House of Commons to legalize the Metric System.