

siderable atrophy will result, at the site of the bandage, after nine months' treatment.

In applying the method of hyperæmia to the shoulder joint, it is necessary to use a piece of rubber tubing, somewhat resembling an Esmarks' tourniquet, instead of the broad Martin bandage. A piece of cotton is put loosely around the neck, forming a loop. The rubber tubing, covered with felt or wadding, is wound around above the joint, one end is slipped through the loop, the other over it, the right degree of constriction is produced and maintained, by clamping the two ends of the tubing together, on the upper aspect of the joint. Two straps are then passed under the ring of tubing, and fastened to it, one in front, the other behind the joint. The straps are then carried around the thorax and tied in the opposite axilla. The same degree of hyperæmia is produced and maintained as in the other joints.

During the course of the treatment, provided the diseased joint be in the upper extremity, the patient is allowed to go about, and to use his arm cautiously in gentle, active movements; passive movements are employed by the physician, or by the friends of the patient. Such manipulations must never be vigorous enough to cause pain.

When the disease affects the lower extremity, the patient is confined to bed, to prevent the weight of the body from causing deformity of the already diseased and softened joints. After a month or two, however, he is allowed to get up, with the joint fixed in removable plaster of Paris splints or some form of mechanical apparatus. Active and passive movements of the diseased limb are carried out in the pauses of the hyperæmia. Many objections have been raised to this exercise of tuberculous joints, and some surgeons have gone so far as to accuse Von Bier of employing gymnastics as a remedy. His answer to this is a reference to the excellent results he has obtained by this combination of movement and venous congestion.

Bier therefore renounces, on the whole, the well recognized treatment of rest for these cases, because of the fact that immobility leads to stiffness and a bad functional result. His object is to obtain, wherever possible, a movable and good serviceable joint; for he considers that the annihilation of such an important and useful apparatus as a joint is a very poor result of any treatment.

During the progress of the disease, local complications are not infrequent, and are not, as some surgeons maintain, a result of