

Arterial, or active, hyperemia is that form of congestion which is produced by acceleration of the blood stream and by an increased quantity of blood in the part. This condition is brought about clinically by the application of heat, and the real curative factor in this form of hyperemia is evidently the accelerated blood stream.

Other agents besides heat have been used to produce this form of congestion, viz., massage and electricity, and they are probably efficacious because of the hyperemia which they produce.

Heat may be applied by means of the Tallerman's, Betz or Bier oven, or by means of any form of radiant heat apparatus, or by hot sand. The action of these agents not only produces hyperemia of the skin, but a congestion of the deeper parts, particularly of the limbs.

Klapp, an assistant of Bier, maintains that such hyperemia extends to the viscera. He put the abdomen of a rabbit in a hot air apparatus, exposed it for some time to intense heat, opened its abdominal cavity immediately on removal of the animal from the apparatus, and found a hyperemia of the entire abdominal wall, the peritoneum of the intestines and the central tendon of the diaphragm.

Other experiments have been performed, to show that active as well as passive hyperemia not only affects the superficial surfaces, but extends deeply, and involves the whole thickness of a limb, even to the blood vessels of bone.

The other variety of hyperemia—passive, or venous—is the greater curative agent, and is used largely in the treatment of acute and chronic infective inflammation of tendons, sheaths, bones and joints.

Venous congestion is produced artificially by two methods,—

- (1) Martin's india rubber bandage.
- (2) Vacuum chambers.

The india rubber bandage is used mainly in the production of passive hyperemia in the limb, and by means of this bandage, and depending upon the degree of constriction, one can produce any degree of stasis hyperemia, varying from the mildest to the most intense form.

The most useful degree of hyperemia is the moderate type.

In applying the bandage, care should be taken to see that it is applied above the diseased area, that the folds overlap, and that no other bandages or dressings are wound about the limb below it.

As a result of moderate constriction above the elbow, the subcutaneous veins of the back of the hand and flexor side of the