

of the benefit derived from tubbing in typhoid, is, I think, to be attributed to a stimulating action on the vaso-motor center.

Failure of the circulation in the later stages of the disease with developing signs of cardiac weakness is to be treated in similar lines to that of a degenerative myocarditis.

Closely allied to the collapse met with in acute infectious disease is the condition known as shock in surgery, due to exhaustion of all the important medullary centers, but in which vaso-motor depression plays the chief part. Crile's experiments show that in shock the heart muscle and its nervous mechanism is unimpaired, as is also that of the vaso-muscular system, but the vaso-motor center fails to respond to any stimulus, irritative, electrical, physiological or pharmacological. Vaso-motor stimulants while the center is so exhausted have little action, strong coffee, or a hypodermic of caffein citrate is one of the most effective. Normal saline solution raises, but cannot sustain, blood pressure and found that in a certain number of their patients the blood definite when shock is associated with profuse hemorrhage. Crile recommends the addition of adrenalin to the saline in the strength of 1-50000 to 1-100000 and directs it to be given intravenously, very slowly and continuously.

In addition to these measures, absolute rest must be secured. The flow of blood to the heart may be assisted mechanically by raising the foot of the bed and in some cases by gentle massage of limbs and abdomen. The extremities must be kept warm.

There is another form of circulatory failure in which I have recently been much interested; the failing heart of chronic arterial hypertension. During the last few years, much study has been devoted to the condition of increased blood pressure, and perhaps a few remarks on this subject may not be amiss.

When physicians first obtained an instrument to measure blood pressure and found that in a certain number of their patients the blood pressure registered considerably above normal, anxious endeavours were at once made to reduce this excess by the administration of all kinds of vaso-dilators, and again therapeutics were sneered at, because they failed, in these cases, to effect a permanent reduction in the blood pressure. Only slowly did physicians realize the fact that permanent high blood pressure in certain individuals is a necessity of life and is, in a great measure, a compensatory manifestation. A recent writer says, "It is to be regarded as one of the great advances of modern medicine, that we are now able to read between the lines, so to speak, and to obtain