

After a full analysis of the results of all the operations, having regard to errors of diagnosis, imperfections of technique, avoidable disasters, and complications which occurred in various cases, these writers summarize their conclusions very succinctly in these words: "Contrasting the worst view with the very best possible construction we can place on this table, we have the operative mortality lying somewhere between 23 per cent. and 7 per cent.; and the recoveries between 41 per cent. and 64 per cent.

Having regard to the well-known hopelessness of the treatment of cirrhosis of the liver by medicinal means, and taking into view the observations of Hale White, that the average length of life in cases of ascites sufficiently marked to call for tapping is only 63 days, it is surely not too much to claim that these statistics afford ground for encouragement in the practice of this operation.

One may perhaps with advantage review very briefly the phenomena upon which the operation of establishing a communication between the veins of the portal circulation and those of the abdominal parietes is based. (Fig. 1.) It is very well known that not by any means all cases of cirrhosis are accompanied by ascites. Lange found among 56 cases of cirrhosis of the liver of varying degree, that ascites was present only in 34 per cent., and the explanation of its absence in the remaining 65 per cent. appears to be found in the fact that in these fortunate and favorable cases there occurs an adequate collateral circulation between the venules of the portal circulation and those of the abdominal parietes, thus affording by nature's own efforts such a relief to the blood pressure in the portal veins, that transudation in excess of what can be absorbed by the lymph channels of the peritoneum does not take place. This collateral circulation consists, in the majority of cases, not in a new development of vessels through the formation of adhesions, but in a dilatation and amplification of the normal communications which were described by Sappey as existing between the portal and systemic veins, namely, through the esophageal plexus, and round ligament of the liver, the hepatic ligaments, and the communications of the inferior mesenteric vein with the iliac veins. Talma has reported a case in which a vein in the round ligament connecting the left branch of the portal with the epigastric in the abdominal wall, was as large as the finger, and in my second case I found two veins each as large as a lead pencil running towards the heart in the base of the suspensory ligament, thus pointing to nature's attempts to relieve the portal circulation by opening sluices in this situation.

The initiation of nature's method of preventing the occurrence of ascites by the creation of an efficient collateral circulation through these channels is of course not within the compass of the surgeon. But Talma, and later, Drummond, observed in the study of a series of cases of hepatic cirrhosis *without ascites*, that there