

B-14. THE PROGNOSIS AND PATENCY OF ANASTOMOSIS OF THE PORTAL DECOMPRESSION

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Studied cases were those admitted to our hospital for the past 7 years and were inclusive of 27 cases of portal hypertension (livercirrhosis 13; Banti's syndrom 11; the others 3) to which the shunt operations were performed. The kind of operations were 4 of Eck's operation, 16 of splenorenal vein anastomosis and 7 of superior mesenteric vein—V. cava anastomosis.

Operative death were none in non-cirrhotic group and 15.4% (2/13) in cirrhotic group. Follow up study revealed that survival rate of non-cirrhotic group was 93% and that of cirrhotic group was 80%. Hematoemesis and ascites were improved by operation in most of the cases. Remission rate of esophageal varices was 71%. Postoperative blood study and liver function tests were performed, revealing no tendency of the progress of the disease. Moreover, some tests indicated the improvement. None showed the abnormal increase of blood ammonia, and only one hepatic coma was observed postoperatively. Rehabilitation rate among the survived cases were 81%.

Simple and reproduciable method is desirable to evaluate the patency of the anastomosis. Therefore, phenoxyethyl penicillin was administered orally to the dogs to which the shunt operations were performed, and the pre- and postoperative blood penicillin level were measured. Early appearance of high concentration of serum penicillin was characteristic of the successful case.

We utilized this principle clinically, however, there was a discrepancy between the clinical and laboratory findings and blood penicillin level. Further study is indicated to rule out the participation of other factor in this study.

B-15. SEPARATIVE MEASUREMENT OF BLOOD FLOW ON PORTAL VEIN AND HEPATIC ARTERY:—EXPERIMENTAL STUDY

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Intrahepatic portal venous blockade consists of 2 types, cirrhotic and non-cirrhotic portal hypertension. This experiment was carried to clarify the fact that the ratio between portal venous blood and hepatic arterial blood was changeable depending upon the position where the ablation of blood flow exists.

Group 1: cirrhotic liver, oral feeding of CCl₄ for 10 months.

Group 2: intrahepatic portal vein obstruction; daily administrations of 1% of methyl cellulose solution for 3 weeks.

Both groups were submitted to separative measurement of portal venous and hepatic arterial flow. Cr 51 labeled red cell was used as indicator.

Percentage of portal blood per total hepatic blood were following.

Group 1: 54.8.....46.9% (average 51.7%)

Group 2: 47.5.....33.1% (average 40.5%)

Control: 76.5.....64.6% (average 70.7%)

In comparision with the control, both experimental groups showed decrease of portal flow. Hepatic flow were studied on these groups by Au¹⁹⁸.

The flow of Group 1 is down to 73% of the control, but not in Group 2.

Diminution of the flow in Group 1 is reflected upon portal flow. This suggests that the compensatory increase of flow of hepatic artery is not dominant, but the decrease of portal flow is supplemented by increase of hepatic artery.

Total hepatic flow is no change. Ratio between portal & hepatic arterial flow are in reverse. These facts suggest that flow disturbance due to strong cell destruction appears in the cirrhotic