A NEW MODIFICATION OF THE H-MESOCAVAL SHUNT

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Mesenterico-caval shunt is used in the surgical treatment of portal hypertension. This procedure is simple, safe and has very few complications. The most important problem is graft failure.

We used a new modification of mesenterico-caval shunt in five patients. All the patients were treated with sclerotherapy but re-bleeding was observed. H mesocaval shunt was applied using this new method after anastomosis was completed, to prevent collapse of the graft by taking a conical piece of 1 cm in length from the anterior mid-portion of the graft; a piece of 2 cm was removed from the mid-back side and re-anastomosis was performed. In this way, the back part became tighter and the wall stress was increased which created a more straight area, thus preventing the collapse of the graft.

Postshunt Doppler and coeliac angiography were performed in all patients. Shunt's patency was confirmed in all patients followed up for 4-28 months.

We created asymmetry and an increase in tension especially at the back portion of the graft and we were able to prevent the collapse of the graft using this method.

Key words: Mesocaval shunt, portal hypertension

The first mesocaval shunt was used by Drapanas et al. (1,2) in 1972. The advantages of this type of a shunt can be summarized as easy usage, a greater ability to create a forward flow in the portal system compared to portocaval shunts, lower incidence of encephalopathy and being proper in liver transplantation status (3). Its disadvantage is the late occlusion. Using this method we tried to prevent later graft occlusion (4).

PATIENTS and METHOD

Between 1993 and 1997, 5 patients were treated with new method of mesocaval shunt. Three of them were female and two were male (mean age 29 years; range: 17-42). Three of them had portal vein thrombosis, while one of them had hepatitis C and one had autoimmune liver disease.

None of the patients had an emergency operation, they were all elective cases. All the patients with variceal bleeding were treated with endoscopic sclerotherapy before the operation. Esophageal varices were verified endoscopically and it was observed that ultrasonographic and histologic examinations were verified, as well.

Under general anesthesia, abdomen was opened by a long midline

incision. After a thorough inspection of the intraabdominal viscera, the transverse colon was lifted upwards and forwards and dissection was started at the root of the mesocolon, after examining the position of the superior mesenteric artery by palpation. The superior mesenteric vein lies to the right of its companion artery, crossing the third portion of the duodenum to pass behind the pancreas. On each case, it was necessary to carry the dissection over the duodenum to the lower edge of the pancreas in order to mobilize a sufficient length of vein of wide caliber for anostomosis. It has also proved necessary to sacrifice one or two jejunal, colonic, duodenal branches of the vein in order to provide access. Splenectomy was performed in all of the patients. We used a 16 mm Dacron graft. It was applied between the superior mesenteric vein and inferior caval vein with 5-0 prolene. The anostomosis was completed by taking a piece of 1 cm from the mid-front and 2 cm from the mid-back portion, then re-anastomosis was performed (Figure 1).

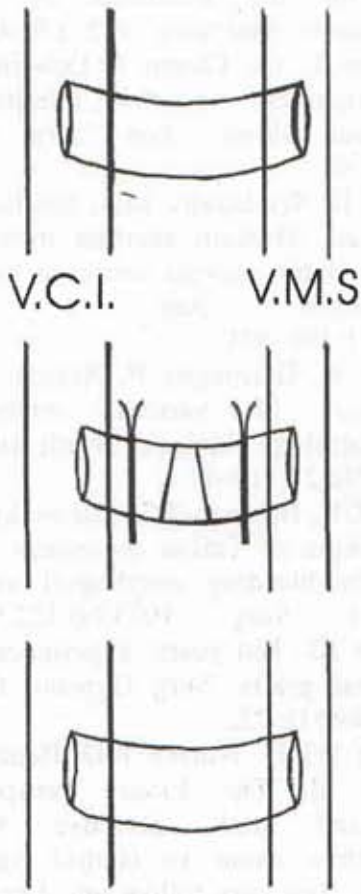

Figure 1. Surgical technique of the new modification of mesocaval shunt.

Figure 2. Doppler review of mesocaval shunt.

RESULTS

Mean operative time was 186 minutes (range: 140-260). Four of the patients did not require any blood products, while one patient was transfused with two units of packed red blood cells. Postoperative ascites was observed in one patient. Shunt patency was confirmed in all of the patients with postoperative Doppler ultrasonography and coeliac angiography. (Figures 2-3). Average follow-up time was 16 months (range: 4-28). During follow-up, there was no evidence of encephalopathy or re-bleeding.

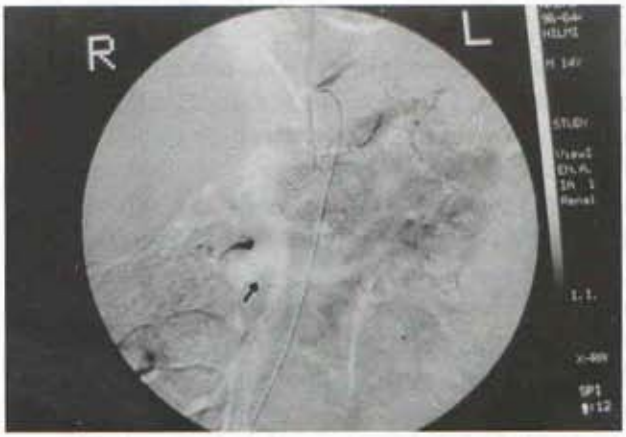

Figure 3. Angiographic review of mesocaval shunt. Arrow shows the shunt.