Peritoneo-Saphenous Vein Shunting for Chylous Ascites after Retroperitoneal Lymph Node Dissection

Introduction and Objective: Chylous ascites after retroperitoneal lymph node dissection (RPLND) occurs in 1-7% of cases. Risk factors include high volume disease, suprahilar dissection, vena cava resection, high-dose chemotherapy and greater intra-operative blood loss. This video presents the surgical treatment of chylous ascites after RPLND by means of peritoneo-saphenous vein shunting.
Materials and Methods: RPLND was performed in a 30-year old man with mixed germ cell testicular tumour (teratoma, yolk sac and choriocarcinoma) stage T3N4M1S2 with large residual para-aortic and supraclavicular node masses after bleomycin, etoposide and cisplatinum chemotherapy. The nodal masses extended above the level of the superior mesenteric artery and below the bifurcation of the aorta. Histology of the RPLND masses showed mature teratoma only. The patient developed massive chylous ascites. A percutaneous pigtail catheter was inserted, but due to persistent drainage of large volumes of lymph (3-4 liters/day) a sapheno-peritoneal venous shunt was performed. The branches of the large saphenous vein were ligated and transected, the vein was mobilized for a distance of 8 cm, an incision was made 4 cm above the inguinal ligament, the abdominal muscles were split and a 1 cm incision was made in the peritoneum. The large saphenous vein was brought through a subcutaneous tunnel, spatulated and sutured to the peritoneal incision.
Results: The valves in the saphenous vein prevent hemorrhage from the femoral vein into the peritoneal cavity, but permit drainage of lymph to the venous system. The postoperative course was uneventful, with no recurrence of chylous ascites.
Conclusions: The treatment of chylous ascites includes diet modification, diuretics, total parenteral nutrition and somatostatin analogues. Percutaneous drainage is rarely curative and may lead to protein wasting and peritonitis. Peritoneo-venous catheter shunting carries the risk of prosthesis infection. Open or laparoscopic ligation of the lymphatics is difficult and has a high failure rate. Compared to other management options, sapheno-peritoneal venous shunting is a simple and effective surgical solution to the problem of severe, persistent chylous ascites after RPLND.

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