Medical management of chyloretroperitoneum following retroperitoneoscopic donor nephrectomy

Sir,

Laparoscopic (transperitoneal or retroperitoneoscopic) donor nephrectomy (DN) has become the gold standard for kidney retrieval from living donors. It requires dissection on the surface and around aorta at level of origin of renal artery to obtain good length of renal vessels during left DN. In the process, many lymphatic channels in the periaortic region are severed. Usually, they seal off on their own. Rarely, they continue to leak leading to chyloretroperitoneum/chylous ascites. We encountered one such patient who had chyloretroperitoneum following retroperitoneoscopic left DN.

A 48-year-old healthy male underwent uneventful left retroperitoneoscopic DN. Post-operative period was smooth and he was discharged on 3rd post-operative day (POD). He presented with left flank pain, swelling, fever, nausea and vomiting on 14th POD. On examination, his vital signs were normal. A tender lump was present in left flank extending from hypochondrium to left iliac fossa. His hematological and biochemical profile was normal. Ultrasound abdomen showed fluid collection with scanty loculi in left flank. Central port site was opened under local anesthesia and a 30 French drain tube was placed into the retroperitoneum. Stat output was 1.6 l of milky white fluid. Gram staining and culture was of the fluid was non-contributory. Biochemistry of fluid showed a triglyceride level of 2588 mg/dl. Patient was started on antibiotics. He was advised to avoid fatty diet and use coconut oil for cooking. Subsequently, around 500 ml of chyle was pouring daily from the drain. On the 4th day of admission subcutaneous injection octreotide, 100 μg 8 h was started. Three days after starting octreotide, drain output became nil. Five days after starting octreotide, drain was removed. Octreotide was continued for a total of 7 days. Thereafter, patient was discharged with advice to continue dietary precautions for next 3 months. He was asymptomatic at 2 years of follow-up.

Chyloretroperitoneum is a rare occurrence following left retroperitoneoscopic DN. No report of such occurrence exists following open or laparoscopic right side DN. Large lumbar and intestinal lymphatics drain in the periaortic region at level of first and second lumbar vertebral bodies. They get severed during left retroperitoneoscopic DN and may cause chyloretroperitoneum. The probability of post-operative chyloretroperitoneum may be decreased by limiting the periaortic dissection around the origin of renal artery to bare minimal for safe application of stapler/clips. Until date, around 20 cases of chylous ascites have been reported following transperitoneal laparoscopic DN.[1] There is only one previous report of chyloretroperitoneum following left retroperitoneoscopic DN.[2]

Management includes a step-up approach starting with dietary measures, somatostatin analogues and finally surgery if conservative methods fail. Dietary measures entail avoiding fatty diet, using special oil preparation containing medium chain triglycerides or coconut oil for cooking and high protein intake.[3] Medium chain triglycerides are directly absorbed into intestinal capillaries bypassing the lymphatics. Hence, lesser chyle is produced. Failing dietary measures, octreotide should be given. Octreotide is a potent somatostatin analogue. It inhibits secretion of gastrin, cholecystokinin glucagon and reduces intestinal and pancreatic secretions. Because of decreased biliary and

intestinal secretions, less chyle is formed.[4] Surgery is reserved for refractory cases not responding to dietary and medical measures. Index case responded to dietary measures and octreotide.

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