

Post Traumatic Acute Chyloperitoneum

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Özet: POSTTRAVMATİK AKUT SİLOPERİTON
Akut siloperiton peritonun lenfatik sıvı tarafından irritasyonu sonucunda oluşan nadir bir durumdur. Etiyoloji genellikle bilinmemektedir. Çok sayıda olgu travma ya da cerrahi girişimler sonucunda gelişmiştir. Preoperatif olarak tanı nadiren konabilmektedir. Akut siloperitonun tedavisi başlangıçta konservatiftir. Konservatif tedavinin başarısız olduğu durumlarda cerrahi girişim yapılmalıdır.

Anahtar kelimeler : Şiloperiton, travmatik.

Post traumatic acute chyloperitoneum is a rare condition and is very rarely diagnosed preoperatively. Paracentesis is the only preoperative diagnostic procedure. Management of chyloperitoneum is medical initially with a fat free diet and Total Parenteral Nutrition (TPN). Surgical intervention is introduced when medical therapy fails.

In this case we report a post traumatic acute chyloperitoneum due to a motor vehicle accident, treated by suturing of the defect in the mesocolon, drainage of the abdomen and a fat free diet.

CASE REPORT

A ten year old child was admitted to the emergency unit following a motor vehicle accident on June 1991. He was conscious and vital signs were stable. Physical examination of the abdomen revealed generalised tenderness, defence and echimoses in the left lower quadrant. Rebound tenderness was not present.

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Summary: Acute chyloperitoneum is a rare condition caused by lymphatic fluid irritation of the peritoneum. The etiology is mostly unknown. Very few cases are caused by trauma or surgical procedures. The diagnosis is rarely established preoperatively. Management of acute chyloperitoneum is conservative at the beginning and operative intervention is performed when the conservative therapy fails.

Key Words: Chyloperitoneum, traumatic.

His WBC and hematocrit levels were 12.200 cells/mm³ and 34% respectively. Urine sediment and plain abdominal radiologic examinations were normal. Bowel sounds were hypoactive and on paracentesis of the right lower quadrant a pink (haemorrhagic-milk like) fluid was aspirated which divided into red and white when kept in a tube. On laparotomy approximately 500 ml. of bloody chylous fluid was aspirated. There was also retroperitoneal chylous accumulation. Abdominal viscera showed no abnormality except for a tear on the radix of the mesocolon transversum and dilated mesenteric lymphatic ducts. Exploration of the retroperitoneum showed no pathology. The tear on the mesocolon was sutured. The splenic area, foramen of Winslow and rectovesical fossa were drained and a fat free diet was given postoperatively. 180, 50 and 2 cc. respectively of chylous fluid were drained on three consecutive postoperative days. Drains were removed 72 hours postoperatively. The biochemical examination of the drained fluid was as follows: Cholesterol 58 mg/dl., triglyceride 1385 mg/dl., glucose 165

mg/dl., protein 478.4 mg/dl. The patient was discharged on the 7th postoperative day. On his control examination 6 months later no pathology was found.

DISCUSSION

Only 62 cases of acute chylous peritonitis distinguished from chylous ascites have been reported and only 8 of them were post traumatic, including the three child abuse syndrome cases (1-3). In most cases of acute chyloperitoneum the etiology is unknown (1-8). Holcomb et al have evaluated the patients in four groups according to their etiology: idiopathic, obstructive, traumatic and ruptured cysts.

In cases caused by abdominal trauma the site of the lesion is usually at the bases of the mesentery. Development of abdominal symptoms following chylous leakage generally takes days to weeks unless there is an associated mesenteric tear (9).

Physical examination shows only a tender and distended abdomen and sometimes hypoactive bowel sounds. Paracentesis is the only specific diagnostic test which can be performed before operation, and the aspirated milky fluid is characteristic (1,3), and if trauma to the other viscera coexists the fluid is haemorrhagic. The fluid is sterile, and gram staining reveals a predominance of lymphocytes (1,4,5,7,10). Density of the fluid is generally more than 1.012, total protein exceeds 3 g/L, glucose, amylase and cholesterol levels are within normal limits.

Abdominal ultrasonography might show free abdominal fluid but cannot make the differential diagnosis. Watanabe and Jeffrey have pointed out that the visualization of an intraperitoneal and retroperitoneal "near water density" fluid at the same time is strong evidence of cisterna chyli rupture (9). The site of leakage can be demonstrated preoperatively by lymphangiography and intraoperatively by intralymphatic injection of patent blue violet into the foot (1-3, 5, 11). On lymphoscintigra-

phy the site of leakage and the intraabdominal fluid collection can be visualized by injection of ^{99m}Tc radiolabelled ammonium sulphur colloid subcutaneously from the dorsum of the foot (12).

In the management of chyloperitoneum, conservative therapy must be tried first. Surgical intervention after establishing the diagnosis of chyloperitoneum has not received wide acceptance. Indication for surgery exists when conservative therapy shows no improvement after three or four weeks.

The composition of chyle and its flow largely depends on diet. Normally flow in the thoracic duct is about 1 ml/kg/hour but it may increase to 200 ml/kg/hour following a fat-rich meal. For all causes of chylous ascites. Conservative management with a MCT (Medium Chain Triglyceride) and repeated paracentesis has been advocated (8). MCT are not transported in the lymphatics but are directly absorbed into the blood through the portal vein, resulting in less chyle production (7). The low-fat diet with MCT supplementation may reduce the flow of lymph through the thoracic duct and thereby diminish the loss of chyle into the peritoneum TPN has also been used successfully in chylous ascites. The increase in lymphatic flow associated with intestinal absorption of fluid is eliminated with TPN (6, 8, %).

Laparotomy is performed in search for surgically treatable lesions such as a mesenteric cyst laceration or visceral injury. An adequate surgical exploration followed by mobilization of the duodenum and pancreas to explore the region of origin of the superior mesenteric artery since this is a common site of extravasation in idiopathic chylous ascites. The thoracic duct or cisterna chyli may be ligated without harmful sequela due to abundant collaterals (4-9, 12).

Although some authors suggest that drainage of the abdomen after laparotomy is not necessary, we have drained the abdominal cavity in order to prevent accumulation of chyle and blood.

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