

Torsion of Gallbladder : a Case Report

Safra Kesesi Torsiyonu: Olgu Sunumu

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Abstract

The author is reporting a case of torsion of gallbladder. The patient used to have episodes of intermittent torsion and there was no acute presentation. Patient was presented with abdominal swelling which was misdiagnosed as a mesenteric cyst. Distended gallbladder, free floating type, tortuous cystic artery with the mesentery were factors responsible for torsion. Gallbladder exhibited 180 degrees of clockwise rotation. Detorsion followed by cholecystectomy was done.

Özet

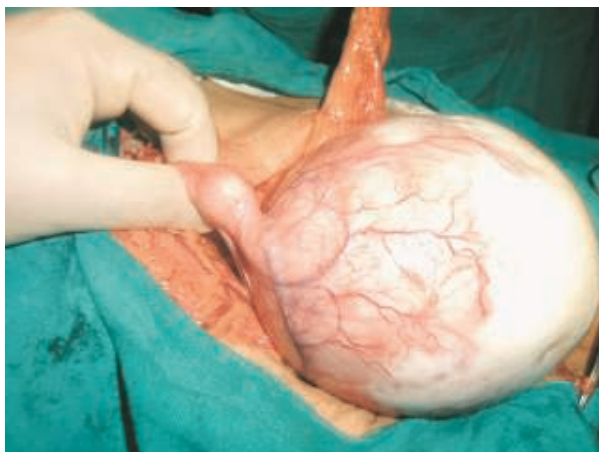
Bu yazıda bir safra kesesi torsiyonu olgusu sunuluyor. Olgu, geçici torsiyon atakları geçiriyordu ve tablo akut görünüm arz etmiyordu. Abdominal şişkinlik gösteren olguya mezenterik kist tanısı konmuştu. Serbestçe hareket edebilen şişkin safra kesesi ve kıvrımlı sistik arter, torsiyondan sorumlu faktörler idi. Safra kesesi saat yönünde 180 derece dönmüştü. Olguya detorsiyon ve kolesistektomi yapıldı.

Introduction

Gallbladder volvulus is rarely encountered. This is defined as rotation of the gallbladder on its mesentery along the axis of the cystic duct and cystic artery (1). This fascinating disease is seen in age ranging from 2 to 100 years (2). Etiology of gallbladder volvulus remains speculative. Fragile and elderly people are more prone for having this entity. Clinical picture simulates acute cholecystitis. Elevation of creatinine phosphokinase (CPK) levels is reported to occur with torsion of gallbladder (3). Ultrasonography, computed tomography scan, magnetic resonance cholangiopancreatography and the hepatobiliary scintigraphy are commonly used in diagnosis. Most of cases are diagnosed at the time of operation. A delay in the diagnosis and treatment may result in life-threatening consequences. Cholecystectomy is treatment of choice.



Picture 1. Non tender and firm swelling observed in abdominal examination.



Picture 2. Gallbladder was free floating with mesentery and twisted around dilated cystic duct of 180 degrees in clockwise.

Case Report

A 72 year old female reported with swelling central abdomen of four year's duration. There was gradual increase in size of swelling associated with intermittent episode of fever and right abdominal pain for which she used to take medications and got relief. No history of jaundice or trauma was present. She had never ultrasonography abdomen done before. General physical examination was unremarkable. Systemic examination was normal. In abdominal examination, non tender and firm swelling in size of 18×9.7×4.2 centimeters was present in umbilical region extending from right to left iliac fossa (Picture 1). Mobility was seen in perpendicular to direction of mesentery, simulating mesenteric cyst. Hemoglobin of 12 g/dl and WBC count of 8,400/ mm³ Liver function test was normal. Radiological evaluation by ultrasonography and computed tomography showed distended gallbladder with multiple stones, multilayered wall, dilated common bile duct and horizontal lie of gallbladder. Patient had exploratory laparotomy with preoperative findings showing distended gall bladder, omentum adhered to fundus, necrosed fundus, dilated common bile duct. Gallbladder was free floating with mesentery and twisted around dilated cystic duct of 180 degrees in clockwise (Picture 2). Detorsion and cholecystectomy was done. Cut section of gallbladder showed thick mucus inside, thickened wall multiple stones and single stone impacted in cystic duct (Picture 3). Histopathological examination showing features of chronic cholecystitis. Post operative period was uneventful as well as follow up period.





Picture 3. Cut section of gallbladder showing thick mucus inside, thickened wall multiple stones and single stone impacted in cystic duct.

Discussion

Wendell (4) in 1898, first described gallbladder volvulus, about 400 cases have been reported. This is one of the peculiar condition of gallbladder, 84% of those having volvulus are elderly women. Peak incidence is seen in 65-75 years of age. Only 13 cases of gallbladder torsion have been reported in children (5). Torsion can be partial variety or of complete type. Axial twist occurs around cystic duct impeding blood supply and occlusion of flow of bile. There is no concrete evidence of factors leading to torsion of gallbladder. Kyphosis, visceroptosis, cholelithiasis, blunt trauma abdomen and adhesive bands are etiological factors implicated for torsion of gallbladder. A prerequisite for torsion is presence of a redundant mesentery. Initiators of the torsion to occur are peristalsis in the transverse colon, duodenum, or gallbladder. Anatomical basis for explaining torsion of gallbladder is variation in the attachment of the gallbladder to the inferior margin of the liver, tortuous cystic arteries and partial fixation of the fundus to a fore-shortened liver bed (6). No characteristic signs and symptoms are attributed to this entity. A clinical picture often mimics acute cholecystitis. A low frequency of fever and jaundice, poor response to antibiotic therapy, and acute onset of abdominal pain is seen (7). Torsion can be associated with both calculous or acalculous cholecystitis. A nonocclusive mesenteric ischemia with torsion of gallbladder has been reported (8). If untreated, necrosis of gallbladder occurs.

Diagnostic value of current radiological imaging is limited. Its diagnosis prior to operative exploration has been extremely elusive (9). Optimal imaging for diagnosis is ultrasound and computed tomography scan (10). A highly suggestive sign of gallbladder torsion observed on ultrasonography or computed tomography is a markedly enlarged "floating" gallbladder with a continuous hypoechoic line indicating edematous change in the wall. The diagnostic imaging criteria are (1) collection of fluid between the gallbladder and the gallbladder fossa of the liver, (2) a horizontal rather than vertical arrangement of the long axis of the gallbladder, (3) the presence of a well-enhanced cystic duct located on the right side of the gallbladder, and (4) signs of inflammation including marked edema with thickening of the wall (11). Magnetic resonance cholangiopancreatography (MRCP) can be very useful in making a definitive diagnosis (12). Findings observed in MRCP are a v-shaped distortion of the extrahepatic bile ducts due to traction by the cystic duct, tapering and twisting interruption of the cystic duct, a distended and enlarged gallbladder that is deviated to the midline of the abdomen, and a difference in intensity between the gallbladder and the extrahepatic bile ducts and the cystic duct. Lyons et al. (13) emphasized of obtaining decubitus or oblique views at the end of a hepatobiliary study in selected cases of unusual findings.

Preoperative diagnosis still remains challenge. Most of cases are diagnosed at the time of operation. A clinical suspicion is made when conservative management for acute cholecystitis fails. The choice of surgical treatment is an open or laparoscopic approach. Detorsion and removal of the gallbladder were accomplished. In laparoscopic cholecystectomy, distended gallbladder pose difficulty and operative vision is limited, increases operative injury (14). There are case reports of using endoscopic retrograde cholangiopancreatography has been proposed as therapeutic tool in torsion gallbladder (15).

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