MATHEWS

Case Report

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Gallbladder Volvulus a Rare Clinical Presentation, Case Report

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ABSTRACT

Introduction: Gallbladder volvulus is a rare clinical entity, and it is one of the causes of the acute abdominal pain which is hard to diagnosis and it is needed emergency surgery. **Case Presentation:** An 86 years old woman with upper abdominal pain which was more in right upper quadrant, nausea and vomiting for 3 days. She had right upper abdominal tenderness with sharpness in right upper abdominal quadrant without rebound tenderness. She underwent emergency laparotomy. The gallbladder was gangrenous and had rotation around the cystic pedicle, so cholecystectomy was done for her. **Discussion:** Gallbladder volvulus is an uncommon cause of acute abdominal pain and pre- operative diagnosis is complicated. The cause of volvulus is not completely understood, it is more in old women and is needed an emergency surgical intervention. **Conclusion:** It is really important to know although gallbladder volvulus is an uncommon manifestation but it is an important emergency differential diagnosis of acute abdominal pain specifically in elderly patients.

KEYWORDS: Gallbladder volvulus, Cholecystitis, Case Report

INTRODUCTION

Gallbladder volvulus is a rare clinical entity with 6% mortality rate. It was first reported by Wendel in 1898. It is a condition which is predominantly occurs in elderly (ages of 60-80), but children may also be affected. The incidence of gallbladder volvulus is about one in 365,520 hospital admissions and female to male ratio is 3/1.4 [1]. The exact etiology is unclear, but some certain anatomical variants are thought to be effective. Five types of gallbladder are recognized duo to position in relation to the liver; 1) Completely embedded in the liver, 2) Attached closely by the peritoneum to the under surface of the liver, 3) Mesentery is completed but held closely to the liver, 4) Complete and long mesentery, 5) Incomplete mesentery which is attached along the cystic duct. Only situation 4 and 5 with freely hanging of gallbladder can predispose to gallbladder volvulus [2]. Volvulus can be incomplete with 180 degrees rotation or complete with >180 degrees rotation [1,3,4].

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CASE PRESENTATION

An 86 years old woman with upper abdominal pain which was more in right upper quadrant, nausea and vomiting for 3 days was referred to Ghaem hospital (tertiary referral center in Mashhad, Iran). In past medical history she had hypertension and past surgical history of cataract. She had history consumption of Tab captopril 50mg (qd), Tab osvix 75 mg (qd) and oral opium. She had right upper abdominal tenderness with severity in right upper abdominal quadrant without rebound tenderness. Laboratory abnormal findings were WBC 13.7 (96%PMN), ESR 28, CRP 2+ and ALP 450. In abdominal and pelvic CT scan with IV and oral contrast there was a distended gallbladder with thick wall and also twisted signs of gallbladder (Figure 1).

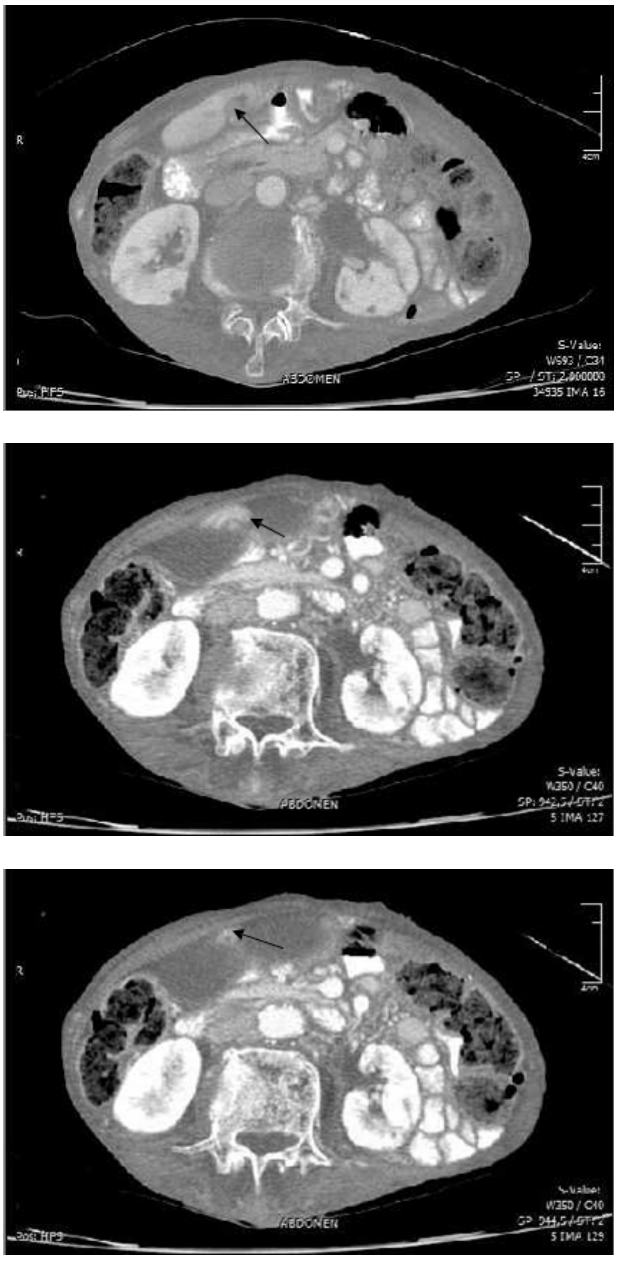

Figure 1. Axial CT scan view of gallbladder with thick wall and torsion sings (arrows)

She was undergone emergency laparotomy. The gallbladder was gangrenous and had rotation around the cystic pedicle, so cholecystectomy was done for her (Figure 2, 3).

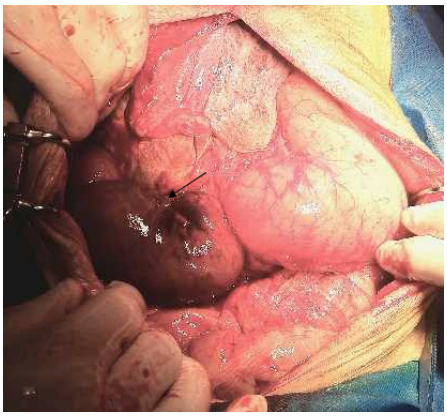

Figure 2. Intraoperative view of gallbladder with rotation around the cystic pedicle (arrow)

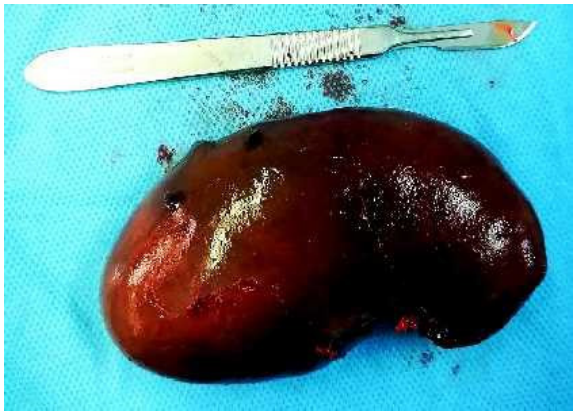

Figure 3. Gangrenous gallbladder specimen

DISCUSSION

Acute gallbladder torsion is a rare phenomenon and often occurs in elderly, thin women with acute abdomen presentation and signs of acute cholecystitis. Several conditions are included as risk factors include; age > 70 years, weight loss, female, elongated mesentery, liver atrophy, atherosclerosis, kyphoscoliosis and loss of visceral fat which results in the elongated gallbladder mesentery necessary [2]. In our patients, she was 86 old female with kyphoscoliosis and she was 45 kg .On laboratory tests, leukocytosis may be present, indicating an inflammatory response [5,6]. Raised C-reactive protein is frequent finding especially with the onset of gangrenous gallbladder [7]. In our patient leukocytosis and also elevated level of ESR and CRP were founded. Radiologic findings for gallbladder torsion are included a large floating gallbladder and a thickened wall. Specific signs seen with gallbladder volvulus are included the presence of the gallbladder outside its normal anatomic area, inferior to the liver or in a transverse position with an echogenic conical structure

corresponding to the twisted pedicle. The importance of gallstones is unclear and about 70%-80% of patients with gallbladder volvulus had no gallstones [8]. In our patient the above criteria and twisted sings were founded in CT scan. Gallbladder will be more distended in torsion case than in a normal acute cholecystitis [9]. In our patient the gallbladder was really distended. Treatment is an emergency surgery includes cholecystectomy after detorsion. This can be done by laparoscopy, which was first done by Schroder and Cusumano in 1994, or by open technique. Detorsion prior to cholecystectomy is helpful technique to avoid bile duct injury [8]. In our patients, according to our anesthesiologist advice open surgery was performed.

CONCLUSION

Although gallbladder volvulus is a rare presentation, but it is important to consider it as a differential diagnosis of acute abdominal pain and also acute cholecystitis specifically in elderly patients. However, preoperative diagnosis of gallbladder volvulus is not easy and there is not any gold standard method to diagnosis. It is important to have early intervention to prevent complication such as perforation of the gallbladder.

ETHICAL APPROVAL

Duo to hospital ethical board approval investigation this case does not meet the criteria for human subject research.

CONSENT

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

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