

A Case report of Spontaneous Gallbladder Perforation in Durrës Hospital

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Abstract

Gallbladder perforation occurs very rarely. The most frequent causes of this complication are: acute calculous gangrenous cholecystitis, acalculous cholecystitis, but very rarely, perforation of the gallbladder may occur without obvious clinical and radiological signs of perforation of the gallbladder. Here I am describing the case of a 76-Year-old woman. The patient was presented to the Emergency Department of Durres regional hospital with the diagnosis: Acute generalized abdomen. The etiological diagnosis was established during the surgical intervention. This clinical case is rare, but it shows that this diagnosis should be taken into consideration by surgeons, in elderly patients who present acute generalized abdomen with unclear etiology in the preoperative period.

Keywords: *Gallbladder, Generalized peritonitis, Perforation.*

Introduction

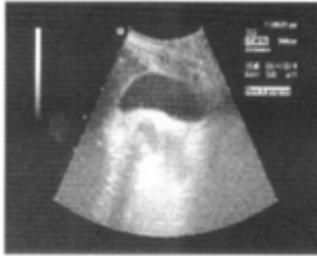
A rare complication of acute cholecystitis is gallbladder wall perforation. In these patients, due to difficulties in diagnosis or due to delayed treatment, a high level of mortality is observed (1). The incidence of perforation in acute calculous cholecystitis varies from 2 to 11 %. Perforation is the serious complication and

appears in advanced stages of acute cholecystitis. It mainly appears in the stage of acute gangrenous cholecystitis. While in the case of acute acalculous cholecystitis, the incidence of perforation varies from 10-20% (15). Regardless of the etiological cause that led to the perforation of the gallbladder, the clinical signs presented by the patients are similar (10, 14). Gallbladder perforation is mainly diagnosed in the stage of generalized peritonitis (16). The patients undergo surgery at this stage and regardless of the late diagnosis, their clinical outcome has been good (3, 4). I will describe a rare case of a patient with generalized peritonitis from spontaneous perforation of the gallbladder.

Case presentation

A 76-years-old woman was referred to the Durres hospital emergency department with severe abdominal pain, spread throughout the abdomen, continuous. The patient reports that she had abdominal pain for three days, which has been increasing in intensity. On palpation, the patient has pain in the entire abdomen, but more in the right abdominal quadrants and in the hypogastrium, with peritoneal reaction in these abdominal areas. The patient does not refer to a chronic accompanying disease. In admission the blood pressure measured 160/95 mmHg, the pulse rate was 82 beats per minute, the respiratory rate was 23 breaths for minute and the temperature was 37.4 grade Celsius. Laboratory analyses results: white blood cell count: 15.610 / mm³; AST: 38 U/L; ALT: 20 U/L; total bilirubin: 1.2 mg/dl; amylase: 56 U/L; creatinine: 1.2 mg/dl; urea: 51 mg/dl; total protein: 4.7 g/dl. Sonography does not reveal changes in the bile ducts, but the expansion of the intestinal loops and edema of their wall is evident (Figure 1, 2). In the computerized tomography of the abdomen, liquid between the loops, thickening of the wall of the loops, their dilatation and hypotony is evident, but no perforation of any intra-abdominal organ is evident (Figure 3). The patient was hospitalized, the abdominal pain is persistent, with a peritoneal reaction, in the stage of an acute abdomen, with unknown etiology. In these conditions, the patient undergoes emergency surgical intervention. An exploratory laparotomy with a median incision is performed. In the intraperitoneal space, bile-colored liquid is evident in moderate amounts, localized throughout the intraperitoneal space. There is no evidence of damage to other organs, except for a perforation of the gallbladder wall. The gallbladder had normal walls, no inflammation and no infection, no calculi, apart from the area where the perforation had occurred, which was necrotic and of very small size, with a diameter of 2-3 mm, located at the fundus of the cholecyst. In the histopathological examination, a small inflammatory and necrotic area is evident which coincides with the perforation hole. The patient's postoperative progress was good. The hospital stay was 18 days. She leaves the hospital cured.

FIGURE 1



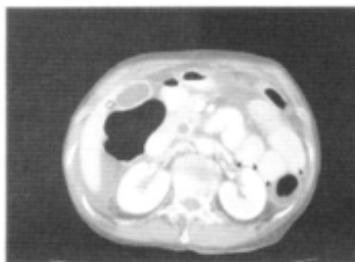
Ultrasonography of the gallbladder: Unremarkable findings and the gallbladder wall has a well-preserved continuity.

FIGURE 2



Ultrasonography: Findings reveal a diffuse thickening and dilatation of the small intestine.

FIGURE 3



Computed tomography: Finding reveal a normal-looking gallbladder, while the small bowel wall is diffusely thickened and dilated.

Discussion

Gallbladder perforation has been reported in many cases, but there are discussions regarding the method of diagnosis and treatment (14). Cases of perforation to whom not a specific cause is found are rare in literature and are reported as spontaneous cases, compared to cases of perforation of the gallbladder due to acute cholecystitis, which are more frequent (3,4). In the case of spontaneous perforation of the gallbladder, the perforation occurs more often in the fundus, as this area has the lowest level of vascularization. This fact shows the main importance of the ischemic process, which leads to perforation of the gallbladder wall (1,14). The diagnosis of spontaneous perforation of the gallbladder in most cases is established in the operating room during the intervention (4). The reasons for the impossibility of establishing the diagnosis in the preoperative period are the unclear clinical signs, and the limited radiological data in clarifying and establishing the diagnosis (7). In our case, the imaging examinations did not help in establishing the diagnosis due to the absence of inflammation of the gallbladder. Mortality in cases of perforation due to acute cholecystitis is high (14). As for idiopathic perforation of the gallbladder, mortality is low. This is explained by the proper and urgent treatment of the patient (4).

Conclusion

The case I referred compared to other cases of perforation of the gallbladder, has similarities in the clinic, in the imaging examinations and in the pre- and post-operative progress. The histopathological examination revealed ischemic necrosis at the level of the perforation of the gallbladder wall. This necrosis is caused by an ischemic insult. This insult can be caused by atherosclerosis, local vasoconstriction, vasculitis, or by idiopathic factors. In conclusion, the cases of elderly patients presenting to the emergency room with the diagnosis: Acute abdomen of unknown etiology should also be suspected of spontaneous perforation of the gallbladder.

References

1. Roslyn JJ, Thompson JE, Darvin H, DenBesten L. (1987). Risk factors for gallbladder perforation. *Am J Gastroenterol.*, 82:636-640.
2. Deric H, Cara C, Bozdog AD, Nazli O, Tansug T, et al. (2006). Diagnosis and treatment of gallbladder perforation. *Word J Gastroenterol* 12 (48): 7832-7836.

3. Tanaka M, Takahashi H, Yarima Y, Okamura K, et al. (1997). Idiopathic perforation of the gallbladder report of a case and a review of the Japanese literature. *Surg Today* 27 (4): 360-363.
4. Esteveao-Costa J, Soares Oliveira M, Lopes JM, Carvalho JL (2002). Idiopathic perforation of the gallbladder: a novel differential diagnosis of acute abdomen. *J Pediatr Gastroenterol Nutr* 35 (1): 88-89.
5. Morris BS, Balpande PR, Morani AC, Chaudhary RK, Maheshwari M, et al. (2007). The CT appearances of gallbladder perforation. *Br J Radiol* 80 (959): 898-901.
6. Stefanidis D, Sirinek KR, Bingerer J (2006). Gallbladder perforation: risk factors and outcome. *J Surg Res* 131 (2): 204-208.
7. Sood BP, Kalra N, Gupta S, Sidhu R, Gulati M, et al. (2002). Role of sonography in the diagnosis of gallbladder perforation. *J Clin Ultrasound* 30: 270-274.
8. Kalliafas S, Ziegler DW, Flancbaum L, Choban PS. Acute acalculous cholecystitis: incidence, risk factors, diagnosis, and outcome. *Am Surg.* 1998; 64: 471-475.
9. Felice PR, Trowbridge PE, Ferrara JJ,. (1985). Evolving changes in the pathogenesis and treatment of the perforated gallbladder a combined hospital study. *Am J Surg.*, 149: 466-473.
10. Lee GH, Lee SG, Hong SJ, Kwon TK, Park KM. (1993). Clinical experience of acute cholecystitis. *Korean J Gastroenterol.*, 25: 1274-1281.
11. Ryu JK, Ryu KH, Kim KH. (2003). Clinical features of acute acalculous cholecystitis. *J Clin Gastroenterol.*, 36: 166-169.
12. Nomura T, Shirai Y, Hatakeyama K,. (1997). Spontaneous gallbladder perforation without acute inflammation or gallstones. *Am J Gastroenterol.*, 98: 895.
13. Ong CL, Wong TH, Rauff A,. (1991). Acute gallbladder perforation: a dilemma in early diagnosis. *Gut.*,32: 956-958.
14. Kwon KH, Hong SJ, Park CW, Song DH, Lee JS, Lee MS, Cho SW, Shim CS. (1994). A case a gallbladder perforation treated by percutaneous transhepatic cholecystic drainage and percutaneous peritoneal drainage. *Korean J Gastrointesti Endosc.*, 14:482-488.
15. Hoi Jin Kim, M.D., Sang Jong Park, M.D., Sang Bae Lee, M.D., Jin Kwang Lee, M.D., Hyun Seung Jung, M.D., Chang Kyu Choi, M.D., and So Ya Paik, M.D.*, A Case of Spontaneous Gallbladder Perforation, PubMed
16. Satish Kumar Sheoran,a,b Rajiv Nandan Sahai,a Jagmohan Indora,a and Upender Chand Biswala, Spontaneous Perforation of Gallbladder: Case Report, PubMed