Images of Interest / Imagens de Interesse

# Gallbladder Perforation – Rolling Stones

Perfuração da Vesícula Biliar – Rolling Stones

Miguel Nogueira, Ana Catarina Silva, Jorge Machado

Serviço de Imagiologia, ULS Matosinhos, Matosinhos, Portugal Diretor de Serviço: Dr. Jorge Machado

#### Address

Miguel Nogueira Serviço de Imagiologia Hospital Pedro Hispano Rua Dr. Eduardo Torres 4464-513 Senhora da Hora, Portugal email: miguelfnog@gmail.com

#### Abstract

We report a case of a 93-year-old woman diagnosed with perforated acute cholecystitis. On the abdominal plain film, two calcified gallstones could be seen in the pelvis, which had rolled from the gallbladder into the Douglas pouch, mimicking calcified uterine leiomyomas. Gallstone spillage is rare and, if not recognized, may cause several complications like abscesses, intestinal adhesions, infertility or dyspareunia. A brief review of the literature is provided.

## Keywords

Cholecystitis; Gallbladder; Perforation; Gallstone.

#### Resumo

É apresentado o caso de uma mulher de 93 anos diagnosticada com colecistite aguda perfurada. No radiograma abdominal simples, observavamse dois cálculos vesiculares em topografia pélvica, "caídos" da vesícula para o fundo de saco de Douglas, mimetizando leiomiomas uterinos calcificados. A condição descrita é rara e, caso não seja corretamente diagnosticada, pode condicionar complicações como abcessos, aderências intestinais, infertilidade ou dispareunia. É realizada uma breve revisão da literatura.

## Palavras-chave

Colecistite; Vesícula biliar; Perfuração; Cálculos.

A 93-year-old women presented to the emergency department with fever and diffuse abdominal pain. At physical examination, the abdomen was diffusely painful and rigid on palpation. Blood tests showed leucocytosis and elevated C-reactive protein.

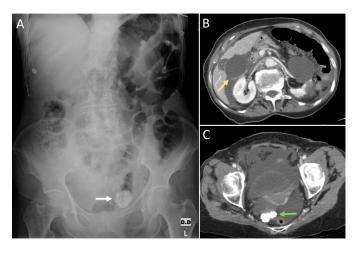
Plain abdominal radiograph findings were unremarkable with the exception of pelvic calcified nodules, which were initially considered as calcified uterine leiomyomas (Figure A – white arrow). Contrast-enhanced abdominopelvic CT scan showed ascites, gallbladder wall disruption and dilation (Figure B - yellow arrow), in relation with acute cholecystitis complicated with perforation. In the pelvis, two calcified gallstones could be seen, which literally had rolled from the gallbladder to the Douglas pouch (Figure C–green arrow). The patient underwent urgent laparotomy. There was a moderate coleperitoneum, acute cholecystitis with necrosis of the gallbladder wall and two gallstones on the Douglas pouch. Cholecystectomy was then performed and the pelvic gallstones removed. There were no

complications on the postoperative period and the patient was discharged home 8 days after hospital admission.

Gallbladder perforation is a relatively rare complication of acute cholecystitis, which is associated with a high mortality. Clinically, it may be indistinguishable from uncomplicated acute cholecystitis.<sup>1</sup>

The pathophysiologic mechanism is thought to result from cystic duct occlusion by a gallstone, followed by overdistension of the gallbladder, leading to increased intraluminal pressure. Venous drainage may become impaired, with consequent vascular compromise, necrosis and perforation of the gallbladder wall.<sup>2</sup>

Spontaneous spillage of gallstones due to gallbladder perforation is rare. Nevertheless, it is a relatively well-known complication of laparoscopic cholecystectomy, occurring in 0,08-0,8% of the cases.<sup>3</sup> Abscess formation





is the most common complication of spilt gallstones, occurring on average 13 months after surgery. Other reported complications are fistulas, intestinal adhesions and perforation. Gynaecological complications are uncommon; however, gallstones in the Douglas Pouch may cause local inflammation leading to fibrosis, pelvic pain, infertility and dyspareunia. <sup>4,5</sup>

In the case of gallstone peritoneal spillage during laparoscopic cholecystectomy every effort should be made to recover all the gallstones. Nevertheless, conversion to open surgery is controversial and generally not indicated.<sup>5</sup>

Received / Recebido 13/03/2017 Acceptance / Aceite 25/05/2017

#### Ethical disclosures / Divulgações Éticas

Conflicts of interest: The authors have no conflicts of interest to declare. Conflitos de interesse: Os autores declaram não possuir conflitos de interesse. Financing Support: This work has not received any contribution, grant or scholarship.

Suporte financeiro: O presente trabalho não foi suportado por nenhum subsídio ou bolsa.

subsídio ou bolsa. Confidentiality of data: The authors declare that they have followed the protocols of their work center on the publication of data from patients. Confidencialidade dos dados: Os autores declaram ter seguido os protocolos do seu centro de trabalho acerca da publicação dos dados de doentes. Protection of human and animal subjects: The authors declare that the procedures followed were in accordance with the regulations of the relevant clinical research ethics committee and with those of the Code of Ethics of the World Medical Association (Declaration of Helsinki). Proteção de pessoas e animais: Os autores declaram que os procedimentos seguidos estavam de acordo com os regulamentos estabelecidos pelos responsáveis da Comissão de Investigação Clínica e Ética e de acordo

com a Declaração de Helsínquia da Associação Médica Mundial.

### References

- 1. Derici H, Kara C, Bozdag AD, Nazli O, Tansug T, Akca E. Diagnosis and treatment of gallbladder perforation. World Journal of Gastroenterology: WIG. 2006;12(48):7832-6.
- 2. Khan SA, Gulfam, Anwer AW, Arshad Z, Hameed K, Shoaib M. Gallbladder perforation: a rare complication of acute cholecystitis. JPMA The Journal of the Pakistan Medical Association. 2010;60(3):228-9.
- 3. Virupaksha S. Consequences of Spilt Gallstones During Laparoscopic Cholecystectomy. The Indian Journal of Surgery. 2014;76(2):95-9.
- 4. Makanjuola D, Murshid K, al Rashid R, al Damegh S, Fathuddin S. Peritoneal lithiasis and cliptomas following laparoscopic cholecystectomy. Eur J Radiol. 1996;23(2):121-5.
- 5. Targarona EM, Balague C, Cifuentes A, Martinez J, Trias M. The spilled stone. A potential danger after laparoscopic cholecystectomy. Surgical endoscopy. 1995;9(7):768-73.