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Órgano de difusión científica de la Academia Mexicana de Cirugía
Fundada en 1933
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CLINICAL CASE

Synchronous acute cholecystolithiasis and perforated acute appendicitis. Case report☆

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Received 25 April 2014; accepted 3 November 2014
Available online 15 February 2016

KEYWORDS
Cholecystitis;
Lithiasis;
Appendicitis;
Acute;
Synchronous

Abstract
Background: Acute appendicitis and acute cholecystitis are among the most common diagnoses that general surgeons operate on. However, it is rarely described in its synchronous form.
Clinical case: A 43 year-old woman attending the clinic for right upper quadrant pain of 11 days duration. The patient refers to intermittent radiating pain in the right side, with positive Murphy, tachycardia, and fever. The laboratory results showed white cells 16,200/mm^3, glucose 345 mg/dl, abnormal liver function tests. Acute cholecystitis was reported with ultrasound. A Masson-type incision was made, noting an enlarged pyogenic gallbladder with thickened walls, sub-hepatic abscess of approximately 300 ml, greenish-yellow color, and fetid. An anterograde subtotal cholecystectomy is performed due to difficulty in identifying elements of Calot triangle due to the inflammatory process, opening it and extracting stones. The right iliac fossa is reviewed, finding a plastron and a sub-serous retrocaecal appendix perforated in its middle third with free fecalith and an abscess in the pelvic cavity. An anterograde appendectomy was performed and the patient progressed satisfactorily, later being discharged due to improvement.
Discussion: In this patient, with a history of recurrent episodes of gallbladder pain and disseminated acute abdominal pain without peritoneal irritation, clinical suspicion was exacerbated cholecystitis with probable empyema of the gallbladder. Open surgery approach for this patient allowed access to both the appendix and gallbladder in order to perform a complete exploration of the abdominal cavity.
Conclusion: The synchronous presentation of cholecystolithiasis and complicated appendicitis has not been reported in the literature.

☆ Please cite this article as: Padrón-Arredondo G, de Atocha Rosado-Montero M. Colecistitis litiásica crónica agudizada y apendicitis aguda perforada sincrónicas. Reporte de caso. Cir Cir. 2016;84:50–53.

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PALABRAS CLAVE
Colecistitis;
Litiasis;
Apendicitis;
Aguda;
Sincronía

Colecistitis litiásica crónica agudizada y apendicitis aguda perforada sincrónicas. Reporte de caso

Resumen
Antecedentes: La apendicitis aguda y colecistitis aguda son los diagnósticos más comunes que los cirujanos generales operan. Sin embargo, rara vez se describe su presentación de forma sincrónica.
Caso clínico: Mujer de 43 años que acudió a la consulta por dolor en el hipocondrio derecho de 11 días de evolución, con dolor intermitente irradiado en el hemicinturón derecho, Murphy positivo, taquicardia y fiebre. Leucocitos 16,200/mm^3, glucosa 345 mg/dl, pruebas de funcionamiento hepático alteradas, el ultrasonido reportó colelitiasis agudizada. Se realizó incisión tipo Masson obteniendo vesícula a tensión (piocolecisto) con paredes engrosadas, absceso subhepático de aproximadamente 300 ml, color verdoso-amarillento, fétido. Se realizó colecistectomía anterógrada subtotal por dificultad para identificar elementos del triángulo de Calot debido al proceso inflamatorio, con apertura de la misma y extracción de litos; se revisó la fosa iliaca derecha encontrando plastrón y apéndice retrocecal subseroso perforado en su tercio medio, con fecalito libre y absceso en hueco pélvico por lo que se realiza una apendicectomía parcial anterógrada. La paciente evolucionó satisfactoriamente siendo dada de alta por mejoría.
Discusión: En esta paciente, con el antecedente de cuadros recurrentes de dolor vesicular y con dolor abdominal agudo diseminado, y sin datos de irritación peritoneal, la sospecha clínica fue colecistitis litiásica agudizada con probable piocolecisto. El abordaje abierto para esta paciente permitió el acceso tanto al apéndice como a la vesícula biliar, permitiendo realizar la exploración de la cavidad abdominal.
Conclusión: La presentación sincrónica de colecistolitiasis agudizada y apendicitis aguda complicada (perforada) no ha sido informada en la literatura médica.

Background

Synchronous appendicitis and cholecystitis have rarely been reported, most have been described as cholecystolithiasis and appendicitis in the early stages, and in pregnant patients (within the same gestation period), in other words, not absolutely synchronous. The few reported cases are from Eastern Europe, and one case from Argentina.[1–4]

Clinical case

A 43-year old woman attending General Surgery with pain in the right hypochondrium. The patient had intermittent, irradiated, right-sided girdling pain, positive Murphy's sign, vital signs: blood pressure 120/70 mmHg, heart rate 100/min, respiratory frequency 20/min, temperature 38.5 °C. Laboratory report: hemoglobin 10.7 g/dl, leukocytes 16,200/mm,[3] segmented neutrophils 82%, prothrombin time 14.9 s, partial thromboplastin time 40.9 s, glucose 345 mg/dl; liver function tests: direct bilirubin 1.82 mg/dl, indirect bilirubin 0.50 mg/dl, total bilirubin 2.32 mg/dl, albumin 2.77 g/dl, albumin to globulin ratio 0.62 IU/l, gamma-glutamyl transferase 404 U/l, rest normal. Ultrasound reported acute cholecystolithiasis, and therefore a diagnosis of cholecystolithiasis was integrated.

A Masson incision was made with the following findings: gallbladder under tension (empyema) with thickened walls, on exploration adherences were released, and a subhepatic abscess was opened of approximately 300 ml, greenish yellow in color and fetid (anaerobes), a subtotal anterograde cholecystectomy was performed at the level of the gallbladder neck opening same and extracting stones, the largest was 2 cm and round and 2 more which were faceted. When evacuation of the abscess, and the simple cholecystectomy were completed the right iliac fossa was reviewed, finding a plastron and sub-serous retrocaecal appendix perforated in its middle third with free fecalith of 2 cm × 6 cm (Fig. 1) with an abscess in the pelvic cavity and right groove, an antegrade appendicectomy was performed. The patient made satisfactory progress and was discharged on the 5th day of her hospital stay as her condition had improved and she was tolerating an oral diet, with return of normal elimination.

Discussion

An important principle of medical diagnosis is the acute onset of symptoms, and the constellation of signs which should provide a better diagnosis. However, in this patient with a history of recurring gallbladder pain, with acute disseminated abdominal pain and no signs of peritoneal irritation, the clinical suspicion was acute cholecystitis with

Figure 1 Gallbladder with lithiasis and appendix with fecalith.

probable empyema of the gallbladder, without considering symptoms of appendicitis. Our case was similar to other reported cases in that 2 possible synchronous conditions were not considered.

DeMuro[5] reported a synchronous case of acute cholecystitis and acute early-stage appendicitis operated laparoscopically, both being pathological processes which had been diagnosed preoperatively. On reviewing the medical literature we only found 3 cases of acute appendicitis simultaneous with acute cholecystitis: (1) one case of concomitance of acute appendicitis and acute cholecystitis[6]; (2) another case of a pregnant women with gallbladder perforation coexisting with appendicitis[7]; (3) and finally, an apparent concomitance of acute appendicitis with acalculuous cholecystitis.[8] Acute appendicitis and symptomatic gallstones are the most common indications for non-obstetric surgical procedures during pregnancy. However, the combination of these 2 clinical presentations in the same gestation period is anecdotal. Neither DeMuro's case[5] nor those presented in their references were similar to ours in their form of presentation. Başaran et al.[9] reported the case of a 30-year old female patient with a twin pregnancy complicated by acute appendicitis followed by cholecystitis with poor fetal outcomes, in whom despite appropriate care when the 2 conditions occurred in the same gestational period, one after the other (not synchronous), complications can become inevitable. Recently, Martínez et al.[10] reported a case of appendicectomy due to acute appendicitis followed on the 4th day by acute acalculous cholecystitis in a girl of 11; the aetiopathogenesis of this condition in the immediate postoperative period has been associated with a high concentration of bile in the gallbladder, followed by rapid and intense contractions to empty the biliary sludge after starting an oral diet, in this case there was no absolute synchrony either. And another case of Shpizel et al.[11] referring to the co-existence of destructive cholecystitis and appendicitis in a child. Poliakov et al.[12] also reported this association as acute destructive phlegmonous appendicitis and cholecystitis. In our case, we could not specify which disorder predisposed to the other. Cholecystalgia, appendices and destructive gallbladders (phlegmonous and gangrenous, expressions of the inflammatory phases which end in necrosis and perforation) are terms which are little used in the West, but they also mean acute phases of these infectious processes which are very similar in physiopathology. These are terms which are widely used in Eastern Europe.[13,14] While the vast majority of patients with abdominal pain have one single diagnosis, surgeons need to be aware that multiple diagnoses can coexist. In such cases, a laparoscopic approach can be the ideal method, allowing surgical access to the entire abdomen, and is a procedure which is currently used almost all over the world. Patients with chronic recurring acute cholecystolithiasis, like our case, can present technical difficulties due to dense fibrosis, which hinders a clear identification of elements of Calot's triangle, which makes a subtotal cholecystectomy necessary.[15–18] Finally, acute cholecystitis is not a known complication of acute appendicitis, and appendicitis is not a complication of acute cholecystitis, in other words, these are 2 different disorders which are present at the same time.[19]

Conclusions

The synchronous presentation of acute cholecystolithiasis and acute complicated (perforated) appendicitis has not been reported in medical literature, and this is the first case that we have observed in our hospital and treated successfully simultaneously, therefore symptoms of acute abdomen with a diagnosis of acute cholelithiasis could be masking appendicitis symptoms and, therefore, a complete review of the intra-abdominal organs is compulsory.

Conflict of interests

The authors have no conflict of interests to declare.

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