Answer

Cholecystocutaneous Fistula (Jean-Louis Petit Phlegmon)

Spontaneous cholecystocutaneous fistulas have been reported since Thilesus in 1670.[1] In 1890, 169 cases of spontaneous biliary fistula were reported by Courvosier,[2] 36 cases were reported by Henry and Ort in 1949,[2] and only 16 cases were reported over the last 50 years.[3] Presently, incidence is greatest in women older than 60 years or men younger than 24 years.[1] Cholecystocutaneous fistulas occur as a result of the persistent inflammation of a perforated gallbladder, trauma, iatrogenic causes,[4] neglected chronic cholecystitis,[4] calculus cholelithiasis, or, infrequently, carcinomas.[3] Fistulas develop primarily at the fundus of the gallbladder and can communicate with the abdominal parieties, duodenum, colon, stomach, gluteal region,[4,5] chest wall, or thigh.[1]

Cholecystocutaneous fistulas typically present with a right upper quadrant, painless, fluctuant mass[1]; dyspepsia; abdominal wall cellulitis or suppuration; upper abdominal colic; or weight loss. Interestingly, cholecystocutaneous fistulas frequently are not preceded by an episode of acute cholecystitis.[1,4] Diagnosis is best confirmed with ultrasonography, computed tomography, or fistulogram. Treatment options include source control through percutaneous management only (including stone removal) in high-risk patients, minimally invasive cholecystectomy, and open management with cholecystectomy. Percutaneous drainage, with potential spontaneous closure of the fistulous tract, is no longer the preferred approach because it requires the subsequent surgical procedure of cholecystectomy to prevent recurrence.[3,4] Open surgical management is currently being considered the standard approach with cholecystectomy and external abscess drainage.[3] However, with improving skills and expanding techniques in laparoscopic surgery, a minimally invasive approach may soon become the standard. It has been reported that laparoscopic management of cholecystocutaneous fistulas is safe and cost-effective.[6] However, it is understood that basic principles in the laparoscopic management of gallbladder disease for cholecystocutaneous fistulas apply, which include obtaining the "critical view" with certainty and being mentally open to early conversion.

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REFERENCE

1. Vasanth A, Siddiqui A, O'Donnell K. Spontaneous cholecystocutaneous fistula. *South Med J.* 2004;97(2):183-185.
2. Henry CL, Ort TG Jr. Spontaneous external biliary fistulas. *Surgery.* 1949;26(4):641-646.
3. Urban C, Urban L, de Lima R, Bleggi-Torres R. Spontaneous combined internal and external biliary fistulae in association with gallstones and gliomatosis of the gallbladder. *Revista Brasileira de Cancerologia.* 2001;47(3):273-276.
4. Cruz RJ Jr, Nahas J, de Figueiredo LF. Spontaneous cholecystocutaneous fistula: a rare complication of gallbladder disease. *Sao Paulo Med J.* 2006;124(4):234-236.
5. Nicholson T, Born MW, Garber E. Spontaneous cholecystocutaneous fistula presenting in the gluteal region. *J Clin Gastroenterol.* 1999;28(3):276-277.
6. Malik AH, Nadeem M, Ockrim J. Complete laparoscopic management of cholecystocutaneous fistula. *Ulster Med J.* 2007;76(3):166-167.

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