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·临床研究·

胆囊十二指肠瘘伴胆石性肠梗阻1例分析并文献复习

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摘　要

目的：探讨胆囊十二指肠瘘合并胆石性肠梗阻的术前评估、诊断和手术方式。

方法：回顾性分析1例胆囊十二指肠瘘合并胆石性肠梗阻术前及术中的临床资料，并复习相关文献。

结果：患者术前CT检查考虑胆囊结石与胆石性肠梗阻。术中探查见回盲部40 cm处结石嵌顿，随后成功行肠切开取石、十二指肠瘘口修补、胆囊切除。术后痊愈出院，随访至目前未见相关并发症。

结论：胆囊十二指肠瘘合并胆石性肠梗阻临床罕见，早期的明确诊断及精确的评估是关键，应根据患者具体情况选择合适的手术方式。

关键词　胆囊结石病；胆瘘；肠瘘；十二指肠梗阻

中图分类号：R657.4

Cholecystoduodenal fistula with gallstone ileus: an analysis of one case and literature review

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Abstract

Objective: To investigate the preoperative evaluation, diagnosis and surgical approach of cholecystoduodenal fistula with gallstone ileus.

Methods: The clinical data of a patient with cholecystoduodenal fistula and gallstone ileus were analyzed retrospectively, and the relevant literature was reviewed.

Results: The patient was considered to have gallbladder stone and gallstone bowel obstruction by preoperative CT examinations. Intraoperative exploration found incarceration of a 40 cm stone at the ileocecal junction. Then, enterotomy and stone removal, duodenal fistula repair and cholecystectomy were successfully performed. The patient was discharged after postoperative recovery, and no related complications were observed up to the present time.

Conclusion: Cholecystoduodenal fistula with gallstone ileus is a rare condition in clinical practice, early diagnosis and accurate assessment are critical, and appropriate surgical approach should be chosen according to the specific characteristics of individuals.

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Key words　Cholecystolithiasis; Biliary Fistula; Intestinal Fistula; Duodenal Obstruction

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胆囊内瘘是胆囊与消化道、胆道等邻近脏器发生联通，当胆囊结石由内瘘口进入消化道，可引起肠道机械性梗阻，其临表现不典型，容易造成漏诊或延误诊断。肠内结石的大小、术中瘘口周围情况、患者的基础情况等将直接影响到治疗方式的选择。现回顾性分析1例胆囊十二指肠瘘合并胆石性肠梗阻患者的临床资料，旨在提高和加深对该类疾病的认识。

1　临床资料

患者　男，48岁。因"反复上腹部疼痛5 d"入院。患者5 d前无明显诱因出现上腹部疼痛，呈阵发性，间断性呕吐2次，无畏寒、发热，无恶心，未停止排便、排气。当地医院行肝胆胰脾彩超提示"胆囊结石伴胆囊炎"。入院后体检：体温36.0 ℃，脉搏105次/min，脉搏20次/min，血压116/90 mmHg（1 mmHg=0.133 kPa），全身皮肤、巩膜无黄染，腹部稍膨隆，右上腹部腹肌稍紧，有压痛，全腹无明显反跳痛，肠鸣音正常。实验室检查：白细胞计数13.18 × 10^9/L，中性粒细胞百分比70.7%，白蛋白49.33 g/L，直接胆红素8.40 μmol/L，间接胆红素26.53 μmol/L，天门冬氨酸氨基转移酶39.03 U/L，丙氨酸氨基转移酶66.58 U/L，肌酐215.30 μmol/L，钠128.08 mmol/L。全腹CT平扫+增强：胆囊与邻近十二指肠沟通，胆囊结石；小肠可见一结节状致密影，近端小肠轻度扩张，考虑胆石性肠梗阻（图1）。予以胃肠减压、禁食、抗炎、维持电解质平衡等对症支持治疗。经治疗4 d后，查体：肠鸣音稍弱，右上腹部压痛，无反跳痛。自诉排便排气较入院时有所减弱。复实验室检查：白细胞计数11.95 × 10^9/L，中性粒细胞百分比70.7%，白蛋白34.33 g/L，直接胆红素2.88 μmol/L，间接胆红素9.11 μmol/L，天门冬氨酸氨基转移酶23.18 U/L，丙氨酸氨基转移酶48.43 U/L，肌酐60.30 μmol/L，钠140.47 mmol/L。CT检查：胆囊结石；胆囊与邻近十二指肠沟通，考虑胆囊十二指肠瘘；回肠远侧肠结石，近端肠管扩张，考虑胆石性肠梗阻（图2）。结合患者的症状与体征，予以急诊剖腹探查。术中探查见：回盲部40 cm处可见结石嵌顿，以上小肠肠管扩张；胆囊内可探及结石，胆囊与十二指肠粘连；腹腔余脏器未见明显异常。明确肠内结石位置后，切开嵌顿处回肠对系膜缘肠管约3 cm，取出1枚直径约4 cm的巨大棕色结石，缝合肠管；分离胆囊周围粘连，见胆囊颈部与十二直肠形成内瘘，精细分离瘘口周围组织，将十二指肠和胆囊分离开来，见一约3 cm左右的巨大瘘口；切除胆囊，横行间断缝合十二指肠瘘口，并将浆肌层加固，并将胃管置入瘘口以下位置（图3）。手术顺利，术后第9天痊愈出院。术后采用电话、门诊随访至今，无任何不适，并将继续随访。

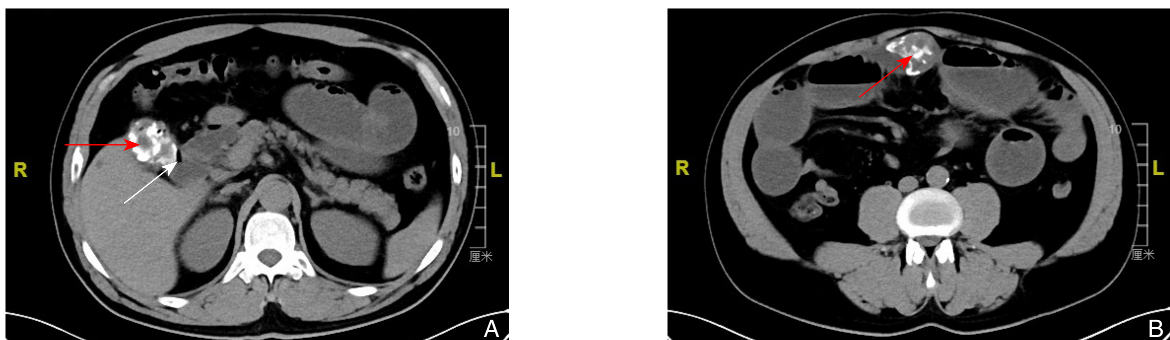

图 1　入院后首次全腹 CT 扫描显示，胆囊区内见混杂密度影堆积，胆囊积气；胆囊与邻近十二指肠沟通，小肠可见一结节状致密影，近端肠管梗阻轻度扩张　A：红色箭头表示胆囊结石；白色箭头表示胆囊与十二指肠瘘口处；B：红色箭头表示进入肠管内的结石

Figure 1　The first whole abdominal CT-scan after admission showing mixed-density shadow accumulated in gallbladder region, gas collections of the gallbladder; communication between the gallbladder and adjacent duodenum, a nodular dense shadow in the small intestine and the obstruction of proximal intestinal canal with mild dilation　A: The white arrow showing the gallbladder stone; B: The red arrow showing the stone entering into the intestinal canal

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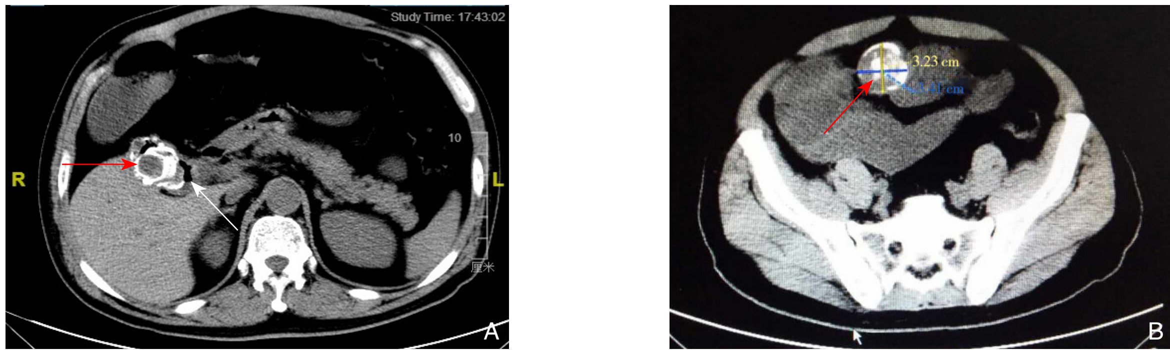

图 2　对症支持治疗 4 d 后全腹 CT 扫描显示，胆囊内可见混杂密度影，胆囊积气；胆囊与临近十二指肠沟通；回肠下段可见一结节状致密影，与前次相比，有明显下移　A：红色箭头表示胆囊结石，白色箭头表示胆囊与十二指肠瘘口；B：红色箭头表示肠管内结石，内径大小约 3.23 cm × 3.41 cm

Figure 2　The whole abdominal CT-scan 4 d after symptomatic and supportive treatment showing mixed-density shadow in the gallbladder with gas collections; communication between the gallbladder and adjacent duodenum; a nodular dense shadow in the lower portion of the ileum which is obviously down moved compared with the previous image　A: The red arrow showing the gallbladder stone and the white arrow showing the fistula between the gallbladder and duodenum; B: The red arrow showing the stone in the intestinal canal, with 3.23 cm×3.41 cm in its inner diameter

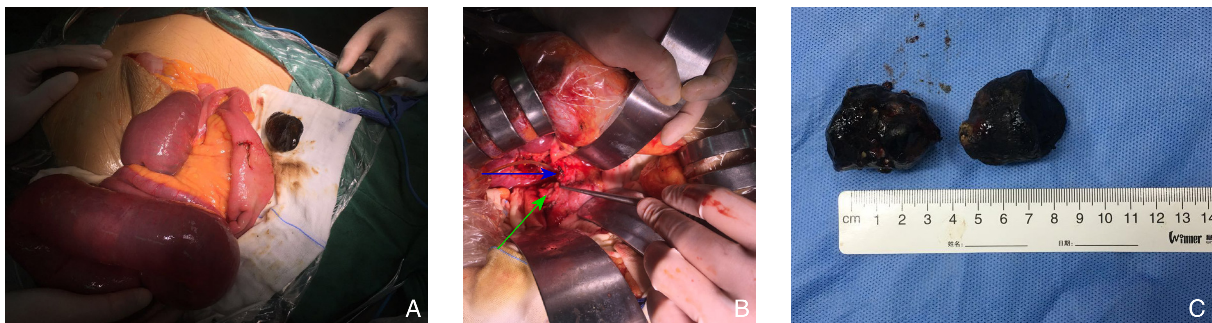

图 3　**手术中情况**　A：肠管切开取石；B：胆囊十二指肠瘘口处（绿色箭头示十二指肠瘘口开口，蓝色箭头示胆囊瘘口开口）；C：取出的胆囊内结石（左）和肠内结石（右）

Figure 3　Intraoperative views　A: Bowel incision for stone extraction; B: The fistula between the gallbladder and duodenum (green arrow showing the opening of the fistula to the duodenum, and the blue arrow showing the opening of the fistula to the gallbladder); C: Stone removed from the gallbladder (left) and the intestine (right)

2　文献复习与讨论

胆囊内瘘是胆囊疾病少见的并发症[1]，而其合并胆石性肠梗阻更是少见[2-5]。胆囊内瘘可发生胆囊与十二指肠、结肠、胃等胃肠道中，也可以发生在胆道中，而胆囊十二指肠瘘在胆囊内瘘中发生率达60%~86%[6]。胆囊十二指肠瘘形成的原因主要与胆石症有关，胆囊结石引起的梗阻、感染、压迫等致使胆囊与肠道发生粘连、血运障碍，引起缺血、水肿、坏死等病理学改变，进而形成胆囊与消化道在之间的内瘘。

胆囊十二指肠内瘘术前诊断较为困难[7]，无特异性临床表现，多在术中明确诊断，容易出现漏诊[8]，即使伴有结石性肠梗阻早期症状也不典型，多为间歇性机械性不全性肠梗阻表现，常表现为“滚石性肠梗阻”的特征：腹痛→缓解→腹痛。因此诊断常被延误、误诊或漏诊,其死亡高达12%~27%[9]。相关文献[10-11]指出有以下表现可考虑是否存在胆囊十二指肠内瘘可能：(1) 中老年患者，有急慢性胆囊炎发作病史；(2) 无症状结石出现幽门梗阻并呕吐患者；(3) 影像学提示胆囊萎缩、胆囊结石、胆囊积气或肝内外胆管积气；当胆囊结石通过内瘘口进入肠道引起的胆石性肠梗阻在CT检查下可表现典型的Rigler三联症[12]：(1) 肠道积气、积液、扩张；(2) 肠道内异位结石影；(3) 胆囊、胆道内出现气体。虽腹部立位平片和腹部超声对结石性常梗阻也一定的作用[13]，但CT对于整体的敏感度（93%）、特异度（100%）、

准确性（99%）仍表现出较大的优势[9]。对于无法确诊的患者，手术探查仍是诊断本病的重要手段。

采用何种有效方法治疗胆囊十二指肠瘘伴胆石性肠梗阻是影响其预后的关键因素。有研究[14-16]表明当肠内结石直径>2.5 cm可能造成肠道的梗阻，梗阻部位一般位于距曲氏韧带7~15 cm的空肠上段和距回盲部40~60 cm的回肠下段。胆囊内瘘合并胆石性肠梗阻患者，往往全身情况差，常合并感染、电解质混乱和营养不良等，在抗感染、维持电解质平衡的基础上及时手术治疗。手术的目的旨在“解除梗阻、治疗胆肠瘘、切除胆囊”。在一般情况较好的情况下可在肠内结石取出的同时，行瘘口修补及胆囊切除。对于全身情况差、粘连水肿重、解剖结构不清晰患者可行I期肠内结石取出，再行II期瘘口修补及胆囊切除[8]，其具有操作简单、技术难度要求相对较低、手术时间短等优势[17-19]。当瘘口较大、需清处组织较多时，Billroth II式胃大部切除术也是一种有效、安全的手术方法[20]。也有文献[21-23]表明，在胆囊结石排空的胆囊十二指肠瘘患者中，胆囊十二指肠瘘也能自行闭合。具体选用何种手术方法因根据患者的全身情况情况、瘘口大小、周围粘连、水肿情况、发病时间的长短等综合考虑，应选择创伤小、恢复快、适合患者的手术方式，同时腹腔镜手术的快速发展也为其微创治疗提高了可能[24]。

本文1例胆囊十二指瘘合并胆石性肠梗阻患者，经术前CT明确胆囊十二指肠瘘位置所在处及肠结石，并表现出了典型的Rigler三联症。从入院时到手术前症状表现为“滚石性肠梗阻”的特点，对比入院时CT和术前CT肠内结石的位置情况来看，结石有明显的下移，但不能排出，其排便排气次数减少，肠鸣音相比入院时减弱。术中探及十二指肠瘘口周围水肿、粘连轻，十二指肠一般情况可，给予了单纯缝合瘘口。综合患者从保守治疗到手术以及手术中的情况，笔者有以下体会：(1) 当胆囊炎、胆囊结石患者，出现肠梗阻的体征时，尤其是伴有腹痛、呕吐-缓解-腹痛、呕吐的症状时，需考虑到是否存在胆囊消化道瘘合并胆石性肠梗阻。(2) 当明确胆囊十二指瘘合并胆石性肠梗阻后，结石直径大小、硬度等直接影响着梗阻情况是否能解除，如采取非手术治疗，需严密观察腹部体征及影像学变化，在这个过程中，可能会出现肠梗阻好转的情况，但也可能会再次发生梗阻。需综合评价肠结石情况，如不能排出，及时手术治疗。(3) 胆囊十二指肠瘘合并胆石性肠梗阻手术最大的困难之出在于瘘口周围组织粘连的分离，常合并水肿，局部解剖层次不清，容易造成附加的损伤，术中应做到精细操作、顿性分离。(4) 粘连最为紧密的往往是瘘口所在之处，应先从组织粘连轻处着手，逐步分离。切开胆囊，从胆囊内找到瘘口所在处也是一种有效、安全的方法。(5) 如无法确认胆囊管开口，可用脑室引流管在胆囊内探查。(6) 肠瘘口处做横向、间断缝合，尽量减少术后狭窄可能。(7) 对于存在的瘘口的十二指肠壁缝合时，除单纯缝合外，必要时可用带系膜的空肠浆肌瓣修补瘘口，周围大网膜覆盖缝合固定。(8) 在十二指肠内瘘口处放置胃肠减压管，使十二指肠内压力降低有利于瘘口愈合，并放置腹腔引流管[25-26]。

胆囊十二指肠瘘合并胆石性肠梗阻临床症状不典型，容易造成漏诊、误诊、延迟诊断，耽误有效的治疗时间。仔细的病史询问、严格的查体、有效的辅助检查以及动态的监测能提高其术前诊断率。手术治疗是其有效的手段，采用何种手术治疗应综合患者的情况具体而定。

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