

Case Report

Gallstones ileus in young patient with incidental finding a small bowel carcinoid tumour

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Received: 17 November 2023

Accepted: 16 December 2023

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ABSTRACT

Gallstone ileus in young patient with incidental finding carcinoid of small bowel identified during exploration for proximal stones, both pathologies have no known pathological reasons to be associated with each other. We present a case of a 45-year-old male who presented with small bowel obstruction as an emergency. At laparotomy we found gall stone impacted in mid ileum and during exploration to exclude multiple proximal stones, small carcinoid identified in mid jejunum. Segmental small bowel resection was performed without disturbing the biliary pathology. Gallstone ileus may manifest in the younger population, and in the course of searching the small bowel to eliminate the presence of multiple stones proximal to the site of the impacted gallstone ileus other pathology may be detected for which we incidentally identified asymptomatic carcinoid such case has never been reported before. Importance of a thorough laparotomy is emphasized.

Keywords: Asymptomatic carcinoid, Gallstone ileus, Young patient, Small bowel obstruction

INTRODUCTION

Gallstone ileus (GI) is defined as the obstruction of the intestinal lumen resulting from the impaction of one or more sizable gallstones, representing a rare complication of gallstones observed in 1-4% of all instances of non-strangulating mechanical small bowel obstructions.^{1,2} This condition is predominantly manifested in the elderly population. Diagnostic confirmation is frequently achieved through computed tomography (CT) imaging (classical features of which not always present pneumobilia, intestinal obstruction, ectopic gallstones).³

It has never been reported in literature that gallstone ileus coincides with the incidental discovery of a small bowel carcinoid tumour, distant from the site of obstruction. This was noticed during the investigation for additional stones within the proximal small bowel lumen, unrelated to the site of obstruction.⁴

The standard surgical approach involves the extraction of the gallstone responsible for the obstruction, coupled with a thorough examination to rule out the presence of multiple stones proximal to the obstruction site. A lot of debate regarding the management of biliary-enteric fistula, whether intervention should occur concomitantly with the initial operation, deferred to a subsequent procedure, or left untreated.⁴

CASE REPORT

A 45-year-old male, medical free, with chronic right upper quadrant pain for the last two years, presented to the emergency department with generalized abdominal pain, colicky, recurrent vomiting, and constipation for three days. No previous surgical operations. His abdomen was soft but distended, his laboratory tests were within normal limits, and abdominal X-rays showed multiple air-fluid levels with small bowel dilatation. CT scan revealed multiple air-fluid levels and distended small bowel with a transition point at the terminal ileum, hyper-

dense lesion within the lumen, and small air inside the gallbladder in addition to stone with it (Figure 1).

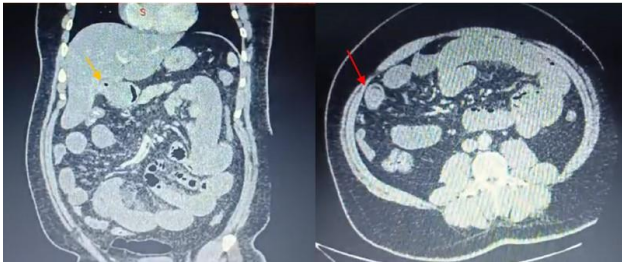


Figure 1: CT appearance of air inside the gallbladder (yellow arrow), gallstone within the small bowel lumen (red arrow).

At laparotomy, all the small bowel dilated, and gallstone was confirmed inside the lumen of the mid part of terminal ileum, enterotomy proximal to site of obstruction and extraction of the stone were done, and during palpation all the small bowel proximal to site of obstruction to excluded multiple stones, small bowel lesion intraluminal was identified hard in mid jejunal loops, wide excision was done. sever adhesion between gallbladder and duodenum, identified and not manipulated (Figure 2).

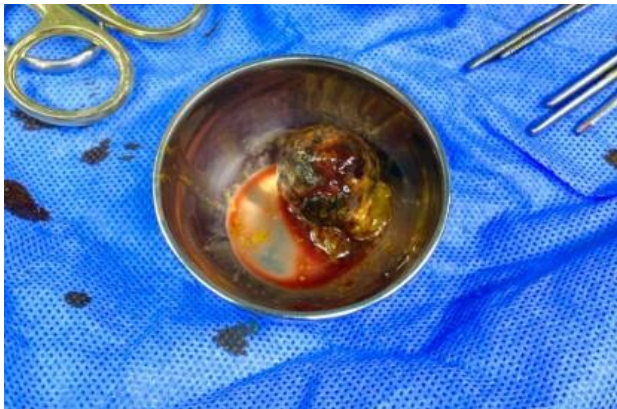


Figure 2: Gallstone ileus.

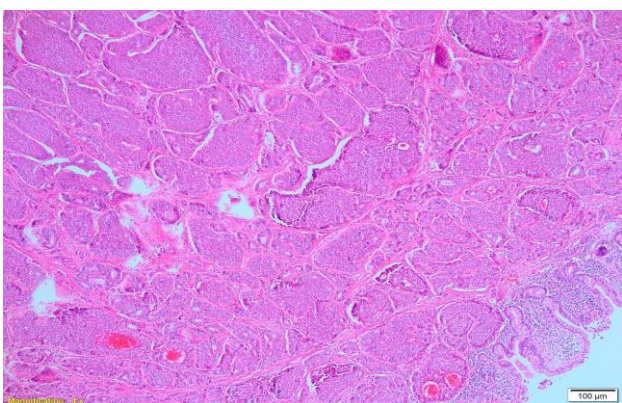


Figure 3: Histopathology of carcinoid tumour, salt and pepper' chromatin appearance.

Recovery was uneventful except superficial wound infection which treated by antibiotics and drainage of the distal part of the wound. biliary-enteric fistula will be managed in second operation later.

The resected part revealed 0.7 cm nodule, Microscopically, the nodules comprised of islands and trabeculae of cells of uniform appearance, scanty eosinophilic cytoplasm, and vesicular nuclei with a 'salt and pepper' chromatin pattern, reaching the submucosa. Resection margins were clear, no lymphatic invasive. final diagnosis well differentiated neuroendocrine tumour (Figure 3).

DISCUSSION

Mechanical small bowel obstruction due to gallstones is a rare condition, which occurs in 0.3% to 0.5% of all patients with gallstones. gallstone ileus, occurring in about less than 0.1% of all mechanical obstruction cases and 1% to 4% of non-strangulating mechanical small bowel obstructions.⁵

Dr. Erasmus Bartholin is the leader who describe impaction of a gallstone in the gastrointestinal (GI) tract after passing through a biliary-enteric fistula in 1654, most case found in elder patients more than 60 with comorbidities, with history of recurrent attack of biliary colic bouts, jaundice, or acute cholecystitis and in our patient is unusual presentation since he is 45 years old and medically free.^{6,7}

The optimal therapeutic approach for gallstone ileus remains debated, given the consideration of three primary keys: intestinal obstruction, biliary-enteric fistula, and cholelithiasis. Presently, surgical interventions encompass three main modalities: a straightforward entero-lithotomy, preserving the fistula; one-stage procedure involving entero-lithotomy, cholecystectomy, and closure of the fistula; and two-stage procedure entailing entero-lithotomy followed by delayed closure of the fistula and cholecystectomy.⁷

Most conclude that entero-lithotomy alone is the best option for most patients. Some have advocated that a one-stage procedure (cholecystectomy and fistula repair) should be considered in low-risk patients in good general condition and adequately stabilized preoperatively. Two-stage surgery is usually an option for those with persistent symptoms despite entero-lithotomy surgery. Whether interval biliary surgery should be performed at the same time as the obstruction relief (one-stage procedure), performed later.^{5,7} In our patients two stage operation planed for the patient s since he is young without comorbidities in addition to other stones detected in the gallbladder.

In the surgical intervention for intestinal obstruction attributable to gallstone ileus, it is imperative to meticulously examine the bowel proximal to the site of

obstruction for the presence of multiple stones, through palpation of the entire small bowel.⁸ Consequently, thorough exploration leads to the inadvertent discovery of incidental masses within the small bowel. Such as our case we a small mass measuring approximately 1×1 cm was identified, which was subsequently determined to be a carcinoid tumour and was found not to be causative of the obstruction.

Majority cases of gastrointestinal carcinoids, detected within the small intestine (25%), appendix (12%), and rectum (14%). Small bowel carcinoids have the greatest malignant potential compared to other gastrointestinal carcinoids, with nodal disease associated with 40% of lesions less than 1 cm, conferring a poor prognosis, Non-invasive lesions of less than 10 mm with low mitotic activity are of least malignant potential.^{4,9}

In many instances, they are only detected at surgery for unexplained bowel obstruction, perforation, or bleeding, In jejunio-ileal carcinoids. Segmental resection with nodal clearance is the recommended surgical management. Multi-centric carcinoid lesions occur in approximately 10% of cases, predominantly in the terminal ileum and require a complete inspection of abdominal content to address potential additional lesions.⁹

CONCLUSION

Gallstone ileus is predominantly observed in the elderly demographic but can also manifest in the younger population. The optimal therapeutic approach for gallstone ileus, particularly regarding the management of biliary-enteric fistula, remains a subject of ongoing debate. Critical determinants in the selection of a treatment strategy include the patient's clinical condition at the time of presentation, the expertise of available hepatobiliary surgeons, and other factors. Additionally, the exploration for proximal stones may reveal the impaction of stones in other anatomical structures or identification of concomitant pathologies.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

1. Dai XZ, Li GQ, Zhang F, Wang XH, Zhang CY. Gallstone ileus: case report and literature review. *World J Gastroenterol.* 2013;19(33):5586-9.
2. Beji H, Chtourou MF, Zribi S, Laamiri G, Bouassida M, Touinsi H. Gallstone ileus: A case report and review of the literature. *Int J Surg Case Rep.* 2023;106:108221.
3. Hussain J, Alrashed AM, Alkhadher T, Wood S, Behbehani AD, Termos S. Gall stone ileus: Unfamiliar cause of bowel obstruction. Case report and literature review. *Int J Surg Case Rep.* 2018;49:44-50.
4. Shiwani MH, Whitfiel CG, Hill A, Ullah Q. Gallstone Ileus Associated with Synchronous Carcinoid Strictures of the Small Bowel. *J Gastrointest Cancer.* 2010;41(3):190-2.
5. Turner AR, Sharma B, Mukherjee S. Gallstone Ileus. In: *StatPearls.* Treasure Island (FL): StatPearls Publishing. 2023.
6. Inukai K, Uehara S, Miyai H, Takashima N, Yamamoto M, Kobayashi K, et al. Sigmoid gallstone ileus: A case report and literature review in Japan. *Int J Surg Case Rep.* 2018;49:51-4.
7. Hussain J, Alrashed AM, Alkhadher T, Wood S, Behbehani AD, Termos S. Gall stone ileus: Unfamiliar cause of bowel obstruction. Case report and literature review. *Int J Surg Case Rep.* 2018;49:44-50.
8. Ozbalci GS, Tanrikulu Y, Kismet K, Dinc S, Akkus MA. Gallstone ileus with a giant stone and associated multiple stones. *Bratisl Lek Listy.* 2012;113(8):503-5.
9. Modlin IM, Kidd M, Latich I, Zikusoka MN, Shapiro MD. Current status of gastrointestinal carcinoids. *Gastroenterology.* 2005;128 (6):1717-51.

Cite this article as: Ghaith AM, Alsekarnh MI, Awad AK, Ghaith OM. Gallstones ileus in young patient with incidental finding a small bowl carcinoid tumour. *Int Surg J* 2024;11:135-7.