

Foreign body in gallbladder: A case report

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ABSTRACT

Foreign bodies in the gall bladder are a rare event, and they being asymptomatic is even rarer. The rarity of such a clinical entity makes the following worthwhile of recording. We report the case of a 51-year-old male who was incidentally found to have gallstones on abdominal ultrasound. The patient himself was asymptomatic. Blood investigations were unremarkable. The patient underwent a laparoscopic cholecystectomy which was later converted to an open procedure. Intraoperatively, he was found to have a cholecystoduodenal fistula for which cholecystectomy, resection of fistula, and repair of the duodenum were done. On bisecting the gallbladder specimen, it was found to contain a wooden toothpick. To the best of our knowledge, this is the first report in the medical literature of a toothpick inside the gallbladder.

Key words: Case report, Foreign body, Gallbladder, Rare

INTRODUCTION

Swallowing of sharp metallic foreign bodies is a common problem in medical practice. It can be a deliberate act or by chance. The first report was mentioned in the early 1700s [1]. The incidence and prevalence of foreign body ingestion are difficult to estimate [2]. Almost all swallowed foreign bodies pass through the gastrointestinal (GI) tract in the stool without causing any significant disorders, accounting for their very low morbidity and mortality rates [3-5]. Sometimes, foreign bodies can change their course and penetrate the hollow organ wall.

Foreign body ingestion may lead to a wide variety of complications. To summarize, they can be divided into two major groups: Obstruction-related complications and those related to overpressure in a specific point of the bowel, leading to ulceration, perforation, and fistulas [6].

Foreign bodies may move forward to almost any intra-abdominal organ [7]. Often, the identification of a moved foreign body is coincidental when patients appear with unrelated symptoms [8].

Concerning the specific ingestion of toothpicks, more than half of all cases go unnoticed by patients and frequently lead to perforations [9]. In the medical literature, there are several case reports of toothpicks lodged in a wide range of sites [10,11]. However, this is probably, to the best of our knowledge, the first reported case of a toothpick inside the gallbladder.

CASE REPORT


A 51-year-old male, Caucasian, engineer by profession, living in Kolkata, India, came to our hospital for annual executive health checkups. He was incidentally found to have gallstones on ultrasound of the abdomen. The patient had no history of pain in the abdomen, dyspepsia, jaundice, nausea hematemesis, melena, weight loss, bone pain, or chronic symptoms. The patient had no other comorbidities and had no history of any abdominal surgeries. The patient had no addictions other than occasionally consuming alcohol. Bowel and bladder movements were normal.

His general survey was unremarkable other than the fact that the patient was overweight (body mass index of 25.3). His vitals and blood parameters were within normal limits. The abdominal examination did not reveal any abnormalities. The patient underwent an upper GI endoscopy which was unremarkable. The patient was thus taken up for elective laparoscopic cholecystectomy and was prepared likewise.

Blood Investigations revealed haemoglobin as 13.6 gm%, total leucocyte count as 8,200/ml with neutrophils as 52%. Platelet count, random sugar levels and renal function tests were normal. Serum bilirubin was 0.5 mg%, total protein was - 7.9 m% with serum albumin as 4.5 gm% and globulin as 3.4 gm%. Serum glutamic pyruvic transaminase was 36 IU/L while serum glutamic oxaloacetic transaminase was 27 IU/L. Serum Alkaline Phosphatase was 81 IU/L. Prothrombin Time of patient

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was 14 seconds with control being 14 seconds as well. Thus international normalised ratio was 1. Thyroid profile was normal. Chest X ray showed no abnormalities.

Ultrasound of the abdomen revealed multiple gall stones with thick gall bladder wall. Common Bile duct width was 5 mm. Portal vein, intrahepatic biliary radicles and liver were normal. There were no other abnormalities found.

After placement of four conventional ports, exploratory laparoscopy was done. The gallbladder was completely covered with the omentum and the duodenum was adherent to the gallbladder. The small intestine, liver, stomach, and pelvic organs were found to be normal. On separation of the omentum from the gallbladder and liver, a tubular structure was seen arising from the Hartmann's pouch to the duodenum, which was suspected to be a cholecystoduodenal fistula (Fig. 1). As the Calot's triangle could not be visualized properly, a decision was taken to convert it into an open cholecystectomy. On opening the abdomen, the tubular structure was confirmed to be a cholecystoduodenal fistula (Fig. 2). It was resected and the duodenal opening was repaired with 3-0 Vicryl sutures. The rest of the cholecystectomy was done in a conventional manner after ligation of the cystic duct and artery. On cutting open the specimen, there was a 5 cm long bile stained wooden toothpick in the gallbladder (Fig. 3). No stones were present. Mucosa did not show any growth or ulcer, which was confirmed later on by biopsy. The biopsy confirmed it to be cholecystitis. On retrospective questioning, the patient could not remember swallowing any toothpick.

The post-operative period was uneventful and the patient was discharged after 5 days. The patient is currently on 6 monthly follow-ups and has no complaints as such.

DISCUSSION

Foreign body ingestion is a common occurrence in childhood, adolescent age group, and among psychiatric patients. Most of the foreign bodies pass through the digestive system without causing any symptoms [12]. These patients are managed conservatively by observation and follow-up. In selective cases, they might require intervention in the form of endoscopy or laparotomy. The most common foreign bodies to be encountered are fish bones, toothpicks, and metallic bodies. The occurrence of a toothpick in the gallbladder causing no symptoms with no recollection of having swallowed one is very rare. Sharp materials such as fish bones, chicken bones, and needles may cause complications up to 35% of the cases, such as appendicitis, irreducible inguinal hernia, intussusception, pancreatitis, hepatic abscess, and duodenocolic fistula [13].

Bilioenteric fistulas are the abnormal communication between the bile duct system and the GI tract that occurs spontaneously and is a rare complication of an untreated gallstone in the majority of cases. These fistulas can cause diverse clinical consequences and in some cases be life threatening to the patient [14]. Some cases have been described where foreign bodies have been

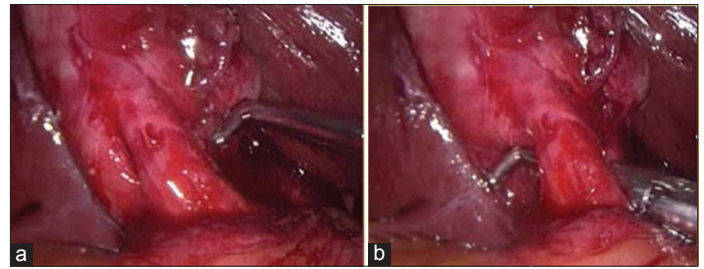


Figure 1: (a) Laparoscopic intraoperative picture showing cholecystoduodenal fistula; (b) with a right angled forceps interposed in between

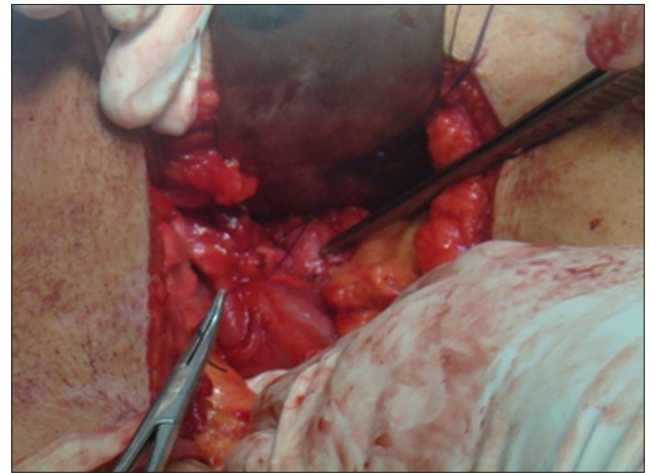


Figure 2: Open intraoperative picture showing cholecystoduodenal fistula

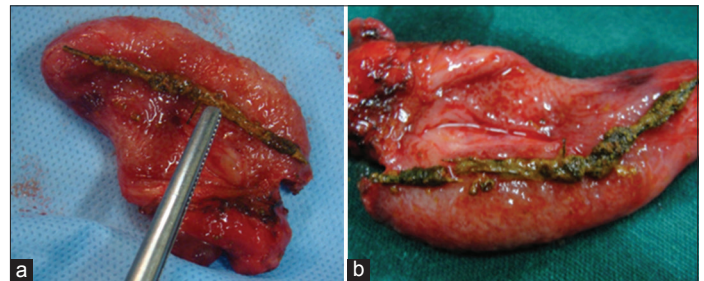


Figure 3: (a) The specimen of the gallbladder; (b) bisected open to reveal wooden toothpick inside

ingested, causing perforation of the bowel and thus migrating to the gallbladder [15]. However, asymptomatic cholecystoduodenal fistula with a foreign body in the gallbladder is extremely rare, and to the best of our knowledge, no such cases have been recorded in the worldwide literature so far.

As presented in our case, the patient showed no symptoms and USG showed it to be multiple gallstones. As the patient has no recollection of toothpick ingestion, we surmise that the patient had unknowingly swallowed a toothpick with food, which passed through the esophagus and stomach without causing any symptoms. The toothpick then got stuck in the first part of the duodenum, still causing no symptoms. The toothpick perforated the duodenum, and subsequently, the gallbladder and migrated to the gallbladder then remained inside the gallbladder without causing any symptoms.

CONCLUSION

This case acts as a reminder that despite extensive investigations, wooden foreign bodies may be missed, and not all patients are as fortunate as ours. Definitive diagnosis will be provided only by surgery. Foreign body causing cholecystoduodenal fistula can be included as differential diagnosis in patients with discordant clinical picture of Cholecystitis.

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