Accidental Finding of a Toothpick in the Gallbladder during Laparoscopic Cholecystectomy for Symptomatic Gallstones

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ABSTRACT

Presence of foreign bodies in gallbladder are a rare occurrence. Most of these are ingested accidentally and passed through the gastrointestinal tract without causing any harm. However, a few complications are noted in the literature. The authors report a case of 36-year female who underwent laparoscopic cholecystectomy for symptomatic gallbladder stones. During gallbladder dissection from the fossa, a toothpick was found in the gallbladder lumen. Accidental ingestion of toothpicks is common; however, presence of foreign body in gallbladder is a rare event. A foreign body should always be considered in the differential diagnosis in patients with a history of upper abdominal pain.

Key Words: *Foreign body, Gallbladder, Laparoscopic cholecystectomy.*

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INTRODUCTION

Foreign bodies are usually swallowed purposefully or accidentally. Accidental swallowing is more common, and in adults, it is usually related to food e.g. fish and chicken bones, toothpicks, etc.[1] Most of the ingested foreign bodies pass through the gastrointestinal tract without complications and do not need any intervention.[2] After ingestion, foreign bodies may occasionally find their way into the gallbladder.[3] Foreign bodies in gallbladder are rarely symptomatic and are usually identified coincidently when a patient presents with some other symptoms.[4] But in some cases, foreign bodies in gallbladder can lead to complications like perforations and fistulas.[5] When it comes to ingestion of the toothpicks, most patients do not recall swallowing them.[6] Few cases of foreign bodies in gallbladder have been reported in the literature.

Herein, a case is reported of a 36-year female who underwent laparoscopic cholecystectomy for symptomatic gallbladder stones. A toothpick was found in the gallbladder lumen during the surgery.

CASE REPORT

A 36-year female patient presented with a complaint of pain in the right hypochondrium for the last 2 months that was associated with dyspepsia and nausea.

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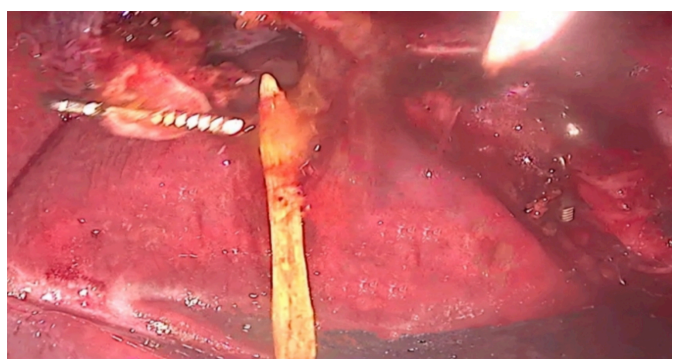

Figure 1: Toothpick recovered from gallbladder during laparoscopic cholecystectomy.

There was no past history of similar symptoms. She had never acquired jaundice and there was no history of acute attack. General physical and abdominal examination revealed nothing of significance. Routine laboratory investigations were normal. Further work-up proceeded with an abdominal ultrasound scan which revealed a few tiny non-shadowing echogenic foci in the gallbladder, the largest measuring to be 0.43 cm with normal intra- and extra-hepatic biliary channels. Hence, a provisional diagnosis was made of biliary colic due to cholelithiasis and the patient was advised cholecystectomy. After complete work-up, elective laparoscopic cholecystectomy was performed after a few days. Perioperatively, the gallbladder was completely covered by the omentum and was tightly adherent to the antrum of the stomach and the first part of the duodenum. During dissection and while releasing adhesions, the gallbladder wall ruptured and a foreign body was found that was identified to be a bile-stained wooden toothpick (Figure 1). The stomach, duodenum, and rest of the gut were assessed thoroughly but there was no evidence of perforation or cholecystoduodenal fistula. Surgery proceeded as planned and on removing the gallbladder and foreign body, it was

confirmed to be a wooden toothpick measuring 3 cm in size (Figure 2). Postoperatively, the patient had an uneventful recovery and on taking history in retrospect, she could not remember the ingestion of a toothpick. She was discharged on the second postoperative day and was asked to follow-up in OPD after one week. She had no complaints on the follow-up.

Figure 2: Toothpick specimen after laparoscopic cholecystectomy.

DISCUSSION

Adults usually present with ingestion of foreign bodies typically related to food. Most of the swallowed foreign bodies pass spontaneously through the gastrointestinal tract without causing any complications.[7] But, sometimes they can lead to complications particularly when there is ingestion of sharp objects like sewing needles, safety pins, chicken or fish bones, and toothpicks that can cause perforation of the hollow organs resulting in peritonitis or penetrating another intra-abdominal organ.[8] Migration of foreign bodies to gallbladder is very rare but occasionally these can make way into the gallbladder usually resulting in the formation of bilioenteric fistulae.[6] These fistulas present with symptoms similar to chronic cholecystitis. The most common communication is cholecystoduodenal fistula followed by cholecystocolic and cholecystogastric fistulas. Treatment of bilioenteric fistulas consists of a cholecystectomy and closure of fistulous communication.[4] In medical literature, few cases of foreign bodies like sewing needles and toothpicks in the gallbladder have been reported.[5,9,10] In this case report, there was no history related to ingestion of foreign body, and it was only discovered incidentally at the time of surgery that was planned for symptomatic gallstones. As far as the authors are aware, only one case of a toothpick in gallbladder has been reported till date.[1] What makes this case unique is that there was no fistulous communication between stomach/duodenum and gallbladder. The probability of an ingested foreign body migrating to gallbladder is rare but it does occur and can lead to significant complications. In this case, there were no related symptoms and patient could not recall swallowing the toothpick. Accidental ingestion of toothpicks is common, however, the presence of foreign body in gallbladder is a rare event. Therefore, while ruling out the causes of upper abdominal pain, foreign body ingestion should be considered as one of the differential diagnosis before reaching a final diagnosis.

PATIENT'S CONSENT:

An informed consent was obtained from the patient to publish this case.

COMPETING INTEREST:

The authors declared no competing interest.

AUTHORS' CONTRIBUTION:

MI: Conception and design of the work, interpretation of data, writing, and final approval of the manuscript.
SC: Literature search, drafting the work and revising it critically for important intellectual content.
ARA: Reference writing, typing of the manuscript.
NH, MT: Manuscript reading.
All authors approved the final version of the manuscript to be published.

REFERENCES

1. Malhotra AK, Das GC, Lahiri A. Foreign body in gallbladder: A case report. *IJCR* 2020; **6(12)**:706-8. doi: 10.32677/IJCR.2020.v06.i12.011.
2. Al-Khyatt W, Rashid F, Iftikhar SY. Accidental finding of a toothpick in the porta hepatis during laparoscopic cholecystectomy: A case report. *J Med Case Rep* 2011; **5(1)**:1-3. doi: 10.1186/1752-1947-5-421.
3. Doğan H, Çağlayan K, İşler BF, Arslan H, Ozucelik DN. Perforation of the gallbladder due to a swallowed sewing needle: Case report. *J Emerg Med Case Reports* 2017; **8(1)**:7-9.
4. Karacay S, Topçu K, Sözübir S. A rare complication of an ingested foreign body: gallbladder perforation. *Gastrointest Med* 2013; **2013**:672572. doi: 10.1155/2013/672572.
5. Brunaldi VO, Brunaldi MO, Masagao R, Silva C, Masuda H, Brunaldi JE. Toothpick inside the common bile duct: A case report and literature review. *Case Rep Med* 2017; **2017**: 5846290. doi: 10.1155/2017/5846290.
6. Steinbach C, Stockmann M, Jara M, Bednarsch J, Lock JF. Accidentally ingested toothpicks causing severe gastrointestinal injury: A practical guideline for diagnosis and therapy based on 136 case reports. *World J Surg* 2014; **38(2)**:371-7. doi: 10.1007/s00268-013-2307-z.
7. Quynh Vo N, Nguyen LD, Chau THT, Tran VK, Nguyen TT. Toothpick-a rare cause of bowel perforation: Case report and literature review. *Radiol Case Rep* 2020; **15(10)**:1799-802. doi: 10.1016/j.radcr.2020.07.034.
8. Chiang TH, Liu KL, Lee YC, Chiu HM, Lin JT, Wang HP. Sonographic diagnosis of a toothpick traversing the duodenum and penetrating into the liver. *J Clinical Ultrasound* 2006; **34(5)**:237-40. doi: 10.1002/jcu.20200.
9. Sealock RJ, Sabounchi S, Graham DY. Toothpick perforation of the intestines presenting as recurrent abdominal pain: Possible roles of abdominal ultrasound and MRI. *Clin Med Insights Case Rep* 2013; **6(6)**:131-5. doi: 10.4137/CCRep.S11486.
10. Jreije K, Steen S, Jones G, Eisner JA. One hole, two tubes, and a Tijuana pathology report: A case report of cholecystoduodenal fistula mistaken for gallbladder cancer. *Cureus* 2020; **12(1)**:e6802. doi: 10.7759/cureus.6802.