

## Rare Causes of Foreign Body in CBD: A Retrospective Study

Zahur Hussain, Sayeed Majid Malik, Ashufta Rasool, Suneel Mattoo

### Abstract

Common bile duct (CBD) is a rare site for foreign bodies (FB). Foreign bodies in the common bile duct (CBD) are rarely reported to cause obstructive jaundice. Most reported cases in the literature are on sutures, surgical clips and stents. T-tube fragments found in the CBD after previous surgical procedures. In current study, 15 patients who were admitted with foreign body CBD were reviewed. Seven (77.8%) patients were females and rest were males. All patients underwent ERCP preoperatively with the intent to remove the foreign body. Failed cases were selected as subjects for the study. Acute colicky abdominal pain was present in all patients. Obstructive jaundice was present in all patients. Obstructive jaundice was present in biliary ascariasis and one case of neglected stent. In addition Physical examination revealed icterus in biliary ascariasis. Presence of foreign body in CBD was assessed and confirmed by USG.

### Key Words

Common Bile Duct, Foreign Body, ERCP, Obstructive Jaundice

### Introduction

Common bile duct (CBD) is a rare site for foreign bodies (FB) (1). Foreign bodies in the common bile duct (CBD) are rarely reported to cause obstructive jaundice. Most reported cases in the literature are on sutures, surgical clips and stents, T-tube fragments found in the CBD, after previous surgical procedures. There are few reports of fish bones, worms, ingested metal pins, tomato skin, shrapnel splinters found in the CBD (2-6). Some fish bones were believed to have entered the CBD retrogradely, whereas others had evidence of penetration through the walls of duodenum and CBD. Shrapnel and bullets have been found inside the CBD in patients who had sustained blast injuries and gunshot injuries. There is

a single case report that described the endoscopic retrieval of a surgical gauze from the CBD.(7)

### Material and Method

In the present case series, the medical records of patients, who had been admitted to the General Surgery Department in Government Medical College Hospital over a period of four years, and underwent open exploration for foreign body in CBD were reviewed. The demographic, clinical and surgical Findings /outcome and complication if any were recorded and analysed in a retrospective manner.

### Results

During the study period, 12 patients were admitted

---

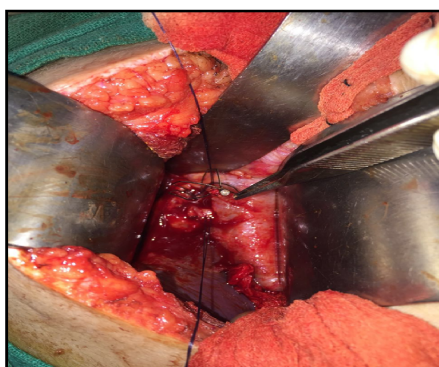
From the Department of General. Surgery, Govt. Medical College Jammu- J&K India

Correspondence to : Dr Zahur Hussain, Assistant Professor, Dept of General. Surgery, Govt. Medical Colloge, Jammu -J&K- India

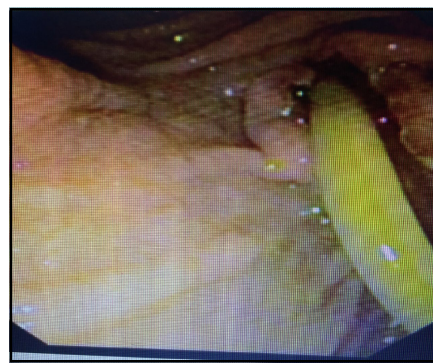
**Table 1. The Study Detail of Foreign Body in CBD in Our Study**

S. No.	Foreign Body	No. of subjects	Percentage	Jaundice	Biliary Colic	Removal by ERCP	Removal by OCBDE	Postoperative Complications
1	T-tube fragment	3	25	No	Yes	Failed	Successful	None
2	Biliary Stent	3	25	In 2 patients	Yes	Failed	Successful	None
3	Calcified round worm	3	25	Yes	Yes	Failed	Successful	None
4	Impacted Dormia Basket	1	8.33	No	Yes	Failed	Successful	None
5	Surgical Metal Clip	2	16.67	No	Yes	Failed	Successful	None

*ERCP= Endoscopic Retrograde Cholangiopancreatography, OCBDE= Open Common Bile Duct Exploration*



**Fig.1 Showing Dormia Basket Impacted in CBD Removed by open Choledochotomy**



**Fig.1 Showing round worm in CBD**

with foreign body CBD were reviewed. Seven (77.8 %) patients were females and rest were males. All patients underwent ERCP preoperatively with the intent to remove the foreign body. Failed cases were selected as subjects for the study. Acute colicky abdominal pain was present in all patients. Obstructive jaundice was present in biliary ascariasis and one case of neglected stent. in addition. Physical examinations revealed icterus in Biliary Ascariasis . Presence of Foreign body in CBD was assessed and confirmed by USG.

**Discussion**

Biliary obstruction due to foreign bodies are uncommon and have been rarely described.(7-14) Ban *et al.* (13)

reviewed the literature and found 63 patients of foreign objects in the biliary tract. Majority of these cases presented with biliary colic and jaundice was present in 46% of the patients. Commonly encountered foreign bodies included residuals from previous operations, mostly a suture ligature acting as a nidus for stone formation. Others included missiles and ingested materials. Penetrating injuries (missiles) usually present with a long symptom free period.(13-14) There is documented susceptibility to reflux of food into the biliary system and foreign bodies like fish bone and tomato skin 9-10 have been retrieved in patients with enteric-biliary anastomosis or those who had endoscopic sphincterotomy. Recently

with increase in laparoscopic cholecystectomy, foreign bodies like clips have also been reported within the biliary tract.(12) Roentogenologic investigations are usually unrewarding. Plain X-rays of abdomen have revealed foreign bodies in only a few cases and correct diagnosis was not possible in majority.(13)

Ultrasonography and MRCP findings are also inconclusive in most of the reported cases and usually mimic CBD calculus.(13-15) Cipolletta *et al.*(7) reported retrieval of a surgical gauze from CBD by endoscopic sphincterotomy. Cimsit *et al.*(11) also reported a case of obstructive jaundice due to a textiloma mimicking a CBD

calculus. In the presented report Biliary colic was present in all patients, Obstructive jaundice was present in Biliary ascariasis only. No Patient presented with cholangitis . Endoscopic sphincterotomy can be diagnostic and is also advocated as procedure of choice for extraction of foreign bodies within the biliary tract (7). Those patients in whome Attempt to retrieve the foreign body with ERCP failed were choosen for Open CBD exploration.

#### References

1. Dias R, Dharmaratne P. Ingested foreign body in the common bile duct. *Indian Assoc Pediatr Surg* 2012; 17(1): 31-32
2. Tsumura H, Ichikawa T, Kagawa T, *et al.* Failure of endoscopic removal of common bile duct stones due to endo-clip migration following laparoscopic cholecystectomy. *J Hepatobiliary Pancreat Surg* 2002;9:274-77.
3. Szanto I, Gamal EM, Banai J, *et al.* Common bile duct stone formation induced by tomato skin following endoscopic sphincterotomy. *Endoscopy* 1994;26:712.
4. Orda R, Leviav A, Ratan I, Stadler J, Wiznitzer T. Common bile duct stone caused by a foreign body. *J Clin Gastroenterol* 1986;8:466-8.
5. Eguchi S, Matsuo S, Hidaka M, *et al.* Impaction of a shrapnel splinter in the common bile duct after migrating from the right thoracic cavity: a case report. *Surg Today* 2002;332:282-5.
6. Haq A, Morris J, Goddard C, Mahmud S, Nassar AHM. Delayed cholangitis resulting from a retained T-tube fragment encased within a stone: a rare complication. *Surg Endosc* 2002;16:714.
7. Cipoletta L, Bianco MA, Rotondano G, *et al.* Endoscopic retrieval of a surgical gauze from the common bile duct. *Ital J Gastroenterol Hepatol* 1997;29:58-61.
8. Toland CG. Foreign bodies in biliary tract. *Ann Surg* 1933;98:904-908.
9. Kaji H, Asano N, Tamura H, Yuh I. Common bile duct stone caused by a fish bone: report of a case. *Surg Today* 2004;34:268-271.
10. Szanto I, Gamal EM, Banai J, *et al.* Common bile duct stone formation induced by tomato skin following endoscopic sphincterotomy. *Endoscopy* 1994;26:712.
11. Cimsit B, Keskin M, Ozden I, Alper A. Obstructive jaundice due to a textiloma mimicking a common bile duct stone. *J Hepatobiliary Pancreat Surg* 2006;13:172-173.
12. Ahn SI, Lee KY, Kim SJ, *et al.* Surgical clips found at the hepatic duct after laparoscopic cholecystectomy: a possible case of clip migration. *Surg Laparosc Endosc Percutan Tech* 2005;15:279-282.
13. Ban JL, Hirose FM, Benfield JR. Foreign bodies of the biliary tract: report of two patients and a review of the literature. *Ann Surg* 1972;176:102-107.
14. Simmons TC, Essilfie W, Fleming A. Obstructive jaundice occurring 40 months after gunshot wound to the left thoraco-abdomen. *Gastrointest Endosc* 1998;48:423-425.
15. Sarkar MM, Kibira AK, Haque MM, Sarkar KP, Rahman MK. Spontaneous transmural migration of a retained surgical mop into the small intestinal lumen causing sub-acute intestinal obstruction: a case report. *TAJ* 2006;19: 34-37.