

Unexpected Finding in Gastrointestinal Bleeding: A Case Report

Ramazan Serdar Arslan^{1*}, Suleyman Diker² and Sirin Kucuk³

¹Department of General Surgery, Usak Resarch and Training Hospital, 64100, Usak, Turkey.

²Department of Internal Medicine, Usak Resarch and Training Hospital, 64100, Usak, Turkey.

³Department of Pathology, Usak Resarch and Training Hospital, 64100, Usak, Turkey.

Authors' contributions

This work was carried out in collaboration among all authors. Authors RSA, SD, SK designed the study, authors RSA and SD wrote the protocol and wrote the first draft of the manuscript. Author RSA managed the literature searches. Author SK performed the pathological light microscopic examination. All authors read and approved the final manuscript.

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Case Study

ABSTRACT

Gastrointestinal bleeding and foreign body ingestion are the big part of the emergency gastroscopic procedure. Foreign bodies such as sharp and pointed ones associated with complications. The most feared complications are perforation, obstruction and bleeding. Toothpicks are very rare among accidentally ingested foreign bodies, but they can cause serious complications and mortalities. In this case, we present a 50 year-old male patient who presented with abdominal pain and melena. During endoscopy a toothpick detected in stomach antrum that penetrated to the gastric mucosa. The toothpick was successfully removed by endoscope without any complication. Mucosal biopsy pathology result was reported as chronic active gastritis.

Keywords: *Toothpick; emergency gastroscopy procedure; gastrointestinal bleeding; foreign body ingestion.*

*Corresponding author: E-mail: r.serdar.arslan@gmail.com, r.arslan@saglik.gov.tr;

1. INTRODUCTION

Foreign bodies (FBs) in the upper gastro intestinal tract can be seen in every period of life from childhood to old age [1]. FBs in the pediatric population, especially between the ages of 6 months and 6 years, are usually noticeable, small, shiny and round objects (coins, small balls, magnets) [2]. In adults, FBs that are often swallowed are fish bones, metal objects, dental prostheses, bones [3]. Most of FBs pass freely through the gastrointestinal tract and are excreted from the body with feces within a few days [4]. Surgery is required for 1-2,7% of patients, while endoscopic interventions are sufficient for 10-20% of patients [1-4]. Toothpicks are extremely rare among ingested FBs [5-11]. In this study, a patient who applied to the general surgery, outpatient with complaints of chronic epigastric pain and melena, and a foreign body was found in the stomach in upper gastrointestinal tract endoscopy will be presented.

2. CASE REPORT

A 50 years old man presented to our hospital with chronic epigastric pain. In addition, he had intermittent melena for the last three months. It was learned from his history, two years ago, he had been referred to the emergency department of our hospital with abdominal pain, nausea, mixed bright red and coffee-ground vomiting and that Forrest 2B duodenal ulcer was observed in the endoscopy. It was found out that the patient had been using a proton pump inhibitor (lansoprazol) two months for ulcer after discharge and then did not show up for their check-up. Epigastric and periumbilical tenderness was detected on physical examination. Other

system examinations and proctologic examinations were normal. Blood count, electrolytes, in laboratory evaluation liver and kidney function tests were normal. Abdominal radiography was unremarkable (Fig.1). Following intravenous administration of midazolam and propofol, a control upper gastrointestinal endoscopy was performed. There was no feature in the esophagus (Fig. 2A). and duodenum (Fig. 2B). Multiple erosive areas were observed in the stomach antrum (Fig. 2C). In addition, a toothpick was detected in the antrum, which penetrated from the mucosa to the submucosa (Fig. 2D). Since there was no endoscopic ultrasonography in unit, no information could be obtained about the depth of the object in the stomach wall. The toothpick was removed from the stomach wall with the help of forceps and taken to the lumen of the stomach (Fig. 2E). The toothpick was taken in the biopsy channel of the gastroscope with the help of forceps and was taken out in that way (Fig. 3). A chest X-ray was taken eight hours after the procedure to rule out gastric perforation (Fig. 4). The patient refused to be admitted to our hospital due to coronavirus disease (Covid-19). He preferred to apply to the daily outpatient. The patient was followed up by daily abdominal examination and chest x-ray. Pantoprazole was given intravenously for three days. Oral intake of the patient was allowed after 24 hours, and after three days of follow up, he was subsequently permitted to eat regular meals. The patient was prescribed a proton pump inhibitor and recommended for using two months. He was excluded from follow up five days after the procedure. Biopsy pathology was reported chronic active gastritis (inflammation 2+, activity +, atrophy +, Helicobacter pylori +, intestinal metaplasia -, Sydney Classification) (Fig. 5).



Fig. 1. Abdominal radiography

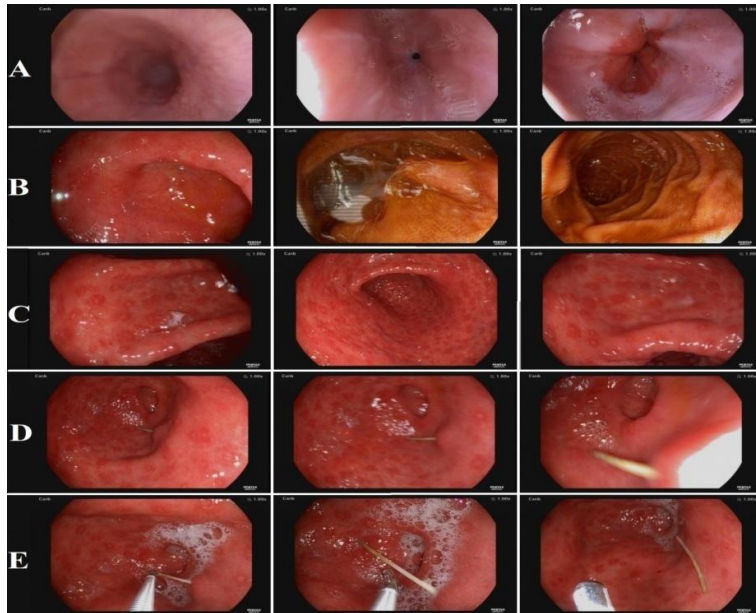


Fig. 2A. Endoscopic view of oesophagus, **B:** Endoscopic view of duodenum, **C:** Endoscopic view of erosive areas in gastric antrum and incisura angularis, **D:** Toothpick penetrated into the gastric mucosa **E:** Pulling the toothpick off the stomach wall



Fig. 3.Original toothpick and removed toothpick

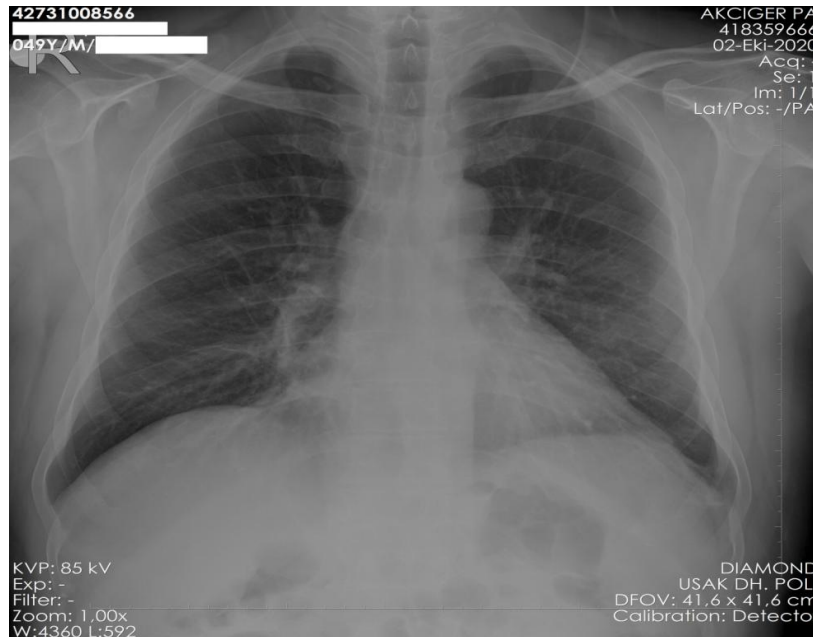


Fig. 4. Control chest x-ray for perforation ecartation

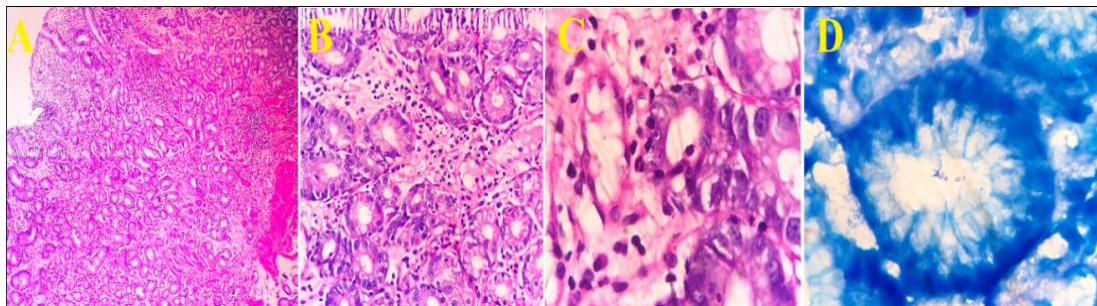


Fig. 5. Pathology light microscope images; A: An example of chronic active gastritis due to *Helicobacter pylori* with moderate (++) inflammation, mild (+) loss of glandular tissue in the mucosa and mild polymorphic leukocyte infiltration in the gland epithelium, H&Ex20, B: Example of chronic active gastritis due to *Helicobacter pylori*, in which chronic inflammation is rapidly added on acute gastritis, neutrophils, eosinophils, macrophages, plasma cells and mast cells are present in the lamina propria and polymorphous leukocyte infiltration is seen in the gland epithelium, H&Ex40, C: Leukocyte infiltration with polymorphs in chronic active gastritis gland epithelium due to *Helicobacter pylori*, H&Ex100, D. Colonization of *Helicobacter pylori* on the in foveolar surface, Giemsa100

3. DISCUSSION

Many factors are important in the algorithm to be followed in the treatment of accidentally swallowed FBs. The time since ingestion of FBs, its localization in the gastrointestinal tract, the presence of perforation in the patient are the most important. The most feared complication after toothpick swallowing is gastrointestinal tract perforations [6-11]. Steinbach et al. [9] In their

study of 136 patients who accidentally ingested toothpicks, found a gastrointestinal tract perforation in 107 patients. In 40 cases, the perforated toothpick had migrated into adjacent organs. They reported that gastroscopy is the first method of choice in the first 24 hours. In the case presented by Hu et al. [6], they reported that the patient swallowed a toothpick four days ago and the toothpick was detected in the stomach by endoscopic ultrasonography (EUS).

After successfully removing the toothpick endoscopically, they reported that they applied a clip to the mucosa and the patient was discharged after two days of observation. Our patient was not aware of a history of swallowing toothpicks and did not give any information in his anamnesis. Since our unit did not have EUS, we could not apply it to our patient. After removing the toothpick, we did not make any intervention on the mucosa, we sent the stomach biopsy samples to the pathology clinic. Histopathological examination was performed according to the Sydney classification and lymphocytic and neutrophilic cell infiltration in the lamina propria and gland epithelium, minimal edema in the lamina propria, minimal atrophy in the glandular structures and intestinal metaplasia were observed. Morphologically, a specific finding for FB was not found on histopathological examination. However, the relationship between the FBs penetrated into the stomach by the EUS and the stomach wall can be easily detected. The transit time of foreign bodies through the digestive tract is 4 to 6 days. It is recommended that foreign bodies with sharp tips and accessible localization should be removed by endoscopic intervention in the early period [6-12]. In a short period of time, foreign bodies with a small size usually progress with peristaltic movements to small bowel segments that the endoscope cannot reach [6,12]. In the follow-up of ingested radiopaque bodies, progress can be followed by daily abdominal examination and abdominal graphs [10-12]. Therefore, early admission to the hospital and early intervention are very important in reducing morbidity and mortality [9-12].

4. CONCLUSION

Although peptic ulcer and malignancies come to mind first in patients with dyspeptic complaints and gastrointestinal hemorrhage, foreign bodies should always be kept in mind.

CONSENT AND ETHICAL APPROVAL

As per international standard or university standard guideline participant consent and ethical approval has been collected and preserved by the authors. Informed consent form was filled out by the patient.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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