JOURNAL OF SCIENCE & DISEASES

# Management of chronic abdominal pain due to an unnoticed ingested wooden toothpick in a low resource setting

## Prise en charge d'une douleur abdominale chronique secondaire à une ingestion d'un cure dent en bois passée inaperçue en milieu défavorisé

Ewole Ella A.C, Atems N.K, Ndzie H, Awoundja C.A, Rizeh D, Bengono Bengono R.S

## Cas clinique

[1] Faculty of Medicine and Pharmaceutical Sciences of Sangmelima
[2] Surgery Unit, Sangmelima's Reference Hospital
[3] Anesthesia and Intensive Care Unit, Sangmelima's Reference Hospital

**Corresponding author** : Ewole Ella Armand Collins, Surgery Unit, Sangmelima's Reference Hospital, PO Box 890, Sangmelima, Tel : ; email: eacollinses@gmail.com

**Key words**: chronic pain, ingestion, foreign body, toothpick, bowel, perforation

**Mots clés :** douleurs chronique, ingestion, corps étranger, cure-dent, intestin, perforation.

**Date de soumission :** 17/02/2025
**Date d' acceptation :** 30/04/2025

### ABSTRACT

It is well known that humans can ingest foreign bodies in their diet. These may end up causing serious gastrointestinal injuries and chronic pain. We present a case of a teenage male with no known psychological disorder, who suffered from abdominal pain for over 5 months. This pain went increasing with time, and was exacerbated during diets. He had been on medical treatment for peptic ulcer disease with no remission of the pain. His psychological evaluation was normal; no serious abnormality was discovered during physical examination. His blood workup was normal except for an elevated white blood cell count of 10,000 /mm3. Computed tomography images showed images of a chronic inflammatory process around the epigastric region. the exacerbation of the pain following failure to a medical treatment led an exploratory laparotomy during which a toothpick was found perforating the walls of adjacent intestinal loops. The foreign body was removed, and intestinal bowel loops repaired. Many causes of chronic abdominal pains exist but foreign body ingestion should be considered in cases of chronic pain refractory to medical treatment.

### RESUME

Il est bien connu que les humains peuvent ingérer des corps étrangers dans leur alimentation. Ceux-ci peuvent finir par provoquer de graves lésions gastro-intestinales et des douleurs chroniques. Nous présentons le cas d'un adolescent, sans trouble psychologique connu, qui souffrait de douleurs abdominales depuis plus de cinq mois. Ces douleurs ont augmenté avec le temps et étaient exacerbées lors des repas. Il n'a jamais remarqué avoir avalé de corps étranger. Il avait suivi un traitement médical pour ulcère gastroduodénal sans rémission de la douleur. Son évaluation psychologique était normale. Aucune anomalie significative n'a été constatée lors de l'examen physique. Le bilan sanguin était normal excepté une hyperleucocytose à 10.000/mm 3. Les images de la tomodensitométrie abdominale ont montré des signes d'inflammation dans la région épigastrique. L'exacerbation de la douleur et l'échec au traitement médical ont suscité l'indication d'une laparotomie exploratrice au cours de laquelle un cure-dent a été trouvé perforant les parois des anses intestinales adjacentes. Le corps étranger a été retiré et les anses intestinales réparées. Il existe plusieurs causes de douleurs abdominales chroniques mais l'ingestion de corps étranges devrait être prise en considération devant des cas de douleurs réfractaires au traitement médical.





Citation as **J Sci Dis 2025, Vol 3 (2): 79-82**

## Introduction

It is well known that humans can ingest foreign bodies in their diet [1], amongst which toothpicks though unusual. Depending on their course, these swallowed objects may follow a complete course and end up in faces or may cause chronic symptoms such as pain, or severe damage to the gastro-intestinal tract [2]. We report the case of ingested toothpick which was misdiagnosed for months and treated as peptic ulcer disease.

## Patient's presentation

A 17-year-old patient, with no history of psychiatric illness, had been experiencing isolated epigastric pain for 5 months, of progressively increasing intensity and exacerbated by meals. He had received many pain killers and treatment for peptic ulcer disease to no avail. He was brought in emergency for an exacerbation of pain that had been developing for 3 days, in an afebrile context, without vomiting nor altered bowel habit.

On physical examination his vital signs were stable and within normal ranges. Mild distention of the abdomen and supra-umbilical tenderness without clear signs of peritoneal irritation seen. His blood workup was within the normal ranges except for of a white blood cell count of 10,000/mm3. during the search for an etiological diagnosis, a plain abdominal X ray and ultrasound were requested.

The abdominal X-ray showed small bowel distention, which indicated the possibility of ileus, the ultrasound depicted an agglomeration of tissue around the transverse colon, without ascites, this prompted the request for a contrasted abdominal CT scan. The abdominal computed tomography (CT) was then performed, which revealed a chronic inflammatory process around the epigastric region involving the transverse colon (thickened bowel walls, tissue agglomeration). The findings on the gall bladder and appendix were non contributory. A working diagnosis of early seen gastric perforation on patient with chronic history of peptic ulcer disease was made with differentials of infected diverticular disease.

A fibroscopy was requested but could not be done due to unavailability. The exacerbation of the pain which did not subside with medications, prompted an exploratory laparotomy. After preparation the patient was taken to the operating room and underwent a midline exploratory laparotomy, the intraoperatory findings were; a wooden toothpick perforating intestinal walls with one end into the transverse colon, about 20cm from the right colic flexure and the other end into the third duodenum with surrounding inflammatory tissue and a lot of adhesions (**figure 1**). The toothpick was successfully removed, the duodenal wound was closed by simple suturing and a segmental colectomy was done around the inflamed zone which had some pre-perforating lesions during dissection (**figure 2**). Two passive tubular drains were placed around the duodenal sutured wound and the transverse anastomosis respectively. the patient made an uneventful postoperative recovery, and was discharged on postoperative day 8. He was seen on rendez-vous one month later and reported the total disappearance of the pains. Following discussion about the intraoperative findings, he still could not recall having swallowed any foreign object.

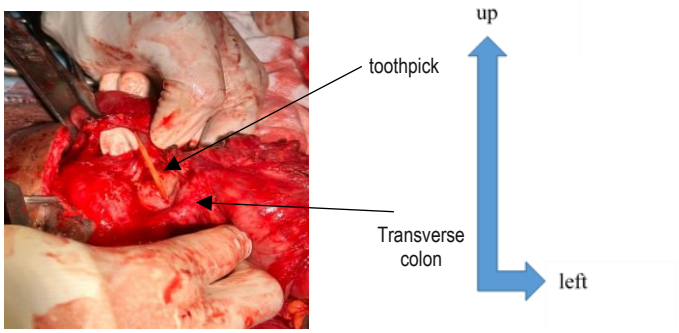


**Figure 1:** *ingested toothpick lodged in the transverse colon after the duodenal end was extracted.*

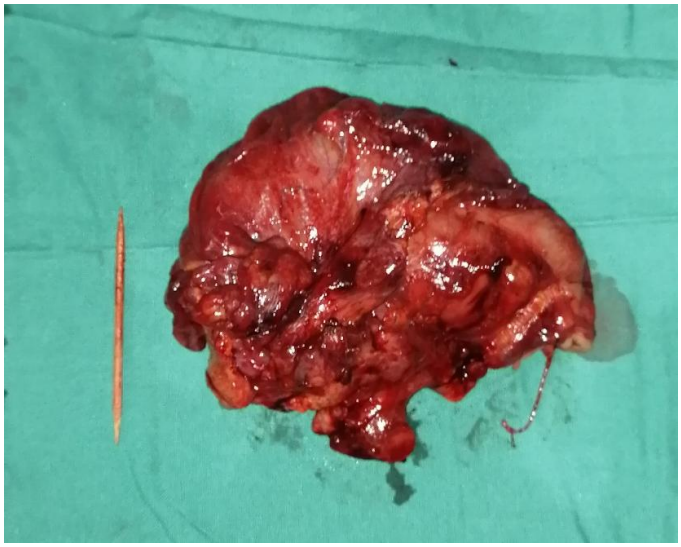

**Figure 2**: *extracted wooden toothpick and resected portion of the transverse colon where it perforated*



Citation as **J Sci Dis 2025, Vol 3 (2): 79-82**

## Discussion

At least 5,2% patients undergoing medical treatment for peptic ulcer disease require surgery [3]. This patient had a clinical presentation which pointed greatly towards a form of gastritis most probably peptic ulcer disease. He was misdiagnosed for months and followed a treatment regimen for peptic ulcer disease with eradication which went beyond 12 weeks with no favourable outcome. The complaints vary according to the injured parts and adjacent organs [4]. Several locations of swallowed toothpicks perforation removal have been described. These include the esophagus (2%), stomach (20%), duodenum (23%), small intestine (18%), and large intestine (37%) [2,5]. In all of these cases, the pains were nonspecific in character and made diagnosis difficult. In our case the pain mimicked that of peptic ulcer disease due to the duodenal injury.

The low incidence of adults swallowing foreign bodies in our context makes it difficult to bring out the epidemiology [6]. Foreign body impactions are mostly seen in the context of a pre-existing pathology. Sung et al. reported the following causes for impaction; strictures (about 37%), malignancy (about 10%), oesophageal rings (about 6%), achalasia (about 2% of cases). None of these were found on our patient.

Less than 1% of cases after swallowing a foreign body lead to perforation [2], though rare, in our case the perforation was favored by the sharp nature of the swallowed foreign body. Interventional endoscopy could have been a useful tool for the diagnosis and management of this patient [6], but the scarcity of the exam facilities made it farfetched and this prompted surgery as the best option viewing the patient's distress [7]. Laparoscopy could as well offer a better and less invasive way to diagnosis and treatment, but the scarcity of the facility and high cost, caused open surgery to be a better alternative in this case [8,9].

Our patient had a hollow viscus perforation which interested two different bowel loops. This finding was similar to that found by the main impressionable adjacent viscera include liver, pancreas, kidney, and vasculature [2,10]. Complications of perforation include fistula, sepsis, bleeding, and even death.[4,11] The location that a toothpick lodges determines the symptom. Wood foreign bodies may contain tiny air bubbles and oils, and thus can mimic air and fat on CT and often have negative Hounsfield units[12,13], As the wood foreign body absorbs more water from its surroundings, it may become more dense on CT, mimicking soft tissue [13]. Diverticulitis and carcinoma represent the most common causes of bowel perforation, and abdominal pains but other causes, like ingestion of foreign bodies, should be taken into account.

## Conclusion

Ingested foreign body (toothpicks) should be kept in mind as an important differential diagnosis in patients with chronic abdomen, radiologic exams such as ultrasonography and CT scan can prove inefficient in the diagnosis of wooden foreign body ingestion. Exploratory surgery (laparoscopy / laparotomy) should be considered in case of patient with chronic abdominal pains refractory to medical treatment.

**Conflict of interest:** none.

**Author's contributions**:
Conception: Ewole Ella A.C, Atems N.K, Ndzie H, Review of literature: Ewole Ella A.C, Atems N.K, Ndzie H, Awoundja C.A, Rizeh D, Writing of article: Ewole Ella A.C, Atems N.K, Ndzie H, Awoundja C.A, Rizeh D, Critical review of intellectual content: Ewole Ella A.C, Atems N.K, Ndzie H, Approval of the final version: Bengono Bengono R.S

**References**

1. Ambe P, Weber SA, Schauer M, Knoefel WT. Swallowed Foreign Bodies in Adults. Dtsch Arztebl Int. déc 2012;109(50):869 75.
2. 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.
3. Gurusamy KS, Pallari E. Medical versus surgical treatment for refractory or recurrent peptic ulcer. Cochrane Database Syst Rev. 2016;2016(3):CD011523.
4. Abu-Wasel B, Eltawil KM, Keough V, Molinari M. Liver abscess caused by toothpick and treated by laparoscopic left hepatic resection: case report and literature review. BMJ Case Rep. 2012;2012: bcr2012006408.
5. Lovece A, Asti E, Sironi A, Bonavina L. Toothpick ingestion complicated by cecal perforation: case report and literature review. World J Emerg Surg. 2014; 9:63.
6. Ndam AWN, Dime AN, Eloumou SAFB, Larry TN, Kowo PM, Talla P, et al. Endoscopic Management of Foreign Bodies in the Upper Gastrointestinal Tract in Yaoundé (Cameroon). OJG. 2020;10(10):247 55.
7. Kamdem J, Palmer D, Barrier C, Bardin R, Brown JA, Topazian M. Diagnostic yield of gastrointestinal endoscopy in North West Region Cameroon and trends in diagnosis over time. PA Med Jour. 2018 ;29(178). Disponible sur: https://www.panafrican-med-journal.com//content/article/29/178/full
8. Raiga J, Kasia JM, Bruhat MA. Laparoscopic surgery in the Cameroon. Int Jour Gyn & Obst. 1999;65(1):65 6.
9. Bang GA, Savom EP, Oumarou BN, Binyom PR, Boukar YME, Mbouche LO, et al. La coelio-chirurgie digestive en 2019 à Yaoundé (Cameroun).Health Sci Dis. 2021 ;22(9). Disponible sur: https://www.hsd-fmsb.org/index.php/hsd/article/view/2935

10. Ricci S, Massoni F, Schiffino L, Pelosi M, Salesi M. Foreign bodies ingestion: what responsibility? J Forensic Leg Med. 2014; 23:5 8.

11. Tonkic A, Kulic D, Peric M, Tonkic M, Bogdanovic Z. Bacteremia caused by a swallowed toothpick impacted in the gastric mucosa. Case Rep Gastroenterol. 2011;5(1):227 31.

12. Kim YH, Kim H, Yoon ES. Unrecognized intraorbital wooden foreign body. Arch Craniofac Surg. 2018;19(4):300 3.

13. Tseng HJ, Hanna TN, Shuaib W, Aized M, Khosa F, Linnau KF. Imaging Foreign Bodies: Ingested, Aspirated, and Inserted. AE Med. 2015;66(6):570-582.e5.