

Accidental Ingestion and Uneventful Retrieval of an Endodontic Hand File in a 55-Year-Old Male: A Case Report

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Abstract

Accidental ingestion of endodontic instruments during dental treatment is an uncommon but potentially serious event. This report describes the clinical course, radiographic localization, and successful spontaneous retrieval of an ingested endodontic hand file in a 55-year-old male. Sequential imaging demonstrated the foreign body’s transit through the gastrointestinal tract without complication, emphasizing the importance of prompt radiographic assessment, conservative management, and preventive measures in dental practice.

Keywords: Endodontic File, Foreign Body Ingestion, Gastrointestinal Transit, Radiographic Localization, Patient Safety.

MeSH Terms: Endodontics, Foreign Bodies, Deglutition Disorders, Gastrointestinal Transit, Radiography, Abdominal.

Introduction

Accidental ingestion or aspiration of dental instruments represents a recognized iatrogenic emergency. Despite preventive protocols, such events can occur due to patient movement, absence of rubber-dam isolation, or gag reflex during endodontic therapy. Metallic foreign bodies such as files are radiopaque and can usually be tracked radiographically; however, their sharp ends pose potential risks of mucosal injury, perforation, or obstruction. This case highlights the multidisciplinary management of an adult patient who accidentally ingested an endodontic hand file, with sequential CT imaging documenting its safe passage through the gastrointestinal tract.

Case Report

A 55-year-old male patient undergoing root canal treatment on a mandibular molar accidentally ingested a Pro-Taper No. 15 stainless-steel endodontic hand file.

The incident occurred when the patient suddenly moved his head during a radiograph, causing the file to slip from the operator's grasp and enter the oropharynx. The patient exhibited brief coughing and irritation in the throat but no respiratory distress or cyanosis. Immediate intraoral inspection failed to locate the instrument. Vital signs were stable. A plain chest and abdominal radiograph revealed a linear metallic object consistent with a dental file in the gastric region. The patient was referred to the Department of Radiology for further evaluation.

Radiologic Findings and Timeline:

- 26 Sept, 11:45 AM – File at stomach level (CT abdomen shows radiopaque object within gastric lumen).
- 26 Sept, 9:00 PM – Ileo-colic junction (file progressed distally, no perforation or obstruction).
- 27 Sept, 9:00 AM – Hepatic flexure of ascending colon (further distal movement with normal bowel loops).
- 28 Sept, 9:00 AM – Normal scan (file no longer visualized, patient asymptomatic).

The patient remained asymptomatic throughout, with no abdominal pain, vomiting, or bleeding. He was managed conservatively with soft, high-fiber diet and close monitoring. The endodontic file was passed naturally within 48 hours, confirmed radiographically by a normal follow-up scan.

Discussion

Ingestion of endodontic files is rare among adults, accounting for a small fraction of dental foreign-body cases. Most metallic instruments under 5 cm in length and less than 2 cm in diameter traverse the gastrointestinal tract spontaneously. However, sharp or pointed objects require careful monitoring due to the risk

of perforation, especially at physiological constrictions such as the ileocecal valve and colonic flexures.

In this case, serial CT imaging demonstrated uneventful passage through the gastrointestinal tract. The success of conservative management can be attributed to the small size and smooth progression of the object, absence of symptoms, and timely radiologic surveillance. Endoscopic retrieval is warranted only when the object remains stationary for more than 72 hours or if symptoms develop.

Preventive measures include rubber-dam isolation, use of floss ligatures tied to small instruments, upright patient positioning, and immediate radiographic evaluation if ingestion occurs. Education and preparedness among dental professionals are crucial for preventing and managing such incidents.

Conclusion

This case demonstrates that even in adult patients, accidental ingestion of an endodontic instrument can occur and requires prompt, systematic management. Conservative observation with serial imaging is often sufficient when the patient remains asymptomatic and the object progresses naturally. The incident underscores the need for strict preventive measures in clinical endodontics to ensure patient safety.

References

1. Bondarde P, Naik A, Patil S, Shah P. Accidental Ingestion and Uneventful Retrieval of an Endodontic File in a 4-Year-Old Child: A Case Report. *J Clin Diagn Res.* 2015;9(12): ZD16- ZD17.
2. Tiwana KK, Morton T, Tiwana PS. Aspiration and ingestion in dental practice: A 10-year institutional review. *J Am Dent Assoc.* 2004;135(9):1287-1291.
3. Susini G, Pommel L, Camps J. Accidental ingestion and aspiration of root canal instruments and other

dental foreign bodies in a French population. *Int Endod J.* 2007;40(8):585–589.

4. Webb WA. Management of foreign bodies of the upper gastrointestinal tract. *Gastroenterology.* 1988;94(1):204-216.

Legend Figures



Figure 1:



Figure 2:



Figure 3:

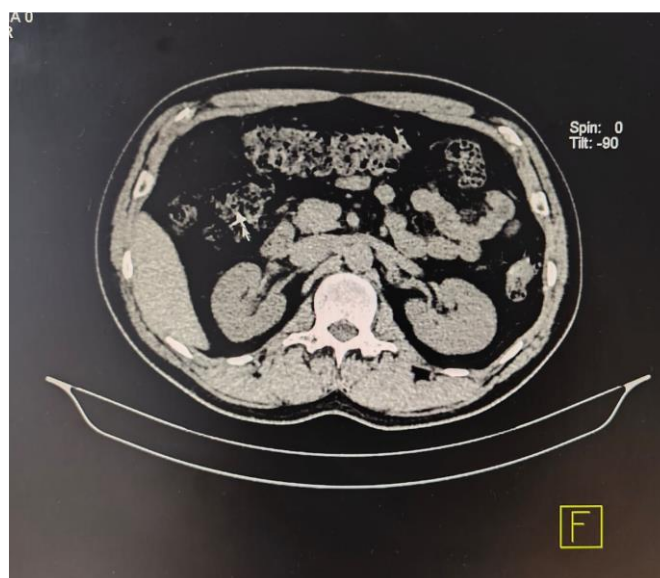


Figure 4:

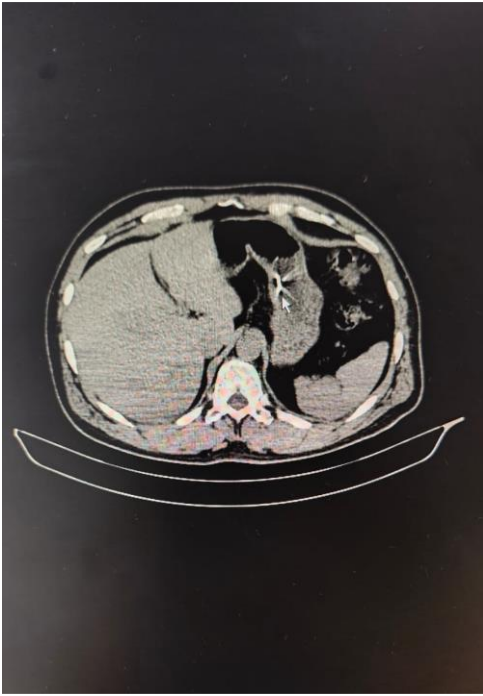


Figure 5:



Figure 6: