

A Foreign Body in an Unexpected Place – Ingested Hardware Nails within the Appendix

Alberto J. Monreal MD, Daniel G. Vanuno MD

AdventHealth Orlando Department of General Surgery, Orlando, FL

- 26-year-old patient ingested over 30 hardware nails, each measuring 2.54 cm [Figure 1].
- Esophagogastroduodenoscopy (EGD) with removal of three nails from the stomach and duodenum [Figure 2].
- Patient passed all but two of the nails, which remained localized to the right lower quadrant.
- Underwent laparoscopic exploration with fluoroscopic guidance.
- Two nails found lodged within the appendix without evidence of appendicitis or perforation [Figure 3].



Figure 1: Abdominal radiograph outlining multiple radiopaque clusters of hardware nails throughout the gastrointestinal (GI) tract.



Figure 2: Hardware nail within the GI tract.



Figure 3: Two metallic foreign bodies (hardware nails) removed from within the appendix.

- Foreign bodies obstructed within the appendix are rare.
- Sharp foreign bodies increase the foreign body complication rate from less than 1% to upwards of 15% to 35% [1].
- Straight pins usually follow a benign course, unless multiple pins are ingested (such as in our case) [1].
- If endoscopic retrieval is unsuccessful, some authors advocate for clinical follow up with serial abdominal radiographs to assess for passage of radiopaque objects [2].
- Laparoscopic exploration with fluoroscopic guidance for localization and removal is a safe and effective treatment strategy.

References

1. Kay M, Wyllie R. Pediatric foreign bodies and their management. *Curr Gastroenterol Rep.* 2005 Jun;7(3):212-8.
2. Klingler PJ, Seelig MH, DeVault KR et al. Ingested foreign bodies within the appendix: A 100-year review of the literature. *Dig Dis.* 1998 Sep-Oct;16(5):308-14.

