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Accidental ingestion of hairpin in an adolescent girl

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Abstract:

Ingestion of headscarf pin is a particular type of foreign body ingestion sometimes experienced by adolescent girls and even older women while putting on their headscarf. We report on a 13-year-old girl who presented at the emergency unit at our hospital within 48 hr after accidentally swallowing a headscarf pin. The pin was successfully retrieved from the ascending colon through colonoscopy. Headscarf pin ingestion is a serious problem among women who wear headscarves for various reasons. However, the retrieval of such pins from the colon through colonoscopy has been infrequently reported.

Keywords:

Bleeding, endoscopy, headscarf, perforation, rat-tooth

Introduction

A headscarf pin is a sharp metallic object, typically 3-cm long with a plastic ball at one end. Accidental headscarf pin ingestion is mainly reported by adolescent girls who hold these pins between their lips or teeth as they put on their headscarf.^[1,2] Given the sharpness of one end of this pin and its length, ingestion is associated with extremely high risks of perforation, aspiration, and bleeding,^[3-5] however, early presentation to the emergency department for endoscopic retrieval can ensure a reduction in these complications.

Case Report

A 13-year-old girl with no known previous medical or surgical history presented at the Emergency Department of King Fahd University Hospital, Al-Khobar, Saudi Arabia, within 48 hr of accidentally ingesting a headscarf pin. She complained of fever and moderate abdominal pain associated with nausea. Her clinical examination revealed a body temperature of 38.6°C, an arterial blood pressure of 102/60 mmHg, a resting heart

rate of 118 beats/min, and a respiratory rate of 20 breaths/min. She was conscious and oriented with respect to time, place, and person. Her abdomen was soft with mild tenderness but no rigidity or rebound tenderness. On routine laboratory tests, the patient's hemoglobin was 12.5 g/L, her white blood cell count was $7.4 \times 10^9/L$, and her coagulation profile, liver enzymes, and renal function were normal. An abdominal plain X-ray showed a pin in the small bowel. The computerized tomography scan revealed a normal abdomen with no perforation, and the pin was again detected in the small bowel [Figure 1]. The patient was admitted and kept under observation. Serial plain X-rays were performed to follow the progression of the pin, which was slow until it reached the ascending colon [Figure 2]. However, for 4 days, the pin remained in the ascending colon. During this time, the patient continued to complain of abdominal pain; therefore, she was scheduled for colonoscopy, which was performed under general anesthesia. The pin was found free in the ascending colon, only a few centimeters from the cecum. No mucosal damage was noted, and the pin was successfully retrieved through colonoscopy with no complications with the rat tooth

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forceps [Figure 3]. Smooth Post-colonoscopy recovery was achieved, and the patient was discharged home in good condition with outpatient clinical follow-up.



Figure 1: Computed tomography abdomen shows the hairpin (black arrow) is inside the small intestine, with no sign of perforation



Figure 2: Abdominal X-ray shows the hairpin (black arrow) at the right side of the colon

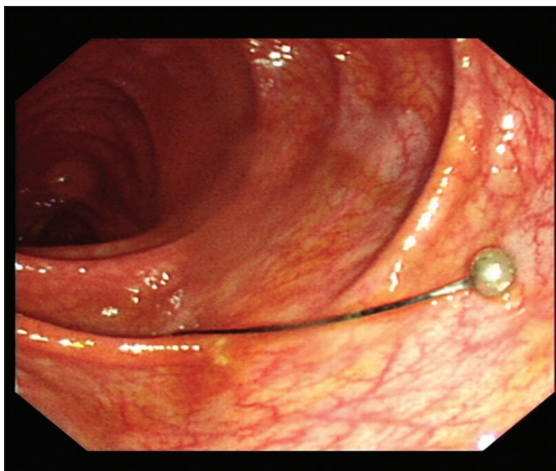


Figure 3: Endoscopic picture shows the hairpin is free at the ascending colon with no mucosal trauma

Discussion

Swallowing of a headscarf pin is an uncommon accident that happens to adolescent girls and older women, who sometimes hold these pins between their teeth or lips while they put on their headscarf. In a study from India that included 75 Muslim girls who accidentally ingested a headscarf pin, its retrieval through upper gastrointestinal (GI) endoscopy was successful in 48% of these patients, whereas the remaining patients were managed conservatively; however, 2.6% of the patients developed peritonitis that required laparotomy and one patient died.^[6]

The most recent guidelines from the American Society for Gastrointestinal Endoscopy for the management of ingested foreign bodies and 2015 guidelines from the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition recommend endoscopic removal of sharp, pointed objects that have passed into the stomach or proximal duodenum and serial abdominal plain X-rays and conservative management for such objects that have passed into the small bowel. However, surgical intervention should be the option if there is no progressive passage within 3 days or if alarming symptoms develop.^[7-9]

In our case, despite daily colon preparation, the sharp pin was stuck in the ascending colon for 4 days without clear progression, and the patient complained of abdominal pain. Therefore, we performed colonoscopy and successfully retrieved this headscarf pin from the colon. However, we report this case because of the infrequent use of colonoscopy to extract sharp pins from the colon since most of such pins are either retrieved through upper GI endoscopy or pass through the GI tract without intervention.

Conclusion

Headscarf pin ingestion is regarded as a dangerous emergency event among women who use these pins to fix layers or folds of headscarves together. There should be greater public awareness of potential dangers associated with holding headscarf pins between the teeth or lips. Alternatively, the wearing of types of headscarves that do not require pins should be encouraged to prevent the ingestion and aspiration of this type of foreign body.

Declaration of patient consent

The author certifies that he has obtained all appropriate patient consent forms. In the forms the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understood that her name and initials will not be published and

due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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