

# An Interesting Foreign Body: Polyester Fiber

## İlginç Bir Yabancı Cisim: Elyaf

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### SUMMARY

Foreign body ingestion in children is a common reason for seeking medical care in emergency departments (EDs) worldwide as well as in Turkey. Although most foreign bodies easily pass through the gastrointestinal system and are removed from the body, the condition causes concern and anxiety for families. Diagnosing the ingestion of foreign bodies might be difficult even when patient history suggest such intake. We share this case in order to provide an etiology for children presenting to the ED with repeated vomiting for unknown reason.

**Key words:** Foreign body; polyester fiber.

### ÖZET

Çocuklarda yabancı cisim yutmaları tüm dünyada olduğu gibi ülkemizde de acil servise sık başvuru nedenlerinden birisidir. Çoğu yabancı cisim gastrointestinal sistemi geçip, dışarı atılmakla birlikte bu durum aileler için endişe ve paniğe neden olmaktadır. Hastalar sıklıkla yabancı cisim yutma anamneziyle başvurursa da, bazen tanı koymak kolay olmamaktadır. Nedeni bilinmeyen, tekrarlayan kusmaları olan çocuklarda etyolojide yutulmuş yabancı cisme dikkat çekmek için olgumuzu sunuyoruz.

**Anahtar sözcükler:** Yabancı cisim; elyaf.

### Introduction

Foreign body ingestion is one of the most common medical concerns in toddlers, preschool and school age children in Turkey and around the world.<sup>[1]</sup> It is a condition that is extremely difficult to diagnose when there is not sufficient anamnesis and when the material is not radiopaque. We wish to present this case in order to increase awareness related to foreign body ingestion in patients with frequent repeated vomiting without an obvious cause.

### Case Report

An 11-month-old male patient was brought into the Ankara Training and Research Hospital ED, with complaints related to frequent vomiting and defecation problems. The patient's family stated that their child had been vomiting for 10 days and they had sought assistance for the same complaint in two other medical facilities prior to attending our ED. The patient was discharged home from both institutions as examinations and diagnostic studies revealed no pathologies,

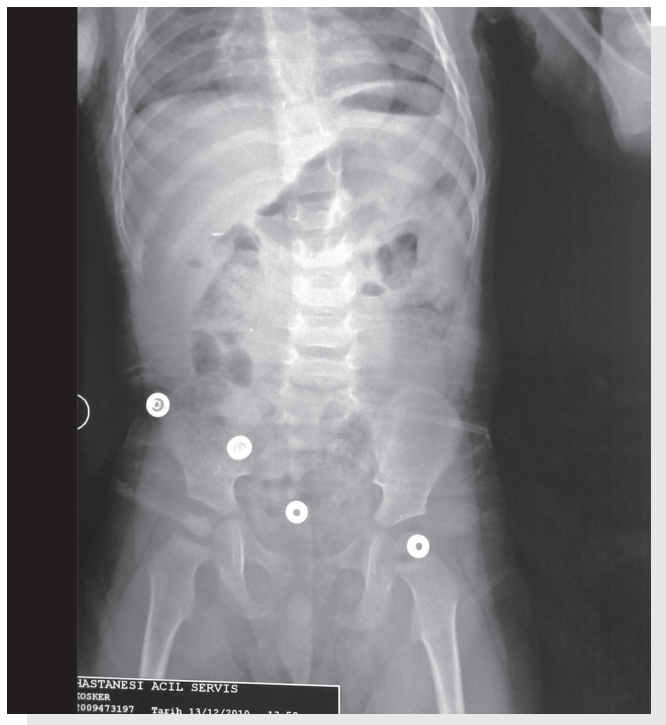
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however the patient's complaints were not resolved. The patient had difficulty when defecating for the past five days and the amount of stool decreased ever since. His mother said that stated to have experienced projectile vomiting seven or eight times per day, especially after the meals. The patient did not have any known disease or family history.

His physical exam revealed a well nourished and alert patient with a pulse of 130 beats per minute, respiration of 30 per minute, temperature 37°C, his abdomen was grossly distended and bowel sounds increased. On palpation the patient started to cry and defended his abdomen, suggesting possible pain. Examination of the other systems revealed no pathologies. The patient's hemogram and biochemical panels were all within normal limits. A standing abdominal X-ray showed no air/fluid level (Figure 1). His abdominal ultrasound exam was also normal. The patient was admitted to the observation unit. During the observation period, a cottonlike substance was noted in the patient's stool. A macroscopic evaluation of the substance enabled us to identify it as polyester fiber (Figure 2). A further anamnesis was obtained and upon discussion with the family the patient's grandmother was discovered to be working with polyester fiber. The patient and his 4 year old sister stayed with their grandmother during the day and would play with the polyester fiber. It was thought that the patient was accidentally ingested the polyester fiber during the time he was with his grandmother.



**Figure 1.** Upright (standing) abdominal X-ray of the patient.

The patient was observed for 24 hours. Since his condition had improved, he was discharged with a suggestion to stay clear of the polyester fibers. The patient's family was contacted by phone daily and he was recalled for a follow-up one week after discharge. In the follow-up, his parents stated that vomiting had ceased and the patient's defecation had returned to normal. Macroscopic and microscopic evaluation of the stool during the follow-up proved normal. The results of the elective endoscopy performed 10 days after discharge was also normal.

## Discussion

Infants and toddlers are frequently place objects into their mouths in order to discover their environment. However, this can result in the accidental ingestion of various objects. Coins are by far the most common foreign bodies ingested by children (33-69%), followed by needles, keys, stones, marbles, beads, nail clippers, rings, hairpins, paper clips, watch batteries, small toys, buttons, teeth, bones and meat.<sup>[2]</sup> While approximately 80% of the ingested foreign bodies are ejected spontaneously, 20% of the patients require endoscopic and/or surgical removal.<sup>[3]</sup> Foreign body ingestions are most commonly observed in toddlers between 6 and 36 months.<sup>[4]</sup> Most foreign body ingestion events are un-witnessed. Gastrointestinal foreign bodies can present a variety of symptoms depending on the shape and the composition of the object, location of the object in the body, age, sex, underlying diseases of the patient and complications of the foreign body ingested.<sup>[5,6]</sup> Common symptoms include drooling, gagging, dysphagia, odynophagia, decreased appetite, food refusal, fever, nausea, vomiting, hematemesis, rectal bleeding, neck pain, chest pain, abdominal pain, halitosis, cough, stridor, wheezing, and respiratory distress.<sup>[7]</sup> Repeated vomiting without an obvious cause as seen in



**Figure 2.** The cottonlike substance in the patient's stool.

our patient should alert the clinicians about the presence of foreign body in the gastrointestinal tract.

The polyester fiber in our patient's stool looked like a bezoar which can be usually visualized on plain radiographs.<sup>[2]</sup> Some ingested foreign bodies can be radiolucent as seen in our case. Wooden pieces, various types of glass and plastic are some of the radiolucent material mentioned in the literature.<sup>[2]</sup> We initially planned to conduct an esophagogastroduodenography for diagnosis, however the unexpected observation of the polyester fiber in the stool allowed us to identify the object without the need for further examination. Since gastrointestinal passage was free, we decided to observe the patient without performing emergency endoscopy.

Another method to identify ingested foreign bodies is endoscopy. Frequently, foreign bodies can be removed during the endoscopic exams and complications such as gastrointestinal bleeding, ulceration, perforation and ileus are prevented.<sup>[8]</sup> Computerised tomography, ultrasonography and magnetic resonance imaging are among the other alternatives that can be used for foreign body identification.<sup>[9]</sup>

While the majority of the foreign body ingestions are accidental, the literature reveals child abuse and neglect cases in which family members intentionally have their children ingest foreign bodies.<sup>[10,11]</sup> Patients should be evaluated from that perspective as well.

## Conclusion

We conclude that, repeated episodes of vomiting and ileus like conditions should alert the clinicians to the possibility of foreign body ingestion, especially in infants who cannot

express themselves verbally. Furthermore, the possibility of child abuse and neglect should also be considered.

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