

A Rare Cause of Colonic Obstruction: Dentures

Nadir Bir Kolon Obstrüksiyon Nedeni: Diş Protezi

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ABSTRACT

The swallowing of foreign bodies is generally accidental among adult population; most common foreign bodies are food scraps and dentures. Foreign bodies that can pass through the ileocecal valve are removed by defecation unless the presence of an underlying cause of colonic obstruction. The impaction of a foreign body into the colonic wall and the formation of colonic obstruction is a rare condition which might mimic malignancy. Segmental colon resection was performed to a 45-year-old male due to unnoticed swallowing of a denture approximately 4 months ago that resulted in colonic obstruction mimicking colon cancer in splenic flexura. As this is a rare condition, we aimed to present this case report.

Keywords: Colonic obstruction, dentures, colon cancer

ÖZ

Yetişkin popülasyonda yabancı cisim yutulması genellikle kazara oluşmakta, gıda artıkları ve diş protezleri öne çıkmaktadır. İleo-çekal valvden geçebilen cisimler, kolonda darlık oluşturan herhangi bir neden yoksa sıklıkla gaita ile problemsiz atılır. Yabancı cismin kolon duvarına impakte olarak darlık oluşturması oldukça nadir olup, maligniteyi taklit edebilir. Yaklaşık 4 ay önce fark edilmeden yutulan diş protezinin splenik fleksurada oluşturduğu darlığın kolon tümörünü taklit etmesi nedeniyle, 45 yaşındaki erkek hastaya segmenter kolon rezeksiyonu yapıldı. Nadir görülmesi nedeniyle sunulmaya değer görüldü.

Anahtar Kelimeler: Kolon obstrüksiyonu, diş protezi, kolon kanseri

Introduction

Foreign body ingestion is a condition that is frequently seen in children and psychiatric patients. The vast majority of swallowed foreign bodies pass through the digestive system without causing any significant complications.¹ In adults 1.5% of the swallowed foreign bodies are dental prosthetic materials.^{2,3} The colon, with its wide diameter and increased amount of solid material it contains, is an organ that foreign bodies can pass along easily without causing any problems after they pass ileocecal valve.⁴ However in cases of coexisting malignancies or when multiple foreign bodies are swallowed, colonic obstruction requiring a surgical intervention may be necessary.^{5,6} We aimed to present a case of surgical resection due to an obstruction in splenic flexura caused by a swallowed dental prosthesis 4 months ago.

Case Report

A 45-year-old male patient admitted to our outpatients clinic with complaints of colic abdominal pain, attacks of constipation-diarrhea and weight loss in the last 4 months. Physical examination revealed a distended abdomen with an increase in tympanism. Body mass index was 20.2 kg/m², laboratory parameters and tumour markers were all in normal limits. A hyperdense mass in the left upper abdomen was detected in the standing abdominal X-ray (Figure 1). A colonoscopy was performed to rule out a malignancy which revealed a circumferential stricture that was located close to splenic flexura and did not allow advancement of the endoscope and multiple biopsies were taken. On histopathological evaluation non-specific alterations without any sign of a malignancy was reported. An oral and intravenous contrasted abdominal tomography was performed to the ongoing suspected tumour. The abdominal



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tomography demonstrated an impacted foreign body at the level of splenic flexura with an increased circular bowel wall thickness at this location together with proximal large and small intestinal dilatation (Figure 2). Upon further focused history taking we have revealed that the patient had lost his dental prosthesis 4 months ago. A laparotomy was performed and a circular mass causing a stricture in splenic flexura was seen. A segmentary colonic resection and colocolic anastomosis was performed. The excised piece was examined and a dental prosthesis that was impacted in the colonic wall together with a circular stricture and increased bowel wall thickness was observed (Figure 3). The patient



Figure 1. Patient's standing plain abdominal X-ray



Figure 2. Patient's abdominal computerized tomography image, the dental prosthesis is demonstrated with the arrow



Figure 3. The image of surgical piece

was discharged on postoperative day 6 without any further complications. The pathologic evaluation was reported as inflammatory changes due to foreign body reaction and no sign of malignancy.

Discussion

The foreign bodies frequently attach to the bowel wall and cause perforation at anatomical locations where the intestinal lumen is narrowed and angled.¹ The clinical findings differ depending on the anatomic location and developing complications; in the presence of an obstructing foreign body causing a stricture in the colon, abdominal pain, nausea-vomiting, constipation, diarrhea are prominent symptoms.⁴ In our patient prolonged abdominal pain, attacks of constipation-diarrhea together with the weight loss raised suspicions of colonic malignancy.

In the case of foreign body swallowing, surgical intervention is necessary if complications such as perforation, fistula, abscess, obstruction have developed. The surgical intervention to be performed can differ depending on the type of the complication and localization of the foreign body.⁷ The vast majority of dental prosthesis that are swallowed unintentionally are recognized after an upper gastrointestinal tract obstruction, passage of the foreign body to the large intestine is infrequent.⁵ One would expect that a foreign body that can pass through the ileocecal valve would easily pass out through the large intestine. However, in cases of co-existing malignancies that cause a stricture in the bowel, the chances of the impacted material to cause a complication increases. Cases of colonic perforation that develop due to the sharp metal tips of the dental prosthetic material have been more frequently reported.⁸

In conclusion, colonic obstruction due to foreign body swallowing is rare. Patients and clinicians may be anxious due to resemblance of the findings to a tumour obstruction. A detailed history taking and careful evaluation of the radiologic imaging can help finding correct diagnosis. Surgical intervention has an important role in definitive diagnosis and treatment.

Ethics

Informed Consent: This article is written after all treatment and discharge of patient from the hospital. The patient's consent form of all treatment levels including medical and surgical treatment steps was taken routinely.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: Ulaş Aday, **Concept:** Ulaş Aday, Hüseyin Çiyiltepe, **Design:** Ulaş Aday, Ebubekir Gündeş, **Data Collection or Processing:** Durmuş Ali Çetin, **Analysis or Interpretation:** Hüseyin Çiyiltepe, Mustafa Duman, **Literature Search:** Ulaş Aday, Hüseyin Çiyiltepe, **Writing:** Ulaş Aday.

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