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## Five years with a rectal foreign body: A case report

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## ABSTRACT

**INTRODUCTION:** Rectal foreign bodies are rare colorectal emergencies. They are important for the complications that may occur. Delayed response causes a wide range of complications or may even result in death.

**PRESENTATION OF CASE:** A 22 years old male patient was seen at our hospital with anal pain, discharge, and complaining of incontinence. The patient stated that a bottle of beverage was placed into his anal canal in an inverted manner for sexual satisfaction 5 years previously.

**DISCUSSION:** After clinical and radiological assessment under general anaesthesia in the lithotomy position the object was removed by a laparotomy. He was advised to seek legal help and he received psychiatric treatment in the postoperative period prior to his discharge.

**CONCLUSION:** Complications such as abscess, perianal fistula complicated by severe pelvic sepsis and osteomyelitis were expected complications in this case. As in this case, a surgical approach may eliminate dissection planes, increasing morbidity and mortality related to the injuring of surrounding bodies during object extraction.

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## 1. Introduction

Though anorectal foreign body cases are rare, they have become increasingly frequent in recent years. These occurrences cause serious complications and permanent damage and thus should be immediately treated with operations.<sup>1–3</sup> Research on adolescent groups has demonstrated that cases of sexual abuses of adolescents are increasing, and considering the permanent damage, both physical and psychological, caused to this age group, this subject should be particularly investigated.<sup>4</sup> This case report concerns a 22 years old male who came to the General Surgery Department 5 years after a foreign object was inserted into his rectum when he was 17.

## 2. Case

A 22 years old male patient was admitted to Dokuz Eylül University Faculty of Medicine Department of General Surgery

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with complaints of rectal pain, drainage and incontinence. In the patient's history, it was stated that someone penetrated a glass bottle reversely into his rectal channel for sexual satisfaction, and the edge of the bottle was subsequently broken. The patient was admitted 5 years after the incident. On physical examination, the abdomen was relaxed and no tenderness and no rebound were detected. On digital rectal examination, a perianal fistula was observed and severe reduction in anal sphincter tone was found. The lower part of the object was palpable in rectal touch. The patient was suffering overflow incontinence. After examination, broad-spectrum antibiotic therapy and psychiatric treatment were started. After proficient forensic medical evaluation, the legal process was initiated for the patient.

A foreign object was observed at the beginning of the upper-middle region of the rectum and extending to the anal verge, and its open edge was directed to the bottom, and its base was proximal, on standing. Abdominal X-ray was performed to confirm the diagnosis and to determine the level of the position and location of the foreign object (Fig. 1). According to abdominal computerized tomography, a foreign object had been placed through the anus right down post-laterally from the left upper anterior on the coronal plane, and the object continued to the anorectic junction and was partially distal in the rectum (Fig. 2). It was observed that the sharp and broken half of the bottle exceeded the rectum wall and continued to the perirectal soft tissue, particularly eroding the



Fig. 1. Pelvic X-ray, foreign body in pelvis.



Fig. 2. Abdominal CT, the foreign body relationship with pelvic bone structure.

inferior ischium bone. This erosion reached 80–90% of the thickness of the bone, particularly on the ischio-pubic junction region (Fig. 2). The backside of the sharpened part of the bottle continued to the gluteus medius muscle. There were diffused inflammatory changes in the perirectal areas that the foreign object reached (Fig. 3). On the right side posterior, on the coccyx level, two different fistula tracts through the skin were observed. Lower extremity muscles on the right displayed fatty degeneration from lack of use (Fig. 3).

After preparation for surgery, the patient was taken to the operation in a lithotomic position under general anaesthesia. Orthopaedic physicians were informed before the operation. The patient was opened from the abdomen via an umbilical median incision, and then the recto-sigmoid junction was dissected and end colostomy from sigmoid colon was prepared. The dissection of the rectum posterior was highly difficult. The anatomical dissection planes of the zone were deteriorated and covered by excessive fibrosis. After rectum mobilisation was partially suspended, the foreign body was reached with long Allis forceps from the anal region. The foreign object had a partial break during the removal. During the operation, the bottom and side walls of the object were removed intact from the anal canal. After washing, a passer



Fig. 3. Foreign body and pelvic diffused inflammatory changes.

catheter was placed into the rectum. The operation was ended after end colostomy. The passer catheter placed into the rectum was removed on the 5th day of postoperative follow-up. The patient was discharged a week after the controls. For follow-up controls, after receiving the opinion of the patient the stoma was not enclosed because of the loss of anal sphincter tone. Thus, the fistulas were decreased and withered away.

### 3. Discussion

Anorectal foreign objects are rare cases in emergency services. They mostly appear to involve 30–40-years-old patients, with two-thirds being males.<sup>1,2</sup> Anorectal foreign objects are generally things made from plastic, aluminium or glass bottles, eggplant, carrot or wood. These objects may be used erotically or for diagnosis and treatment purposes (Table 1).<sup>3</sup> Foreign objects in the rectum can be of different sizes, and the larger ones may cause more complications. Therefore, these cases must be handled as complicated cases and must be considered in terms of a systemic treatment approach and not as cases needing local treatment.<sup>5</sup> Treatment of psychiatric and forensic reviews should not be neglected after application of the patients.<sup>3,4,6</sup> Systemic antibiotic therapy should be applied with tetanus prophylaxis, while preventing the possible complications, and if there are complications, they should be treated.

Because of the shame of the situation, patients usually refrain from consulting a doctor. Abdominal pain, rectal pain and bleeding are common symptoms.<sup>6</sup> Some of the patients consult doctors for perforation, sepsis or bleeding resulting from trying to remove the object themselves.<sup>6</sup>

**Table 1**  
Kinds of rectal foreign objects.

1. Erotical purposes: bottle, vibrator, eggplant, battery, spool, etc.
2. Diagnosis and treatment purposes: thermometer, irrigation catheter, etc.
3. Taken by mouth and left in rectum: dental prostheses, chicken bones, toothpicks, pins, etc.
4. Sexual violence incidents and accidents: sexual abuse
5. Those who passes to rectum through adjacent tissues and organs

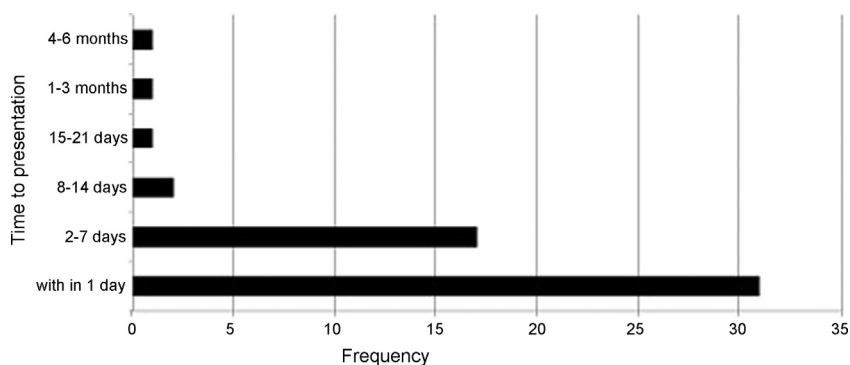


Fig. 4. Time interval between insertion of foreign body and presentation for treatment in single case reports ( $n=53$ ) Kurer et al.

Table 2

AAST rectal organ injury scale.

Grade 1: haematoma: contusion or haematoma (without devascularization and/or partial laceration)
Grade 2: laceration $\leq 50\%$ , peripheral
Grade 3: laceration $\geq 50\%$ , peripheral
Grade 4: full-thickness laceration extending to the perineum
Grade 5: devascularized segment

For the classification of rectal organ injury, the use of a system for penetrating and blunt injuries created by the Association of American Trauma Surgery (AAST) is helpful for evaluation of rectal foreign objects (Table 2).<sup>7</sup>

However, a rectal examination is a basic requirement for diagnosis, and it should be performed after abdominal and pelvic radiography. The water-soluble contrast graphics are helpful for diagnosis and also provide information both on the localisation of object and if there is any perforation. Objects placed distally can be defined and removed easily if the process will not cause additional trauma. However, foreign objects placed over peritoneal reflection cannot be detected by rectal touch and thus does not allow guessing of an injury level. It is also important to determine if there is any sphincter damage. Upon physical exam, the abdomen must be well evaluated, and severe pelvic pain, abdominal pain, tachycardia and fever could be a warning for organ perforation. If there is a stable perforation suspected during the vital findings, thickness increases in the rectal wall, along with air and liquid collections, they should be treated as full-thickness wall injury until proven otherwise by evaluation with computerised tomography. If foreign object was removed, evaluation of rectal injury should be made by endoscopy.<sup>3,5,6</sup>

For patients who do not discuss a colorectal foreign object and do not present any rectal pathology, the diagnosis can be made by perirectal pain, reduction in sphincter tone and directly imaging the object. If the patient informs about a foreign object, the properties of the object and sphincter functions must be evaluated by clinical examination. To prevent wrong decisions when managing the case, the findings should be evaluated carefully. As a result of assessment if there is a possibility of complications related to obstruction or directly to the foreign object, physicians should be ready for operation. For the cases unlikely to have complications, the exam and extraction can be made under sedation or general anaesthesia.<sup>4</sup>

Techniques for extraction are determined according to the size, placement height and structure of object. For objects placed on the rectosigmoid junction, the possibility of being passed into the rectum and transanal extraction should be assessed. Foreign objects under the rectosigmoid junction must be assessed according to the breakage risk and determined if they have sharpened surfaces. The vacuum effect could lead to damage after manipulation.

Possibly, sharpen objects can cause injury to full-thickness walls. Therefore, the colorectal zone should be assessed for injury by endoscope. After operation, sphincter tone should be assessed, and after recording, the patient should be contacted for follow-up<sup>3</sup> and control of faecal incontinence.<sup>6,8</sup>

Keeping in mind that the most dangerous complication is perforation, the stabilisation of the patient, place of perforation and faecal leakage should be assessed. The four D rules must be remembered for rectal injuries: diversion, debridement, distal wash and drain. Using a trauma surgery approach, the applied primary repair with/without diverting stoma for patients consulting in an earlier phase can result in minimal pollution and damage. However, for later consulting patients who are not stabilised, and who have additional comorbidities, diversion is the most advised method. In our reported case, there was no sphincter function. Therefore, a permanent stoma was created for the patient. The patient was observed, and antibiotic treatment was administered via the intravenous route. Resuscitation after oral feeding revealed cuts, resulting in small extra-peritoneal injuries.<sup>6</sup>

When we scanned for the literature concerning anorectal foreign objects, no case report was found for anorectal bodies that remained for 5 years in the rectum. According to the 2010 review of Kurer et al., 58.5% of cases were consulted on the same day and 32.1% 2–7 days after the incident for 53 cases in emergency services. Just one patient waited for 6 months after the incident (Fig. 4).<sup>8</sup> In our case, a 22 years old patient came for consultation 5 years after the initial incident, which occurred when he was 17 years old.

#### 4. Conclusion

According to Danielson and Holmes<sup>4</sup>, 8% of adolescent youths suffer sexual abuse. Therefore, they stated that personality disorders observed in these youths include anxiety disorders, post-traumatic stress disorders, suicide, substance abuse, self-harm and a damaging environment.<sup>4</sup> In our case, the case was reported to the judicial authorities, and post-psychiatric assessment supporting treatment was supplied to the patient.

After the elapsed time the caused damage to the rectum and tissue around was less than we anticipated. Complications such as abscess, perianal fistula complicated by severe pelvic sepsis and osteomyelitis were expected complications in this case.

As in this case, a surgical approach may eliminate dissection planes, increasing morbidity and mortality related to the injuring of surrounding bodies during object extraction. In cases assessed for anorectal foreign objects, patients have the possibility of sepsis leading to death from minimal mucosal bleeding after late consultation for object extraction.

### Conflict of interest

All authors declare no relationship with other people and organisations of this work.

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### Ethical approval

Authors obtained from the patient's consent for his data to use publication to case report.

### Author contributions

Concept: the idea for research or article/hypothesis generation (Dr. Ozbilgin, Dr. Arslan); design: planning the methods to generate hypothesis (Dr. Ozbilgin, Dr. Terzi); supervision: supervision and responsibility for the organization and course of the project and the manuscript preparation (Dr. Arslan, Dr. Ozbilgin, Dr. Terzi); resources: supplying financial resources, equipment, space, and personnel vital to the project (Dr. Terzi, Dr. Arslan); materials: biological materials, reagents, referred patients (Dr. Yakut, Dr. Aksoy, Dr. Arslan); data collection and/or processing: responsibility for conducting experiments, management of patients, organizing and reporting data (Dr. Arslan, Dr. Yakut);

analysis and/or interpretation: responsibility for presentation and logical explanation of results (Dr. Aksoy, Dr. Arslan); literature search: responsibility for conducting literature search (Dr. Arslan, Dr. Yakut); writing manuscript: responsibility for creation of an entire or substantial part of the manuscript (Dr. Aksoy, Dr. Arslan); critical review: reworking the final version of the manuscript, not just spelling and grammar check, before submission for intellectual content, (Dr. Arslan, Dr. Aksoy, Dr. Terzi).

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