

Surgical management of rectal foreign bodies: A single-center experience

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ABSTRACT

BACKGROUND: Rectal foreign bodies (RFBs) are one of the rare clinical presentations in colorectal surgical practice, with an increasing incidence over the recent years. Due to the lack of standardized treatment options, the management of RFBs can be challenging. This study aimed to evaluate our diagnostic and therapeutic approach to RFBs and to suggest a management algorithm.

METHODS: All patients with RFBs who hospitalized between January 2010 and December 2020 were retrospectively reviewed. Patient demographics, RFB insertion mechanism, inserted objects, diagnostic findings, management, complications, and outcomes were all evaluated. An algorithm for clinical management was developed depending on the center's experience.

RESULTS: The cohort consisted of 21 patients, 17 (81%) were males. The median age was 33 years (ranging, 19–71). Sexual preferences were the reason for RFB in 15 (71.4%) patients. In 17 (81%) patients, the RFB size over 10 cm. In 4 (19%) patients, RFBs were removed transanally without anesthesia in the emergency department; in the remaining 17 (81%), they were removed under anesthesia. Among these, RFBs were removed transanally under general anesthesia in 2 (9.5%) patients; with the assistance of a colonoscope under anesthesia in 8 (38%) patients; by milking towards the transanal route during laparotomy in 3 (14.2%) patients; and with the Hartmann procedure without restoration of bowel continuity in 4 (19%) patients. The median hospital stay was 6 days (ranging, 1–34 days). The Clavien-Dindo grade III-IV complication rate was 9.5%, and no post-operative mortality was observed.

CONCLUSION: RFBs can usually be successfully removed transanally in the operating room with appropriate anesthetic technique and proper surgical instrument selection.

Keywords: Extraction; rectal foreign body; sexual preferences.

INTRODUCTION

Rectal foreign bodies (RFBs) are one of the rarest clinical presentations encountered in surgical practice. In most cases, they are typically associated with sexual preferences.^[1,2] Since the topic of sexual preferences is considered taboo in the majority of societies, most patients are initially reluctant to seek medical help and instead attempt self-treatment, resulting in delayed and worsened clinical conditions.^[3,4] In addition, embarrassment often prevents them from providing truthful information during medical history collection. RFBs include a wide range of items, such as fruits

and vegetables, bottles, light bulbs, spray cans, and pieces of wood. The variety in terms of types, shapes, numbers, and sizes of RFBs encountered creates an even more challenging situation for clinicians. Despite the assertions made by some authors that the incidence of RFBs has increased in recent years,^[5] the literature on the management of RFBs lacks significant data. The vast majority of available information consists of case reports or case series with small numbers.^[3,6–11] At present, no standardized protocol for the management of RFBs is available. This study aimed to assess our diagnostic and therapeutic approach to RFB and recommend a management algorithm.

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MATERIALS AND METHODS

Archival records of patients diagnosed with RFB maintained at Dokuz Eylul University Hospital between January 2010 and December 2020 were retrospectively reviewed. The following clinicopathologic characteristics were assessed: age, sex, body mass index, comorbid conditions, psychosocial disorders, revealed reason for RFB insertion, type and size of RFB, and laboratory and radiological findings. In addition, patients were evaluated based on treatment strategies, pre- and post-extraction endoscopic findings, surgical approach, post-extraction follow-up, and complications. The study was approved by the Local Ethics Committee (Approval number: 2022/26–16). All the patients gave their written consent both for the surgery and for participation in the study.

A complete medical history evaluation and clinical examination of the patients were performed before administering treatment. In addition, depending on the patient's history and symptoms, an abdominal and chest X-ray or computed tomography (CT) was performed to localize the foreign body and rule out perforation of the colon or rectum. Digital rectal examination was postponed until after radiological evaluation to prevent the surgeon from causing accidental injury resulting from sharp or broken foreign objects. The RFB size was defined by its largest diameter. Based on digital rectal examination and radiological findings, RFBs were classified as distal (located in the distal 2/3 of the rectum) or proximal (located in the proximal 1/3 of the rectum or colon) localization. Our clinic prefers that removal of foreign bodies is performed under anesthesia in the operating room. If the object spontaneously came out during the rectal examination in the emergency department, it was removed; otherwise, no additional effort was made to forcefully remove the object. The transanal pathway was the primary choice for RFB extraction. Anesthesia was administered based on the need for sphincter relaxation, instrument selection, and exploratory laparotomy. If transanal extraction failed, or if there was evidence of perforation or peritonitis, laparotomy was the treatment of choice.

The severity of the rectal injury was determined using the Rectal Organ Injury Scale (ROIS) as follows: Grade I – contusion or hematoma without devascularization and/or partial-thickness laceration; Grade II – laceration involving 50% of the rectal wall circumference; Grade III – laceration involving >50% of the rectal wall circumference; Grade IV – full-thickness laceration extending into the perineum; Grade V – devascularized segment.^[12] Post-operative complications were classified according to the Clavien-Dindo (C-D) system.^[13]

Statistical Analysis

Statistical analysis was performed using SPSS® v.25.0 for Windows (SPSS Inc., Chicago, Illinois, USA). Continuous variables were expressed as the mean standard deviation. Categorical variables were expressed as absolute and relative frequencies.

A detailed statistical analysis was not performed due to the small number of patients.

RESULTS

Patient Characteristics

A total of 21 patients with RFBs were included in the study, 17 (81%) of whom were men. The median age was 33 years (range: 19–71 years). The majority of the patients received an ASA I score (76.1%). None of the patients, except one, suffer from any psychiatric disorder; the said patient presented with mental retardation. The most common reason for RFB insertion was found to be sexual preferences, as cited by 15 (71.4%) patients. Other causes included relieving constipation (4 patients, 19%), treatment for hemorrhoids (1 patient, 4.8%), and criminal assault (1 patient, 4.8%). The clinical characteristics of the patients are shown in Table 1.

Table 1. Clinical characteristics of patients with rectal foreign body (RFB)

	Total patients (n=21)	%
Age (years), median (range)	33 (19–71)	
Gender		
Male	17	81
Female	4	19
ASA		
I	16	76.1
II	5	24.9
Reason for RFBs insertion		
Sexual preferences	15	71.4
Constipation	4	19
Hemorrhoids	1	4.8
Assault	1	4.8
Rectal injury		
No injury	6	28.5
ROIS grade I-II	11	52.3
ROIS grade III-IV	4	19
Extraction mechanisms of RFBs		
Transanally in ER	4	19
Tansanally in OR with anesthesia		
Manual with instruments	2	9.5
With colonoscopy	8	38
Laparotomy		
Milking	3	14.2
Hartmann procedure	4	19

ASA: American Society of Anesthesiologists Classification; ROIS: Rectal Organ Injury Scale; ER: Emergency room; OR: Operating room.

Initial Presentation and Diagnosis

All the patients had arrived at the emergency room because they were unable to remove the objects on their own. The median time interval between the insertion of the foreign body and presentation for treatment was 16 h (range: 1–60 h). In only one patient, this period was 5 years, and this finding was excluded when performing statistics. This patient was mentally retarded and stated that someone had sexually abused him by penetrating a glass bottle into his rectum. He presented with pelvic sepsis and osteomyelitis with the ischium bone erosion of the broken bottle 5 years after the incident. The patient was treated by performing rectal resection and permanent ostomy due to existing anal sphincter damage.^[14] Eleven patients (52.3%) presented with lower abdominal pain, 3 (14.2%) with abdominal pain accompanied by rectal bleeding, and 2 (9.5%) with abdominal pain and constipation; 5 (23.8%) patients presented with no symptoms. RFBs involved in the reviewed cases included a wide variety of items, such as vegetables, bottles, and wood pieces. The characteristics, size, localization, and extraction method of the RFBs found are summarized in Table 2. Fifteen (71.4%) patients underwent abdominal and chest X-rays, and 12 (57.1%) patients underwent CT to demonstrate the localization of RFBs and rule out the presence of perforation or peritonitis. Digital rectal examination and radiological findings revealed that the RFBs were localized distally in 14 patients and proximally in seven patients.

Table 2. The characteristics, size, localization, and extraction method of RFBs

	Total patients (n=21)	Transanal extraction (n=17)	Hartmann procedure (n=4)
Foreign body			
Wooden piece	6	4	2
Bottle	5	3	2
Vegetable	2	2	0
Spray can	3	3	0
Tooth brush	1	1	0
Pen	1	1	0
Metal stick	1	1	0
Shower head	1	1	0
Vibrator	1	1	0
Localization in rectum			
Distal	14	14	0
Proximal	7	3	4
Size			
≤10 cm	4	4	0
>10 cm	17	13	4

RFB: Rectal foreign body.

Management of RFBs

The trans-anal pathway was the first choice for extraction, and it was performed successfully in 17 (81%) patients. In four of them (19%), RFBs were spontaneously removed without additional effort, during rectal digital examination in the emergency department. In the remaining patients, the procedure was carried out in the operating room. Regional anesthesia was administered to 10 (47.6%) patients, while general anesthesia was administered to 7 (33.3%). On rectal examination and colonoscopy, 6 (28.5%) patients showed no signs of injury, 11 (52.4%) had ROIS Grade I–II injuries, and 4 (19%) had ROIS Grade III–IV injuries.

Various surgical techniques were used, such as manual extraction with surgical instruments (surgical forceps / Kelly clamp) in two (9.5%) patients and with the assistance of colonoscopy in eight (38%) patients. Laparotomy was performed in 3 (14.2%) patients whose RFBs could not be removed through the transanal route and had no signs of perforation or peritonitis; the RFBs were removed trans-anally by milking downwards. Due to the presence of peritonitis and perforation in 4 (19%) patients with ROIS Grade III–IV injuries, the Hartmann procedure was performed with an end ostomy.

Follow-up and Complications

The median hospital stay was 6 days (range: 1–31). Six patients were checked for psychiatric disorders during the post-operative period, but no pathology was found. Patients who underwent transanal extraction did not develop any complications. Surgical site infection was observed in 1 (4.7%) patient, which was resolved uneventfully with local treatments. In 2 (9.5%) patients, C-D Grade III complications were observed. One of them was treated with a percutaneous drainage catheter and antibiotics due to an intra-abdominal abscess. In another patient, upper gastrointestinal bleeding caused by a gastric ulcer occurred in the post-operative period; the bleeding was treated successfully by endoscopy. In the late post-operative period, a patient who initially underwent the Hartmann procedure was treated with low anterior resection and colorectal anastomosis due to rectal stricture.

DISCUSSION

In the study in which we documented our findings pertaining to RFB insertion, the proportion of males to females was 4.2–1, and sexual preference was the most commonly cited reason (71.4%). Removing RFBs transanally under regional or general anesthesia was our most preferred treatment option (81%). A laparotomy was required for 28.5% of the patients, and of those patients, 66.6% underwent the Hartmann procedure with an end ostomy. Despite prompt and proper management, post-operative complications were not uncommon in these patients (C-D Grade III–IV, 9.5%). Therefore, close post-operative monitoring is required, particularly for patients who have undergone laparotomy.

Although RFBs are regarded as uncommon conditions in surgical practice, their incidence has increased over the past decade.^[5] Remarkably, 57.1% of the cases in our series have been observed within the past 5 years. In a review conducted by Kurer et al.,^[15] it was stated that the overwhelming majority of patients were male patients, with the male-to-female ratio being 37:1. Male dominance was also observed in our study, although at a slightly lower rate (4,2/1). A wide variety of reasons for RFB insertion have been reported, from constipation or hemorrhoid treatment to sexual assault. However, the most common reason is sexual preference. The majority of patients are men between the ages of 20 and 40 and are sexually active.^[1,10,15,16] The median age of our patients was 33 years, but a 71-year-old male patient in our study presented with RFB due to sexual preference.

Patients with RFBs are reluctant to seek medical assistance since they fear embarrassment. They frequently attempt to resolve issues on their own or with their partner. Society's perception of it as a taboo is also a factor contributing to late admission for treatment. Following the insertion of a foreign object into the rectum, treatment applications are typically submitted the same day or within 2–7 days.^[15] In our series, this interval was 16 h long. Health professionals have important responsibilities on initial application. They should refrain from being judgmental and instead reassure patients that they are in a safe environment where their reputation and privacy will be protected.^[17] Attention to these processes increases the treatment's success rate.

Transanal extraction is often successful when performed using proper instruments and an appropriate anesthesia technique to relax the anal sphincter.^[1,15,16,18,19] However, this is also closely related to the RFB's shape, size, nature, and location. Lake et al.^[20] found no statistically significant difference between cases of RFB requiring operative versus non-operative removal with regard to time to presentation (2 days versus >2 days) or size of the RFB (<10 cm <). They argued that RFBs located proximal to the rectum are more likely to necessitate surgical intervention. In our series, four patients had RFBs <10 cm in size, and all were successfully removed transanally. In only one of the patients who underwent laparotomy, the object was located in the distal rectum (extracted trans-anally by milking), while in all the others, it was located proximally.

Our clinic prefers to perform RFB removal procedures in the operating room using a variety of anesthesia techniques. Only four RFBs were removed trans-anally in the emergency room. Various reports advocate attempting RFB removal in the emergency room or at the bedside.^[20–22] The success rate of bedside or emergency room interventions has been reported to range between 16 and 75%.^[3] Repeated and forceful attempts to remove RFB cause anxiety, pain, and involuntary anorectal spasms; this is the primary cause of decreased success rate. Similar to previous research, the success rate of

trans-anal treatment was 81% in our study.^[1,5] We believe that this high success rate of the transanal route is related to the advantages of the operating room, preferred use of anesthesia, appropriate tool selection (colonoscope, Kelly clamp, ovarian clamp, etc.), and the short admission time of our patients.

Laparotomy should be performed if there are signs of acute abdominal infections suggesting perforation or peritonitis on admission, or if transanal removal fails.^[1,15,18,19] Depending on the situation encountered during laparotomy, various surgical techniques may be utilized. If the patient does not have peritonitis and perforation but the RFB could not be removed by the transanal route, laparotomy can be performed and extraction can be attempted with milking into the anal canal. This intervention was successful in the treatment of 14.2% of our patients. If the milking method fails, the primary repair is possible after a colotomy and removal of the object. However, if there is perforation or peritonitis, resection of the perforated rectum or colon segment and colostomy should be performed without delay.^[1,9,15] The use of minimally invasive methods such as laparoscopy instead of laparotomy has increased in recent years.^[4,8]

Even after successful extraction, RFBs can cause rectal or sigmoid perforation or bleeding.^[4,19] In the presence of a possible or suspected intestinal wall injury, patients should be hospitalized and closely monitored. Endoscopic evaluation of

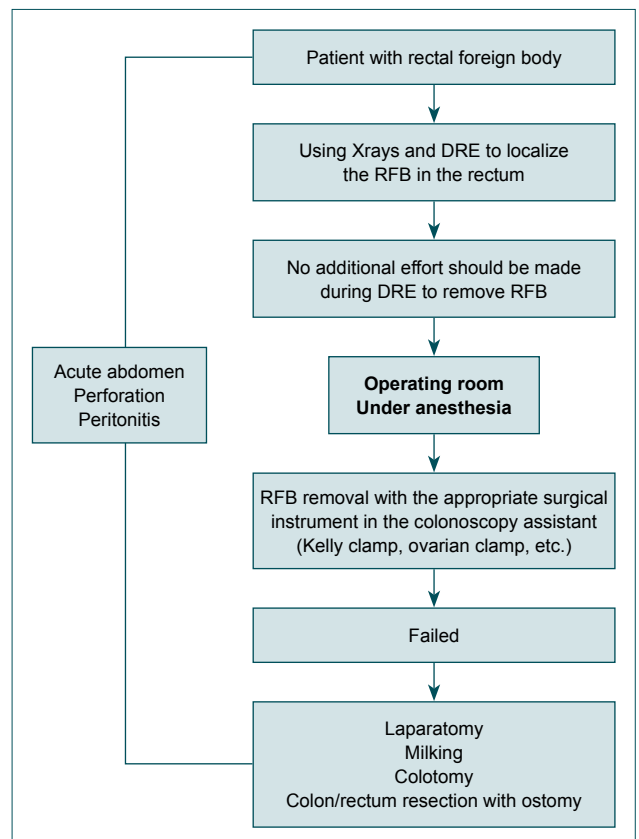


Figure 1. Surgical management algorithm of rectal foreign bodies (RFB, rectal foreign body, DRE, and digital rectal examination).

the rectal and distal colonic mucosa helps identify mucosal injuries and bleeding, particularly after a difficult trans-anal extraction.^[1,16] In our series of patients undergoing colonoscopy after transanal extraction, the most frequent rectal injuries were Grades I and II. During the post-operative period, patients who undergo laparotomy in particular require close monitoring. Two patients in our series who were treated with laparotomy encountered C-D III–IV complications.

Our study was limited by a number of factors, including its retrospective design and the fact that it includes only a single institution. Due to the study's small sample size, the statistical significance of some variables may have been diminished. However, we offered a treatment scheme based on our clinical experience (Fig. 1). Following this algorithm, we demonstrated that 80.1% of the patients were successfully treated with trans-anal extraction.

Conclusion

The incidence of patients presenting with RFBs is increasing, with sexual activities being a frequent cause. To ensure accurate diagnosis and treatment, patients should be examined radiologically (X-ray and/or CT). Further, forced attempts to remove RFB in the emergency room or at the bedside should be avoided. Performing the extraction procedure in the operating room and under anesthesia increases patient comfort and the success of transanal removal, as well as eliminates the need for unnecessary laparotomy. However, laparotomy should be performed without delay if perforation and peritonitis are present.

Ethics Committee Approval: This study was approved by the Dokuz Eylul University Non-interventional Clinical Research Ethics Committee (Date: 17.08.2022, Decision No: 2022/26-16).

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REFERENCES

- Yildiz SY, Kendirci M, Akbulut S, Ciftci A, Turgut HT, Hengirmen S. Colorectal emergencies associated with penetrating or retained foreign bodies. *World J Emerg Surg* 2013;8:25. [\[CrossRef\]](#)
- Hellinger MD. Anal trauma and foreign bodies. *Surg Clin N Am* 2002;82:1253–60. [\[CrossRef\]](#)
- Clarke DL, Buccimazza I, Anderson FA, Thomson SR. Colorectal foreign bodies. *Colorectal Dis* 2005;7:98–103. [\[CrossRef\]](#)
- Goldberg JE, Steele SR. Rectal foreign bodies. *Surg Clin North Am* 2010;90:173–84. [\[CrossRef\]](#)
- Ayantunde AA. Approach to the diagnosis and management of retained rectal foreign bodies: Clinical update. *Tech Coloproctol* 2013;17:13–20.
- Lim KJ, Kim JS, Kim BG, Park SM, Ji JS, Kim BW, et al. Removal of rectal foreign bodies using tenaculum forceps under endoscopic assistance. *Intest Res* 2015;13:355–9. [\[CrossRef\]](#)
- Bak Y, Merriam M, Neff M, Berge DA. Novel approach to rectal foreign body extraction. *JLS* 2013;17:342–5. [\[CrossRef\]](#)
- Cawich SO, Mohammed F, Spence R, Albert M, Naraynsingh V. Colonic foreign body retrieval using a modified TAMIS technique with standard instruments and trocars. *Case Rep Emerg Med* 2015;2015:815616.
- Huang WC, Jiang JK, Wang HS, Yang SH, Chen WS, Lin TC, et al. Retained rectal foreign bodies. *J Chin Med Assoc* 2003;66:607–12.
- Cawich SO, Thomas DA, Mohammed F, Bobb NJ, Williams D, Naraynsingh V. A management algorithm for retained rectal foreign bodies. *Am J Mens Health* 2017;11:684–92. [\[CrossRef\]](#)
- Coskun A, Erkan N, Yakan S, Yildirim M, Cengiz F. Management of rectal foreign bodies. *World J Emerg Surg* 2013;8:11. [\[CrossRef\]](#)
- Moore EE, Cogbill TH, Malangoni MA, Jurkovich GJ, Champion HR, Gennarelli TA, et al. Organ injury scaling, II: Pancreas, duodenum, small bowel, colon, and rectum. *J Trauma* 1990;30:1427–9. [\[CrossRef\]](#)
- Dindo D, Demartines N, Clavien PA. Classification of surgical complications: A new proposal with evaluation in a cohort of 6336 patients and results of a survey. *Ann Surg* 2004;240:205–13. [\[CrossRef\]](#)
- Ozbilgin M, Arslan B, Yakut MC, Aksoy SO, Terzi MC. Five years with rectal foreign body: A case report. *Int J Surg Case Rep* 2015;6C:210–3.
- Kurer MA, Davey C, Khan S, Chintapatla S. Colorectal foreign bodies: A systematic review. *Colorectal Dis* 2010;12:851–61. [\[CrossRef\]](#)
- Kokemohr P, Haeder L, Fromling FJ, Landwehr P, Jahne J. Surgical management of rectal foreign bodies: A 10-year single-center experience. *Innov Surg Sci* 2017;2:89–95. [\[CrossRef\]](#)
- Paynter M. Rectal foreign bodies. *Emerg Nurs* 2008;15:22–4. [\[CrossRef\]](#)
- Kim JH, Um E, Jung SM, Shin YC, Jung SW, Kim JI, et al. The management of retained rectal foreign body. *Ann Coloproctol* 2020;36:335–43.
- Fritz S, Killguss H, Schaudt A, Sommer CM, Richter GM, Belle S, et al. Proposal of an algorithm for the management of rectally inserted foreign bodies: A surgical single-center experience with review of the literature. *Langenbecks Arch Surg* 2022;407:2499–508. [\[CrossRef\]](#)
- Lake JP, Essani R, Petrone P, Kaiser Am, Asensio J, Beart RW Jr. Management of retained colorectal foreign bodies: Predictors of operative intervention. *Dis Colon Rectum* 2004;47:1694–8. [\[CrossRef\]](#)
- Rodriguez-Hermosa JI, Codina-Cazador A, Ruiz B, Sirvent JM, Roig J, Farres R. Management of foreign bodies in rectum. *Colorectal Dis* 2006;9:543–8. [\[CrossRef\]](#)
- Gupta SV, Kumar J, Sehgal S, Khemka S. Impacted large unusual rectal foreign bodies: A case series. *Indian J Surg* 2022;84:498–503. [\[CrossRef\]](#)

ORİJİNAL ÇALIŞMA - ÖZ

Rektal yabancı cisimlerin cerrahi tedavisi: Tek merkez deneyimi

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AMAÇ: Rektal yabancı cisimler (RYC) son yıllarda artan insidansı ile kolorektal cerrahi pratiğinde nadir görülen klinik prezentasyonlardan biridir. Standart tedavi seçeneklerinin olmaması nedeniyle, RFB'lerin yönetimi zor olabilir. Bu çalışma, RFB'lere tanıs ve terapötik yaklaşımımızı değerlendirmeyi ve bir yönetim algoritması önermeyi amaçladı.

GEREÇ VE YÖNTEM: Ocak 2010 ile Aralık 2020 arasında hastanede yatan tüm RYC'li hastalar geriye dönük olarak incelendi. Hasta demografisi, RYC yerleştirme mekanizması, yerleştirilen nesnelere, tanı bulguları, yönetim, komplikasyonlar ve sonuçların tümü değerlendirildi. Merkezin deneyimine bağlı olarak klinik yönetim için bir algoritma geliştirildi.

BULGULAR: Kohort 21 hastadan oluşuyordu, 17'si (%81) erkekti. Ortanca yaş 33 idi (19–71 arasında değişiyor). On beş (%71.4) hastada cinsel tercihler RYC nedeniydü. On yedi (%81) hastada RYC boyutu 10 cm'nin üzerindeydi. Dört (%19) hastada acil serviste RYC'ler anestezi olmadan transanal yolla çıkarıldı; kalan 17'sinde (%81) anestezi altında çıkarıldı. Bunların arasında iki (%9.5) hastada genel anestezi altında RYC transanal yolla çıkarıldı; sekiz (%38) hastada anestezi altında kolonoskop yardımıyla; üç (%14.2) hastada laparotomi sırasında transanal yola sağım yaparak; ve dört (%19) hastada bağırsak devamlılığı sağlanmadan Hartmann prosedürü ile RYC çıkarılması yapıldı. Medyan hastanede kalış süresi altı gündü (1–34 gün arasında değişiyordu). Clavien-Dindo (C-D) derece III-IV komplikasyon oranı %9.5 idi ve ameliyat sonrası mortalite gözlenmedi.

TARTIŞMA: RYC'ler genellikle ameliyathanede uygun anestezi tekniği ve uygun cerrahi alet seçimi ile transanal yolla başarılı bir şekilde çıkarılabilir.

Anahtar sözcükler: Cinsel tercihler; ekstraksiyon; rektal yabancı cisim.

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