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Rectal Foreign Body Management: 22 Years Of Experience

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History

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ABSTRACT

Rectal foreign body (RFB) is a clinical picture rarely encountered in the emergency department, but the majority of them are men. It is known that the most common reason for these objects taken orally and anally is for voluntary sexual stimulation. These patients are usually sexually active patients between the ages of 20-40. In this study, we aimed to evaluate only rectal foreign bodies placed in the anal region and to present a management strategy for these patients with our own experience and literature. A total of fifteen RFB cases that applied to the emergency department between 2002-2024 and were placed only in the anal region were included in our study. The objects removed were; 6 cosmetic objects, 4 soda bottles, 3 vegetables, and 2 glasses. The reason for approximately ¾ of our patients was sexual stimulation. 9 (60%) of RFB were removed anal, 5 (33.3%) were removed anal with laparotomy and bowel milking by bringing the object closer to the anus. In 1 (0.66%) patient, the object was removed by performing laparotomy and colotomy primary repair. Although RFB retention is an unusual clinical presentation, colorectal surgeons should be familiar with different extraction methods. It should also be kept in mind that patients experience psychological trauma and a nonjudgmental approach should be followed with patients.

Keywords: Rectum, foreign body, exraction, colonic perforation, Management

Rektal Yabancı Cisimlerin Yönetimi: 22 Yıllık Deneyim

Araştırma Makalesi

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ÖZ

Rektal yabancı cisim (RFB) acil serviste nadir karşılaşılan bir klinik tablodur ancak çoğunluğunu erkekler oluşturmaktadır. Bu nesnelerin ağızdan ve anal yoldan alınmasının en yaygın nedeninin istemli cinsel uyarılma olduğu bilinmektedir. Bu hastalar genellikle 20-40 yaş arası cinsel açıdan aktif hastalardır. Bu çalışmada sadece anal bölgeye yerleştirilen rektal yabancı cisimleri değerlendirmeyi ve bu hastalara kendi tecrübelerimiz ve literatürümüzle bir yönetim stratejisi sunmayı amaçladık. Çalışmamıza 2002-2024 yılları arasında acil servise başvuran ve sadece anal bölgeye yerleştirilen toplam 15 RFB vakası dahil edildi. Kaldırılan nesneler; 6 kozmetik obje, 4 soda şişesi, 3 sebze ve 2 bardak. Hastalarımızın yaklaşık ¾'ünün nedeni cinsel uyarılmaydı. RFB'nin 9'u (%60) anal, 5'i (%33,3) laparotomi ve bağırsak sağımı ile anüse yaklaştırılarak anal çıkarıldı. 1 (%0,66) hastada laparotomi ve kolotomi primer onarımı yapılarak cisim çıkarıldı. RFB tutulması alışılmadık bir klinik tablo olmasına rağmen kolorektal cerrahlar farklı ekstraksiyon yöntemlerine aşina olmalıdır. Hastaların psikolojik travma yaşadığı da akılda tutulmalı ve hastalara yargılayıcı olmayan bir yaklaşımla yaklaşılmalıdır.

Anahtar Kelimeler: Rektum, yabancı cisim, ekstraksiyon, kolon perforasyonu, Yönetim

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Background

Rectal foreign bodies (RFB) are usually inserted transanally for sexual stimulation, concealment of illegal substances and medical purposes, while foreign bodies can also be seen after oral ingestion. Anorectal foreign bodies are more common in men than in women .[1] When looking at the studies on RFB in the literature, the majority of them are male (male/female=6/1). The age range varies between 11 and 88. It is also reported that a large portion of these objects are inserted into the rectum for sexual stimulation.[2-4] Rectal object insertion is categorized as voluntary, involuntary and sexual. Involuntary ones mostly occur in children as a result of ingestion of medical instruments such as thermometers or oral objects, while voluntary ones include the insertion of cocaine and other illegal objects known as "body-packing" into the rectum to conceal them. The most common cause of RFB is objects inserted into the rectum for sexual purposes, with 75% .[5-7] Most patients do not seek medical attention at first, they wait for the RFB to pass spontaneously or they usually present to the emergency department (ED) days later with complaints such as abdominal pain, anal pain, and rectal bleeding because they try to remove it themselves. If a mucosal injury or perforation occurs due to trauma and/or a direct object while trying to remove it themselves, they may present with fever, abdominal pain, vomiting, and even septic symptoms. When RFB is suspected during the initial evaluation of the patient in the emergency department, especially in mentally retarded and incarcerated patients, it is necessary to thoroughly question whether the foreign body has a sharp surface before performing the rectal digital examination and, if necessary, to perform a rectal examination after imaging. Depending on the distance of the foreign body from the anus, it is classified as mid-distal rectum, high rectum, and colon localization. If there is no mucosal injury or perforation in laboratory findings, no pathology is usually detected. Radiolucent object may be seen in imaging, and pneumoperitoneum may be seen if there is perforation.[8-10] Although RFB constitutes a very small portion of patients presenting to the emergency department, it is a condition that involves medical and social difficulties. This condition, which is difficult to manage for both the patient and the doctor, requires an approach that does not cause the patient to be embarrassed, ashamed or blamed. In this study, we aimed to evaluate only rectal foreign bodies placed in the anal region and present a management strategy for these patients based on our own experience and the literature.

Materials and Methods

A total of 22 RFB cases admitted between 2002-2024 were included in the study. The patients' diagnosis was confirmed according to anamnesis, physical examination and radiological imaging methods. 7 patients were excluded from the study because RFB occurred as a result of oral intake. Only fifteen patients with RFB placed through the anal route were included in our study. Patient information was obtained from hospital records and recorded. Patient demographic data, hospital arrival times, reasons for RFB placement, RFB shape, laboratory results, imaging, location according to the anal region, extraction method and complication status were examined. Personal information of the patients was kept confidential. We divided the object location into three classes as distal mid-rectum low location (L), proximal rectum middle location (M) and colon location high location (H). Different extraction methods were recorded with pictures and videos. No statistical method other than standard average was used for statistical analysis.

Results

All patients were male and the mean age was 33.1. The marital status, causes of RFB and other characteristics of the patients are given in Table 1. When the patients applied to the ED, the object could be palpated in only 8 (53.3%) patients with digital rectal examination in the first evaluation and was recorded as L localization. No object was palpated in any patient during the abdominal examination. As a result of imaging, the object was detected as M localization in 4 patients and H localization in 3 patients. All patients underwent surgical intervention under spinal or general anesthesia. 9 (60%) of RFB were removed anal, 5 (33.3%) were removed by laparotomy and intestine milking and the object was removed from the anal region by approaching the anus. In 1 (0.66%) patient, the object was removed by laparotomy and colotomy primary repair. The removed objects were; 6 were cosmetic objects, 4 were soda bottles, 3 were vegetables and 2 were glasses. No patient required follow-up imaging or sigmoidoscopy after the operation. No complications were observed in any of our patients after the treatment. When the patients were examined according to their causes, it was seen that they were grouped into three groups as sexual stimulation (SS) 11 (73.3%), therapeutic (T) 1 (0.66%) and humiliating punishment method (HP) 3 (2%). In the first evaluation of the patients, history collection, physical examination and laboratory tests were performed. This information is shown in Table 1.When removing vegetables from the rectum, successful results were obtained by using a Kelly clamp for carrots, an over clamp for cucumbers, and two spoons as forceps for apples. The computerized tomography image of the apple in axial section is shown in Figure 1 and the extraction of the apple in the form of forceps using two spoons is shown in Figure 2. When a Foley catheter is used to remove the cups, when the cup is pulled towards the anal region, in cases where the cup mouth diameter is larger than the colon diameter, mucosal damage may occur in the colon due to the plane difference between the cup mouth and the colon wall. To eliminate this situation, a long twisted balloon is used instead of a Foley catheter Figure 3.In imaging methods, the cup mouth diameter is determined approximately and the amount of air that inflates the balloon to the cup mouth diameter outside the body is determined. A long balloon placed on a tube is placed into the cup with an anoscope and the determined amount of air is given, and since the cup mouth and the colon wall are on the same plane, and the rectosigmoid fold is corrected, mucosal damage is prevented, and the extraction process becomes easier.

Figure 1: Apple image in axial section

Figure 2: Extraction of apple with two spoons

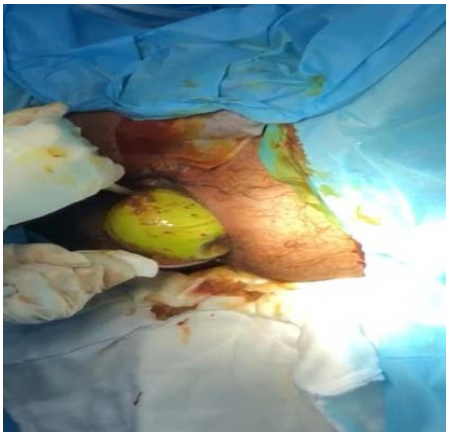

Table 1: Characteristics of patients, causes of RFB, characteristics and extraction methods

No	Age (years) Marital status	Cause	Day after insertion	Reason for ED	FB/size (cm)	RFB location	Extraction method	Complication
1	42/M	T	2	Constipation	Carrot/17	L	Transanal extraction	No
2	45/M	SS	4	Constipation	Cosmetic object/20	L	Transanal extraction	No
3	38/W	HP	2	Anal pain	Soda bottle/ 16	L	Transanal extraction	No
4	51/NA	SS	3	Fear/confess	Apple/11	L	Transanal extraction	No
5	47/W	SS	2	Rectal bleeding	Glass/10	M	Laparotomy-Milking Transanal extraction	No
6	34/NA	SS	1	Rectal bleeding	Cosmetic object/19	L	Transanal extraction	No
7	26/W	HP	2	Fear/confess	Cucumber/ 19	L	Transanal extraction	No
8	49/M	SS	3	Constipation	Glass/11	L	Transanal extraction	No
9	31/W	SS	2	Fear/confess	Soda bottle/23	H	Colotomi extraction and primer repair	No
10	25/NA	SS	4	Fear/confess	Cosmetic object/18	M	Transanal extraction	No
11	40/M	SS	1	Anal pain	Soda bottle/17	M	Laparotomy-Milking Transanal extraction	No
12	46/W	HP	5	Fear/confess	Soda bottle/16	H	Laparotomy-Milking Transanal extraction	No
13	22/W	SS	2	Abdominal pain	Cosmetic object20	L	Transanal extraction	No
14	42/M	SS	1	Anal pain	Cosmetic object	H	Laparotomy-Milking Transanal extraction	No
15	35/NA	SS	3	Fear/confess	Cosmetic object	M	Laparotomy-Milking Transanal extraction	No

M:Married, W:Widowed, NA:Not available, T:treatment, SS:Sexual pleasure, HP: Humiliating punishment, ED:Emergency Department L:Lower, M:Middle, H:High

Discussion

Despite the existence of management guidelines and algorithms for rectal foreign bodies, management challenges remain. It has been reported that the majority of these foreign bodies are self-implanted. Patients are often unable to openly accept this information during their history-taking visits to the ED. Cultural differences and attitudes of these patients may affect the incidence of rectal RFB in clinical practice.The causes of RFB inserted in the anal region are diverse; they include relief from hemorrhoids or constipation, concealment of

medications, secondary gains in patients with psychiatric disorders, assault and sexual gratification or anal eroticism. Autoeroticism for sexual gratification appears to be the most

clues. A detailed physical examination, including imaging and digital rectal examination, should be performed. Plain radiography provides important information to determine the size, shape and location of RFB. However, radiolucent RFBs such as fish bones, plastic objects, and vegetables may not be easily visualized. Plain radiography may be sensitive to bowel perforation in only up to 50% of cases. Although the indications for CT in these cases have not been clearly established, CT may be needed to demonstrate perforation that cannot be confirmed by plain radiography or complications due to high-lying RFBs.[4,7,11-13] RFB insertion for sexual gratification is considered taboo; due to the shame associated with this practice, many patients do not provide a truthful history. Patients may fabricate a history and may not provide accurate information about the reasons for RFB insertion. It is imperative to establish and maintain a nonjudgmental relationship and respect for the patient's privacy. It is important for physicians to consider suspected cases of sexual abuse. Involuntary RFB insertion has been reported in children, the elderly, and individuals with intellectual disabilities. In cases of sexual abuse, special attention should be paid to addressing both the mental and physical well-being of the patient. Many sexual abuse victims may be reluctant to undergo examination. Therefore, it is recommended that physicians also perform an assessment of general trauma when interviewing and examining potential sexual assault victims. The incidence of RFB perforation in these patients is approximately 10% .[14,15] In the vast majority of cases, rectal foreign bodies may be inserted during erotic activity. Objects are typically seen in dildos, vibrators, light bulbs, candles, shot glasses, soda bottles, beer bottles, and similar objects of unusual or unusual size. In our study, the reason for this was sexual stimulation in approximately three-quarters of our patients. Concealed foreign objects may be inserted rectally. Typically, these objects are drug packets, and less commonly, objects such as knives or guns. No concealed RFB was detected in our patients. Some psychiatric patients intentionally conceal sharp objects in their rectums in order to harm the examiner performing the rectal examination. Finally, in older patients, rectal foreign objects used for prostate massage or to break up stool particles may be lost during this activity. Some rectal foreign bodies are initially swallowed and then pass through the gastrointestinal tract. Examples of the latter include toothpicks, popcorn, bones, sunflower seeds, and, in recent years, camera pills used in gastrointestinal studies .[16,17] Patients may cause anal sphincter damage while trying to remove the RFB before reaching the ED. RFB removal may become easier in these patients. Care should be taken when removing the RFB in patients who use the rectum to store illegal objects. Because it should be kept in mind that there may be substances in the package that are toxic to the body in excessive doses. Therefore, care should be taken not to tear the RFB sheaths in order to prevent them from tearing and developing systemic effects of the toxic substance inside. Oral intestinal motility enhancing drugs can be given to bring RFBs located high closer to the lower level, and in cases where these drugs are ineffective, the object can be milked downwards by laparoscopic or laparotomy, and then the RFB can be removed transanally. In cases where it is not possible to common reason for RFB insertion. Most patients are sexually active men between the ages of 20 and 40, as observed in this study.Patients' accurate history provides important diagnostic milk from the colon, colotomy, extraction and primary repair can be performed. It is accepted that glass-like FBs are a potential indication for laparotomy [18,19]. There is no consensus among the authors regarding RFB placements in the literature. In our study, the number of objects located at the lower level was found to be 8 (53.3%), objects located at the middle level were found to be 4 (26.7%) and objects located at the high level were found to be 2 (20%).Studies have shown that the rate of RFB removal in the emergency department is 51.3%. In addition, vaginal spatulas, wire and plastic forceps, rubber-coated bone-holding clamps, and tenaculum forceps have all been described as grasping foreign bodies for extraction. In this context, intraoperative proctoscopy can be used to grasp and pull out bulky foreign bodies. In our study, two spoons were used as forceps for an apple, which yielded successful results. Precautions should be taken to avoid damaging the anal sphincter during these procedures. It has been described that posterior sphincterotomy can be performed, especially for the removal of large objects. Transanal extraction is the most common approach used in patients with RFB, and 60–75% of FBs can be successfully removed transanally.[20–23]If the foreign body is small in diameter and there is no suction effect, enemas or oral cathartic (magnesium sulfate) agents can be used, but these treatments may have risks such as bleeding, further mucosal damage, and intestinal perforation. Occasionally, the object may be too high in the recto-sigmoid to be grasped. In such cases, it is recommended that the patient be sedated and hospitalized for monitoring to allow peristalsis to lower the foreign body to the lower level within 12 hours .[24,25]

Sigmoidoscopy is usually recommended after RFB removal to assess the anorectal mucosa and the extent of injury. Although a few authors have advocated sigmoidoscopy as a mandatory procedure, it may not be mandatory because it may predispose to complications and close clinical observation is sufficient for post-extraction care. In our study, none of our patients required sigmoidoscopy during close follow-up and had sphincter damage that could cause anal incontinence. In conclusion, although RFB retention is an unusual clinical presentation, colorectal surgeons need to be familiar with different extraction methods. It should also be considered that patients experience psychological trauma and a non-judgmental approach should be followed with patients.

Declaration of competing interest

The authors declare no conflict of interest.

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