Extraction of a rectal foreign body - an alternative method

Rektal yabancı bir cismin çıkartılması - alternatif bir yöntem

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We present a case report of trans-anal extraction of a foreign body from the rectum using an unconventional instrument. Our patient presented with impacted retained rectal foreign bodies. As the patient suffered from psychosis, a laparotomy with a stoma would have been difficult to manage. It was thus decided to make every effort to retrieve the objects transanally. After failed attempts with retractors and endoscopy, Kielland obstetric forceps were used successfully to retrieve the foreign body transanally. The authors have found no other report describing use of Kielland obstetrical forceps to retrieve foreign bodies from the rectum.

Key Words: Foreign body; Kielland forceps; rectum.

Bu yazıda, rutinde kullanılmayan bir alet yardımıyla, yabancı cismin rektumdan transanal yolla çıkarıldığı bir olgu sunuldu. Rektumda kalan yabancı cisim şikayetiyle başvuran hastanın psikoz yakınması vardı ve stoma yoluyla uygulanacak laparotomi uygulaması çok zor olacaktı. Bu nedenle, yabancı cismi transanal yoldan geri çıkarmak üzere girişimin gerçekleştirilmesine karar verildi. Retraktörler ve endoskopi ile gerçekleştirilen girişimlerin başarısız olmasından sonra, yabancı cismi transanal yoldan geri çıkarmak için Kielland obstetrik forsepsi başarılı bir şekilde kullanıldı. Bu çalışmanın yazarları, yabancı cisimleri rektumdan geri çıkarmak üzere Kielland obstetrik forsepsinin kullanıldığı başka herhangi bir makale bulamamışlardır.

Anahtar Sözcükler: Yabancı cisim; Kielland forseps; rektum.

Retained rectal foreign bodies are a common presentation worldwide, and various shapes and sizes have been described in the literature.[1] Low-lying rectal foreign bodies can sometimes be manipulated and extracted even in the emergency department, whereas the high-lying foreign bodies may pose a challenge and require formal admission and removal under anesthesia.[1] As the foreign body can lead to obstruction and perforation, an attempt with an endoscope should be done before open surgical removal.[2]

We present our experience with Kielland obstetric forceps to retrieve a rectal foreign body.

CASE REPORT

A 40-year-old male presented to the emergency department complaining of rectal bleeding and pain. He stated that he had of his own will inserted a hair gel jar into his rectum the day before. He claimed that the foreign body was still there and that it was an accident. The patient was very delusional and psychotic at the time, with threats of self-harm and a threatening behavior toward the staff. Abdominal examination revealed some distention and exaggerated bowel sounds, but there were no signs of peritonitis due to bowel perforation. A digital rectal examination could not be performed due to the patient's threatening behavior. Plain abdominal radiographs including the pelvis in erect position revealed a glass gel jar and a metallic ball above it situated in the rectum (Fig. 1).

The liaison psychiatrists were involved in the care and found him to be unfit to give a formal informed consent for a laparotomy or a possible

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Fig. 1. Plain abdominal radiograph showing the two rectal foreign bodies.

stoma. It was thus decided that every effort would be made to extract the foreign bodies transanally. No other radiological investigation was performed.

The patient was taken to the operating theater where general anesthesia was applied and he was placed in the lithotomy position. Using rigid and flexible sigmoidoscopy, we could visualize the edge of a foreign body at 10 cm that appeared to be a gel jar. Anal dilatation was done with four fingers. Several attempts were made to grasp the object using biopsy forceps, retractors and graspers, but it was impossible to mobilize the object even with application of abdominal compression externally to facilitate caudal movement. The endoscope could not pass around the object as it occupied the whole bowel lumen and due to the mucosal edema surrounding the foreign body.

The obstetric theater staff nurse was approached to obtain standard Kielland forceps (Fig. 2), 15 inches in length, as the last attempt before a laparotomy was undertaken. The effort was fruitful and the foreign body was delivered by placing the blades around the jar and just pulling at the handle of the forceps. The integrity of the rectum was checked with an endoscope and the metal ball retrieved using a basket. The gel jar was 9 cm in diameter and 7 cm in height and the metal ball had a 4 cm diameter. The patient was transferred to the psychiatrists' care after 48-hour observation. The patient was followed up with an endo-anal ultrasound to check the integrity of the anal sphincter as incontinence was contemplated. As the patient had become incontinent and the endo-anal ultrasound showed damage to the sphincter, he was referred to a lower gastrointestinal surgeon for definitive care.

DISCUSSION

Reports of retained rectal foreign bodies are increasingly common worldwide.[1] It is likely that any surgeon practicing at a major medical center will encounter this type of case, and thus should be familiar with both surgical and non-surgical management options.[1] The diagnosis is usually easy to confirm with a thorough history and physical exam and plain abdominal films.[1]

Eftaiha et al.[3] classified colorectal foreign bodies as low- or high-lying. Low-lying objects are those that can usually be removed in the emergency department transanally as they are accessible, whereas high-lying foreign bodies up in the rectum can pose a challenge and require anesthesia, endoscopy or a laparotomy. In our patient, the foreign bodies were high-lying so the patient was taken to theater to first try the transanal route for extraction. It is suggested that trans-anal delivery should only be done under direct vision.[2] We were able to directly visualize the foreign body with the endoscope but not during the extraction with the Kielland forceps, which could have proved hazardous. Thus, the integrity of the bowel wall was checked after the extraction with the endoscope and the patient was kept under observation for 48 hours. Large objects impacted high in the rectosigmoid junction pose a challenge for endoscopic extraction.[2] A flexible sigmoidoscope with an endoscopic snare can be used to "lasso" the foreign body and deliver it externally.[2] It should be attempted before open surgical removal.[2] In our patient, the endoscope would not pass beyond the large foreign body so it was not used primarily; however, it was used later to retrieve the metal ball.

Kingsley et al.[4] proposed that laparotomy should be considered as the primary method of treatment if the patient presents with a high-lying foreign body impacted for 24 hours or longer. Although our

Fig. 2. Kielland forceps.

patient had a 24-hour history and high-lying foreign bodies, a laparotomy carried potential for a greater disaster based on his psychiatric history.

The possibility of a perforation must be taken into account with foreign bodies, which can erode the bowel wall. In our patient, there were no clinical signs of bowel perforation on abdominal examination. Crass et al.[5] reported that all free perforations were clinically obvious with free air on abdominal radiographs, but in our case there was no such evidence on radiographs.

A multidisciplinary approach should be used when dealing with patients with colorectal foreign bodies. These patients frequently present in the emergency department and the surgical team should be involved in all cases. If there is difficulty in interpreting radiographs, a professional opinion from a radiologist should be obtained. Before attempting manipulation in the theater, consultation by a stoma nurse is advised in the event a laparotomy and proximal diversion are needed. These patients are often deeply embarrassed and psychological support and confidentiality are essential. The role of the nursing staff involved in the care of the patient in that case is highly important. Our patient was very difficult to handle as he was threatening self-harm and self-discharge.

An ideal general surgical instrument would be able to easily grasp and remove a foreign body in the rectum without damaging the bowel wall or the sphincter. No such instrument exists. In extremis, we used the Kielland forceps, which worked well in extracting the rectal foreign bodies by the trans-anal route, but the compromise in regards to the integrity of the sphincter was an unavoidable risk bearing in mind the psychiatric illness. As incontinence was feared and eventually occurred, the patient required further investigations and treatment by a colorectal surgeon.

In conclusion, we point out that even obstetric instruments can be used in general surgery to manage difficult cases, with good results. To our knowledge, this is the only report describing use of the Kielland forceps in the rectum. We propose that these forceps are a useful instrument in rare circumstances for removing colorectal foreign bodies that are large and difficult to remove by other means.

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