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# Transanal extraction of an inserted foreign body

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## Abstract

Rectal foreign bodies are a common occurrence at most large emergency rooms. An 18-year-old male presented to the ER complaining of rectal pain for 90 minutes after he inserted a foreign object into his rectum and was unable to retrieve the item. This case illustrates the need for medical providers to be familiar with the multiple techniques for removing rectal foreign bodies and when to proceed to a more invasive technique to achieve successful removal of a rectal foreign object.

## Keywords

Rectal foreign body; transanal approach; endoscopy; colostomy

## Introduction

An 18-year-old male presented to the ER complaining of pain in his pelvic region from a "personal problem." The patient was unable to sit and had called an ambulance to transport him to the hospital.

A physical exam revealed normal vital signs with no indication of peritonitis, though the patient appeared very uncomfortable throughout the exam and leaned against the bed for support.

The patient stated that he had been experiencing rectal pain for approximately 90 minutes but was otherwise in good health, with no history of abdominal problems or surgery. He had consumed an unknown amount of alcohol earlier that day, but he had not experienced any nausea, vomiting, fever, chills, rectal bleeding, melena, diarrhea, or constipation.

When pressed as to the source of his discomfort, the patient sheepishly stated that he was embarrassed to say what had happened. He admitted to inserting an object into his rectum but was vague and dismissive when further questioned. Hospital personnel then obtained an AP KUB X-ray of the patient's abdomen (Figures 1 & 2).

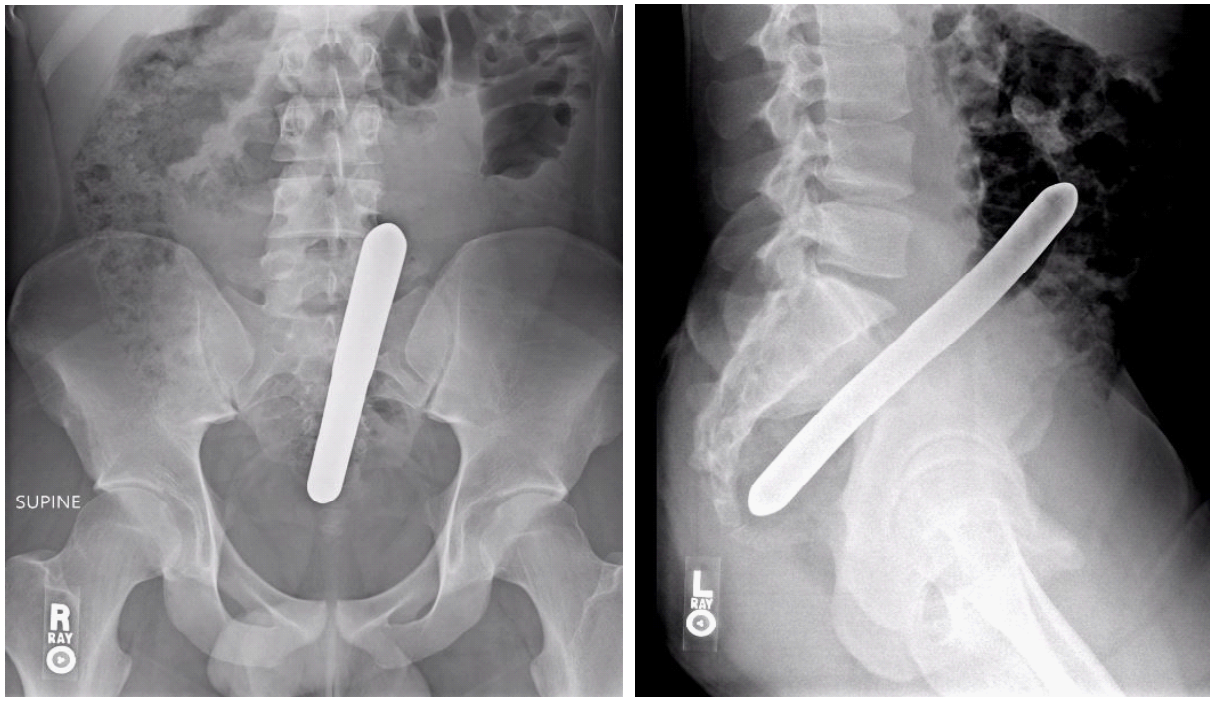


**Figure 1:** Abdominal X-rays visualizing the foreign body in the rectum.


**Figure 2:** A picture of the dilator sounding instrument that was removed from the patient.

The X-ray showed a radiopaque tubular foreign body in the rectum measuring 205 mm longitudinally. There was no evidence of free air in the abdomen.

When questioned further, the patient stated he had been inserting an object into his rectum to massage his prostate when he lost control of the object and had been unable to retrieve it. The patient had attempted to remove the object for approximately 30 minutes before calling EMS.

At the hospital, ER personnel attempted to retrieve the object but halted due to the patient's discomfort, where upon he was taken to the operating room for a rectal exam. The patient was administered general anesthesia and placed in a high lithotomy position. A digital rectal exam revealed that the foreign body was palpable with the tip of the surgeon's finger. The surgeon inserted a speculum, visualized the object, and used a clamp to remove the object intact. The object was a smooth stainless steel dilator/sound, measuring 205 mm long X 18 mm wide at the base, tapering to 17 mm at the tip. The patient later stated he had purchased the urethral dilator sounding instrument online for the specific purpose of prostate massage, despite it not having a base and not being intended for rectal insertion. The dilator sound was removed intact and there was no observed bleeding or visible damage to the local mucosa.

## Discussion

The majority of patients presenting for medical treatment to remove an anorectal foreign body are males with a mean age of 42.5 - 46 years old [1,2]. Most large hospitals treat approximately one patient per month for an anorectal foreign body [3], while at our military clinic this was the first case of a voluntary placement of a rectal foreign body in over three years. A distinction is made between voluntary and involuntary rectal foreign bodies: Involuntary foreign bodies are usually items that have been ingested orally and have subsequently lodged themselves in the colon, such as bones, toothpicks, or bits of plastic. Voluntary rectal foreign bodies are often items inserted into the rectum for sexual gratification, though this category also includes objects inserted for purposes of concealment, such as transporting illegal drugs or introducing items into a prison.

When a patient presents to a medical facility for treatment in such cases, the primary decision is how to retrieve the foreign body. There are many factors that determine whether an object can be removed bedside or if the patient must be prepped for the operation room. The first step is to visualize the object by ordering plain films. This not only permits visualization of the object's placement but also reveals the presence of free air. If free air is observed in the abdominal cavity, the patient should immediately be sent to surgery; however, if no free air is detected, it may be appropriate to try removing the foreign body in the clinical setting. Removing an object in the clinic as opposed to sending the patient to surgery will depend on the object's shape and composition (e.g., blunt, sharp, frangible, brittle), the ability of the patient to relax amid the discomfort (sedation may be necessary to complete the removal), and the length of time the object has been inside the rectum.

### Bedside Removal

If a bedside transanal extraction is to be attempted, it is important that enemas or suppositories are not used, as they may push the foreign body more proximally into the colon. If the patient is unable to relax their rectal sphincter, IV sedation or perianal block will likely be necessary. The patient should be placed in the lithotomy position to afford the physician the best chance to visualize the object. A digital rectal exam will also assist in evaluating the location of the object. After the physician determines that conditions are appropriate to attempt a transanal extraction, common anorectal surgical instruments such as speculum and clamp can be used to grasp and extract the object. However, as the inserted objects are likely to be smooth, round, cylindrical, or egg shaped for easy insertion [4], it is difficult to grasp and remove them in a transanal manner using standard surgical instruments. If tolerated, abdominal pressure may be manually applied or the patient themselves can provide pressure via a Valsalva maneuver. After removal of the foreign body, the patient must be evaluated and checked for perforation, active bleeding, or other damage to the rectum.

### Surgical Removal

If the patient is unable to relax sufficiently to allow a transanal removal in the examination room, the patient will be sent to general surgery to be sedated, after which a surgeon can attempt a transanal extraction

under anesthesia. Depending on the object's shape and position, external pressure can be applied to the abdomen to allow the object to descend to the distal colon and facilitate transanal removal. A laparoscopy may also assist in applying accurate pressure to the colon and milking the object into the distal colon where it can be grasped transanally [5]. If these transanal attempts are insufficient, a colotomy will be required to remove the object.

If perforation is observed, the object should be left in place if possible to help identify the site of the perforation and to avoid further damage to the colon. The surgical repair and intervention required will be dependent on each individual case and may range from simple removal and primary repair to a diverting stoma [6].

As laid out in the flowchart above, unless imaging reveals that the rectal foreign body has caused perforation or other significant damage, physicians should consider a minimally-invasive transanal removal to be the preferred treatment option, particularly in cases of voluntary rectal insertion.

## Conclusion

The patient tolerated the removal of the dilating sound instrument well; he was kept overnight for observation and released the following day without incident. During a follow-up 72 hours later, the patient stated that he had experienced no lasting effects and was having normal bowel movements.

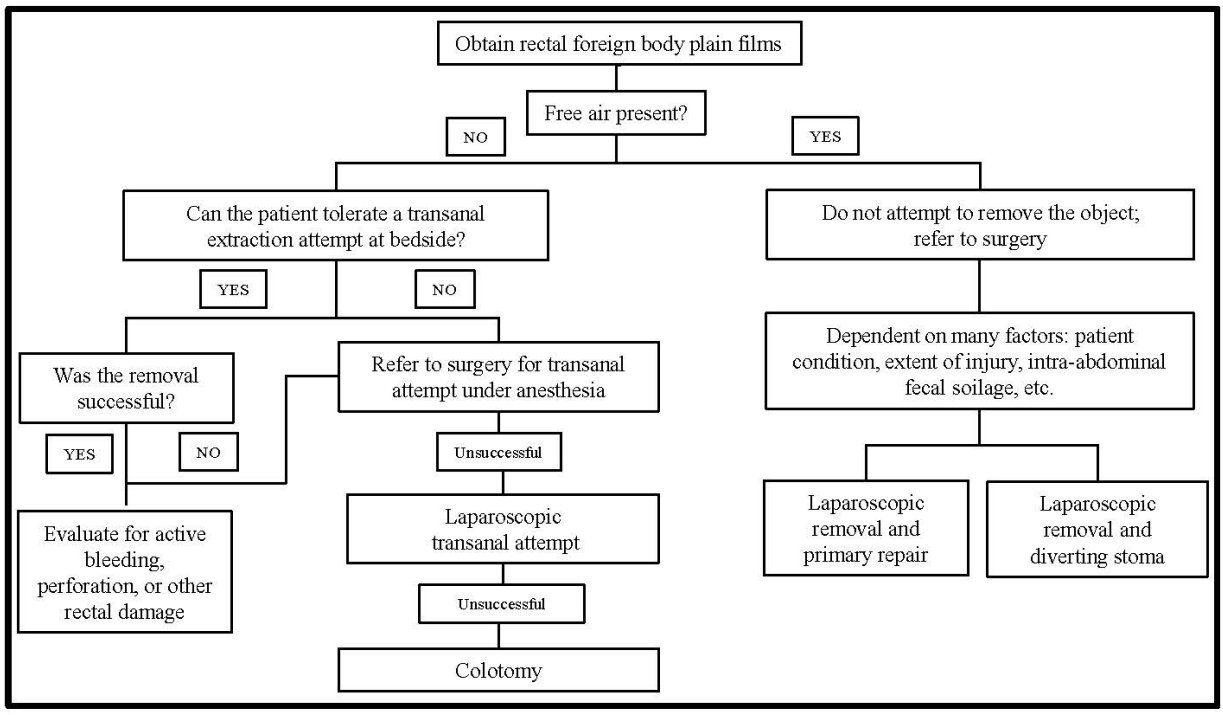


**Figure 3:** Flowchart for determining the extraction method for a rectal foreign body.

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