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Case Report

Peculiar challenges of a glass object retained in rectum: review of current options

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ABSTRACT

Rectal foreign bodies are rare and often challenging. It can vary from soft toys to hard glass or wooden objects. Patients are mostly habitual offenders who generally present to emergency due to retained foreign body or complications like perforation or bleeding. Proper history with a plain X-ray is often enough for the diagnosis and position of the foreign body. However, management can be varied from a simple trans-anal retrieval to an exploratory laparotomy. Minimal invasive techniques also have a role in current scenario. We report an unusual glass foreign body with its opening placed caudally.

Keywords: Foreign body, Trans-anal retrieval, Glass in rectum

INTRODUCTION

Rectal foreign bodies are intriguing cases in the emergency department and each comes with their own set of challenges and complications. The most encountered patient is a middle-aged male, following a sexual misadventure. Other reasons being accidental, trafficking of illegal drugs (body packing), psychiatric illness or criminal assault. The objects inserted are most usually household items, vegetables, dildos and cocaine packets.[1] Glass objects are especially unique and are difficult in management owing to the rich vascular supply of the anorectal region and the propensity of the glass to shatter to further cause even more serious damage during retrieval.

CASE REPORT

A young male presented to surgery emergency with complaints of peri-anal pain and bleeding per rectum due to a retained foreign body. Patient was habitual of inserting foreign bodies inside his rectum for sexual pleasure. While his general and systemic examination was unremarkable, his rectal examination revealed a glass tumbler approximately three inches deep to the anal verge with its open mouth caudal and closed end cephalad. Complete open rim of the tumbler could be felt with no cracks. The anal sphincter tone was lax, mucosa was oedematous with blood-stained mucoid discharge. An abdominal X-ray confirmed the upside-down tumbler, with no evidence of pneumoperitoneum (Figure 1).

Under relaxation of general anaesthesia patient was placed in a lithotomy position. After anal dilatation, a sponge holding forceps with gauze wrapped at its tip was used to catch hold of the tumbler rim, attempting to pull it out. After few careful attempts the glass started to crack and break. Hence a small infraumbilical incision was made and the assistant's hand was inserted into the pelvic cavity to push the tumbler out per-anal. Lateral sphincterotomy was also done to widen the anal opening, a manoeuvre which facilitated removal of tumbler along with all small broken glass pieces. A thorough saline wash was then given to remove any retained glass piece. Subsequent proctoscopic

evaluation revealed few small mucosal tears, however there was no peritoneal breach which was also confirmed by direct visualisation through the infraumbilical incision. Post-operative X-ray confirmed no retained foreign body and patient was discharged after psychiatry consultation on second post-operative day.

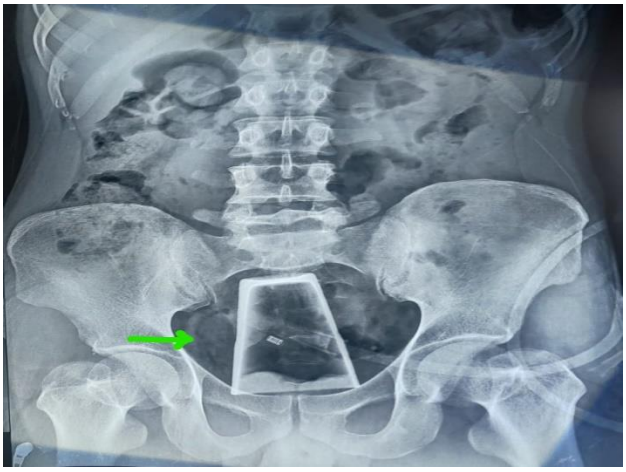

Figure 1: Showing the upside down glass in the rectum (arrow).

DISCUSSION

Each case of retained foreign body which varies in shape, size and material has a unique presentation and requires an individualised approach. The first step is to procure an accurate history and a non-judgemental, respectful approach is paramount.[1] After alleviating anxiety and pain, clinical examination which includes a per abdominal and digital rectal examination to look for any perforation, nature and approximate location of the foreign body which will guide whether a trans anal retrieval of the object should be attempted in the emergency room or under anaesthesia in operating theatre. X-ray or with computed tomography (CT) of the abdomen and pelvis can further help in giving more information. Upfront surgery is required for a perforated bowel, one with jagged edges or an object lodged high up in the sigmoid as a trans-anal approach may prove to be a daunting and frustrating task. Various algorithms have been proposed; where it has been found that most authors advocate for a trans-anal attempt in the emergency if the object is low lying, not fragile, and presents early, while others advice an early shift to the operating room (OR) where the less invasive procedures such as trans-anal extraction using various methods such as snaring, using obstetric forceps, and TAMIS may be used under a better controlled and equipped environment under proper or adequate analgesia.[2,3] In OR, it can be converted to a laparoscopic or open procedure where a milking down of the foreign body and extraction trans-anally can be attempted. If all fails, a colotomy is required.

Retained glass objects in the rectum pose an altogether different set of challenges. The smooth, slippery nature of the glass surface makes it difficult to manipulate and the ever-present risk of fracturing the glass and causing further injury to the rectum leading to more injuries. Furthermore, mucosal edema around the opening with the wide end downwards makes the trans-anal retrieval more difficult and frustrating.[2] It is advisable not to attempt trans-anal retrieval of the foreign body under inadequate anaesthesia and equipment as this leads increased discomfort and can result in further upwards migration. The risk of fracturing the glass is also much greater in an uncomfortable patient.

Once in OR, in lithotomy and reverse Trendelenburg position, an attempt at a trans-anal approach is justified. In an awake patient, Valsalva manoeuvre can be attempted and the object grasped trans-anally after applying generous lubrication, using an obstetrical suction device, or various grasping forceps.[4] Under adequate anaesthesia, with the abdominal and pelvic muscles fully relaxed, a suprapubic pressure can be applied. Drinking glasses with the opening directed cephalad, negative pressure within the glass may produce a consequent suction effect, drawing the mucosa into the opening where Foley catheters and Sengstacken Blakemore tube have been used to overcome the suction effect.[5-7] Techniques described include applying "Plaster of Paris" or a strong glue inside the object with a wet gauze and using it for traction. Other unique ways of handling a glass body are to wrap the object in a cotton gauze, or inserting it inside a plastic bag before attempting to scoop it out.[8]

In more highly placed foreign bodies, the endoscopic approach is a safe and reliable approach. Under direct vision, a polypectomy snare may be used to bind the foreign body for extraction.[9] TAMIS and its modifications are newer approaches that are also gaining popularity.[10]

Minimally invasive laparoscopic-assisted technique or mini-laparotomy can be attempted, and the object can be milked inferiorly with direct intraabdominal visualization to allow transanal extraction.[11] Enterotomy to clear objects is the preferred initial approach if the glass object has sharp jagged edges or if perforation has already occurred.[12-14] Thorough per rectal and transperitoneal examination should then be done to look for any additional injuries that may require repair and to remove any retained glass particles.

In our case, an additional reason to give a small infraumbilical incision was to be able to gently guide the fractured glass into the widened anal opening and thus avoid a more invasive procedure, and with gentle manipulation of the jagged edges with a soft gauze the trans-anal removal was uneventful. Narjis et al had also described a similar case, in which an attempt to manual extraction in the emergency room using obstetric forceps led to fracture of the glass, and therefore a laparotomy with colotomy for RFB retrieval and temporary colostomy had to be performed.[15]

A good psychiatric evaluation and counselling is also of utmost importance to prevent repeated incidences.

CONCLUSION

The approach to a glass object per rectum, although follows the general rules of management of other foreign bodies, should have a low threshold for a more invasive approach as the case can quickly turn for the worse if not done properly.

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