

PRESENTATION AND MANAGEMENT OF SELF INDUCED ANORECTAL FOREIGN BODIES

Muhammad Saad Faisal,¹ Sidra Dil Muhammad,¹ Muhammad Imran²

ABSTRACT

Background: Cases of self insertion of anorectal foreign objects and their extraction maneuvers had occasionally been stated in literature. **Objective:** To determine the presentation and management of self induced anorectal foreign bodies. **Methodology:** Retrospective data of anorectal foreign bodies from 1st March, 2010 to 30th September, 2015 was collected and analyzed in this cross sectional study. A total of 17 male patients presented with foreign bodies in lower gastrointestinal tract were included in this study. Information regarding detailed clinical history, digital rectal examination, proctoscopy, sigmoidoscopy, plain abdominal radiograph and surgical and nonsurgical treatments were collected and analyzed. Details of intraoperative or postoperative complications, observed mortality or morbidity and condition at discharge, were also noted and analyzed, by using SPSS version 20. **Results:** The mean age of 17 patients included in this multicentered retrospective analysis was 35±17 years. Anorectal pain was present in 17 (100%) patients while rectal bleeding was observed in 14(82.35%). Only 7(41.17%) revealed history of foreign body insertion through anus for sexual gratification. Plain abdominal radiograph displayed foreign bodies in 10 patients. In 7(41.17%) patients, foreign bodies were extracted transanally. Ten (58.82%) patients experienced laparotomy for high lying objects. No major or minor postoperative complications were observed. There was no mortality. Mean hospital stay was 2.14±1.95 days. **Conclusion:** Anorectal foreign body can present invariably. Low threshold of suspicious is required for early recognition. Management should be planned according to type and best possible facilities availability.

Keywords: Anorectal, Foreign body, Acute abdomen, Rectal bleeding

INTRODUCTION

Anorectal foreign bodies because of its potential complications, is an interesting topic.¹ Its true incidence has not been documented precisely how ever it is sporadically reported in different areas of world, mainly in Western countries.^{2,3} Studies have shown that the most patients with anorectal foreign bodies were male (65—100%) and mean age of 35±5 years (ranging from 16 to 94 years) and the most common cause was sexual pleasure.⁴ Manifold reasons of insertion of foreign body into lower gastrointestinal tract through anus can be classified as voluntary and involuntary, sexual and nonsexual.^{5,6} Varieties of objects like vibrators, candles, enema tips, thermometer, fruits, vegetables or glass bottles are used for this purpose which cause variable trauma.⁷ So, these patients present with range of symptoms and clinical signs according to severity of the condition; ranging from chronic pelvic pain and constipation to rectal hemorrhage and acute abdomen as result of gut obstruction or perforation.⁸ Trouble in constructing diagnosis always exists as many patients are not ready to disclose core etiology because of embarrassment. Although clinical and rectal examination, proctoscopy and plain abdominal x-rays are often useful in recognizing and localizing the foreign

body (FB) preoperatively, incidental findings of FB have also been reported.⁹

Now a day, it is not odd in surgical practice to come across patients with anorectal foreign bodies. Unfortunately, the available literature largely consists of case series or reports which belong to Western World. In a developing country like Pakistan, this becomes an out of the ordinary topic because of paucity of data and possible variation in presentation, pattern of injury and management from presented modern world literature as the practicing sex toys for anorectal pleasure are not liberally available in developing third world countries, rather we have observed people using very dangerous and unsafe objects for this purpose. We herein describe our five years experience of presentation and management of anorectal foreign bodies from three tertiary care units.

METHODOLOGY

In this cross sectional study, we analyzed the data of 17 patients who presented with self insertion of anorectal foreign bodies between 1st March, 2010 to 30th September, 2015 at three tertiary care units i.e., Services Hospital, Lahore, Rasheed Hospital, Lahore and Sharif Medical City Hospital, Lahore. We included only those patients who :- 1) presented with history of self-induced FB and FB was extracted by

1. Sharif Medical City Hospital, Lahore, University of Health Sciences, Lahore, Pakistan.

2. Services Hospital Lahore, University of Health Sciences, Lahore, Pakistan.

Correspondence: Dr Muhammad Saad Faisal, Assistant Professor General Surgery, Sharif Medical City Hospital, Lahore, Pakistan.

E-mail: saadi206@yahoo.com

Mobile: +92-321472211

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the surgeon, 2) has history of self-induced FB but FB was already extracted by the patient himself but produced at the time of presentation -3) did not present with history of self-induced FB but the FB was revealed incidentally during any of the following procedure i.e. digital rectal examination, proctoscopy, radiological assessment or surgery and postoperatively, upon retrograde history, patient confirmed the self-insertion of FB.

We excluded the patients in whom foreign body was not retrieved or presented by patient at time of presentation, children of < 10 years age, mentally retarded patients or in whom foreign body was inserted by some medical professional or for treatment purpose or during assault. We collected all the information regarding the demographics (age, gender, occupation, socioeconomic status, marital status, sexual orientation), duration between introduction of the foreign body and its presentation (in hours), history at presentation (concealed or revealed), clinical assessment (nonspecific perianal or pelvic pain, rectal bleeding, abdominal pain and tenderness, tachycardia), findings at proctoscopy (lax anal sphincter tone, laceration in rectum/anal canal, rectal bleeding, presence of FB), laboratory (low hemoglobin, raised total leucocyte count) and radiologic results (free gas under diaphragm, radiopaque shadow mimicking FB). We also gathered information regarding management offered to those patients, management plans selected by the surgeon; included either of the following; examination under anesthesia (EUA), attempts for transanal extraction of FB, milking of FB towards anus for transanal extraction or covering colostomy/ileostomy with primary repair of gut injury/perforation during exploratory laparotomy. Outcome details were also noted in terms of re-exploration and mortality.

Based on clinical and operative assessment, the patients were categorized according to AAST rectal injury scale. Grade 1: haematoma: contusion or haematoma (devoid of devascularization and/or incomplete laceration), Grade 2: laceration \leq 50%, peripheral, Grade 3: laceration \geq 50%, peripheral, Grade 4: full-thickness laceration extending to the perineum, and Grade 5: devascularized segment.² Outcome parameters were successful extraction of FB through anus, any iatrogenic injury to gastrointestinal tract during transanal extraction

or milking, complications related to exploratory laparotomy including pelvic collection and sepsis. Any procedure related mortality was also noted. The data was entered and analyzed through SPSS 20.

RESULTS

The total number of patients with self-induced anorectal foreign body in our study was seventeen, and all were males. Mean age of the patients was 35 ± 17 years (range 17–82 years). The mean time to presentation was 2 ± 10.66 hours. Only 7(41.17%) patients revealed history of self-induced foreign body at the time of presentation while 10(58.82%) patients concealed the history. Anorectal pain was present in all patients (100%), bleeding rectum in 14 (82.35%) patients. Nine (52.94%) patients presented with signs and symptoms of acute abdomen (abdominal pain and tenderness, hypotension, fever, tachycardia or tachypnea). Routine digital examination and proctoscopy revealed Lax anal sphincter tone 17 (100%), laceration of rectum/anal canal 6(35.29%), rectal bleeding 14 (82.35%) and the presence of foreign body in 7(41.17%) patients. Elevated white blood cell count was observed in 3 (17.64%) patients. Routine abdominal X-ray was obtained in every case; gas under diaphragm was present in 3 (17.64%) patients and the presence of foreign body which was shown in 10 (58.82%) patients. There was no need to seek help from CT scan or Ultrasonography. Sharp objects were found in 5 (29.41%) patients and blunt objects were noticed in 12 (70.58%) patients. Three (17.64%) patients has inserted metallic, 2 (11.76%) wooden, and 12 (70.58%) plastic. Seven (41.17%) patients were presented with already extracted object by himself. In 6 (35.29%) patients object was located in rectum and in 1(5.88%) patient object was found in the transverse colon. Rectum was level of injury in 13 (76.47%) patients, sigmoid colon in 2 (11.76%), descending colon 1(5.88%) and small gut (ileum) and rectum in 1(5.88%) patients. Examination under anesthesia and transanal extraction of object was successful in 7(41.17%) patients while in 1(5.88%) patient exploratory laparotomy was performed to extract foreign body through anus by milking it distally. Primary repair of intestinal perforation with covering stoma (8 colostomies, 1 ileostomy) were done in 9(52.94%) patients. Stomas were reversed successfully in all patients after 6 weeks of injury. Psychiatric evaluation, post transanal extraction colonoscopy and repeat plain abdominal x-ray were recommended in every case. No intra operative or

postoperative major or minor complications were observed.

There was no mortality. Mean hospital stay was 2.14±1.95 days. No patient was presented with second time self-induced anorectal foreign body. Demographic features of patients are shown in table I, types of extracted FB and their management in table II and operative findings and classification of gut injuries according to AAST are given in table III.

Table I: Demographic features of patients with anorectal FB

Parameters		Number (n)	%ages
Socioeconomic status	Lower class	11	64.70
	Middle class	3	17.64
	Upper class	3	17.64
Educational level	Uneducated	11	64.70
	Primary education	2	11.76
	Secondary education	4	23.52
Marital status	Unmarried	8	47.05
	Married	9	52.94
Sex orientation	Heterosexual	9	52.94
	Homosexual	8	47.05

Table II: Types of extracted FB and their management

Objects retrieved	Number (%)	Offered management		
		Transanal extraction of FB under anesthesia n(%)	Exploratory laparotomy	
			Transanal extraction N (%)	Primary repair & covering stoma n(%)
Cooking spoon	1(5.88)	1(5.88)	-	-
Iron bar	1(5.88)	-	-	1(5.88)
Fountain pen	2(11.76)	-	2(11.76)	-
Sex toy	3(17.64)	2(11.76)	1(5.88)	-
Glass bottle	1(5.88)	1(5.88)	-	-
Wood piece	1(5.88)	-	-	1(5.88)
Screw driver	1(5.88)	1(5.88)	-	-

DISCUSSION

Anorectal foreign bodies during odd sexual practices are not uncommon but their clinical presentation and accordingly management is quite variable and puzzling. While taking history, most of the times patients do not reveal the history of

insertion of foreign body through anus.

Extraction of anorectal foreign body through anus has been recommended as a conservative approach in those cases where there is no gut perforation and object is approachable transanally. No special instruments or techniques have been devised to grasp the object and eliminate it through anus. A turnip has been brought out through natural route by the help of obstetric forceps.¹⁰ A soft large rubber sex toy has been removed by engaging it with a myomectomy screw into its inferiorly directed portion.¹⁰ Laparotomy is one step in those cases where extraction through anus is failed, objects moved proximally or patients present with gut obstruction or perforation. Being tackled intermittently, not any precise incidence of rectal FB is originated in literature.¹¹ Rather; it is very common in Eastern Europe and infrequent in Asia.¹² Our study was conducted in Asian group however; cases were from all ethnic group populations.¹³

Table III: Operative findings and classification of gut injuries according to AAST

Parameters	Number	Percentage
Grade 1	6	35.29
Grade 2	2	11.76
Grade 3	0	0
Grade 4	9	52.94
Grade 5	0	0

The factual rate may be higher to our observation, as only those patients accessible to us who were incapable to get rid of rectal FB themselves or agonized from complications allied to FB. Reported cases unveiled that not one particular age group individuals are indulged in this activity.^{14,15}

Young as well as old, are well-versed with rectal FB.¹⁶ In a study of Ali Coskun et al, all patients were ranged between 33 to 68 years in comparison to our study, mean age was 35 ± 17 years (range 17 - 82).¹⁷ Rectal FB also stated in psychiatric patients with Munchausen's syndrome and it is prevalent in male population.¹⁸ Similar results were noticed in our study, all patients were male.

Self and accidental insertion of FB, sexual enjoyment, criminal assault and psychiatric illness had also been reported as the motives of rectal FB.¹⁹ Autoeroticism is the commonest cause of rectal FB.²⁰ Variety of objects have been reported which had been used to introduce in rectum for sexual purposes i.e bottles, light bulbs, candles, broom stick, vibrator, sex toys, fruits and vegetables.²¹ In our study, 1 cooking spoon, wood piece, iron bar, screw driver and glass bottle while 2 sex toys and fountain pens were retrieved from rectum. Seven (41.17%) patients got their gut damaged from bath room brush according to their history. Contrary to other studies, we have observed our patients using hazardous objects like wood piece, screw driver, iron bar and bath room brush. Instant medical care is generally neglected because of social embarrassment. This social awkwardness made patient to hide actual history and to narrate diverse stories of FB insertion. Patients with entangled FB consult doctor only when their own attempts failed to remove FB.²² Anal pain and bleeding (66.7%) is the commonest presentation and history of FB is revealed in 33.3% cases.^{23,24} In our study commonest presentation was perianal pain 17(100%) and rectal bleeding 14 (82.35%).

In our study, diagnosis of FB were made at time of presentation in those patients 7 (41.17%) who revealed history of FB insertion into rectum; both prospectively 5 (29.41%) and retrospectively 2 (11.76%). Ten (58.82%) patients were diagnosed with rectal FB on plain abdominal x-ray and 7 (41.17%) on DRE. Patients with self-induced rectal FB are very much story teller. Good and effective doctor – patient communication matters a lot in such cases. Doctors should be non-blaming.

Plain radiograph reveals and locate object, its size, shape and number; and excludes free air inside peritoneal cavity. This helps in making decision regarding route of extraction of FB. Two views of abdominal x-ray (lateral and anteroposterior) had been taken in order to exclude artefacts. The plain

abdominal x-ray could determine the presence of some of the FB.

Kyle G et al had proposed an algorithm of management of rectal FB but that is beneficial in those patients who confess self-insertion of FB into rectum at time of presentation.²⁵ Conservative and surgical policies are two comprehensive means of management of FB rectum depending upon object locality and gut perforation. Low lying objects that don't breach gut are usually achieved by transanal extraction.

Figure I: An X-ray abdomen (plane) of a patient which outlines the shape of a glass bottle suggesting the suspicion of FB in gastrointestinal tract.

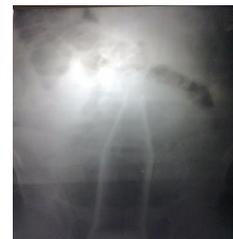


Figure II: An ileal perforation discovered during exploratory laparotomy in a patient with insertion of FB (handle of bath room brush).



Surgery is reserved for failed transanal extraction, high lying object and gut injury. In our study, after making diagnosis or suspecting FB rectum, 7 (41.17%) patients were managed by taking out FB through natural route; 6 (35.29%) with EUA and 1(5.88%) required laparotomy only to milk object towards anus; and while 9 (52.94%) patients were underwent laparotomy for the repair of gut injury caused by FB. The ileal perforation which was observed in only one patient, along with recto-sigmoid perforation, may be explained due to adhesion formation (between ileum and rectum) because of previous two abdominal surgeries.

In literature, obstetrics forceps, devices for vacuum extraction, plaster of Paris, and Foley's catheter were used to grip and take away rectal FB.²⁶ Fruitful role of sigmoidoscopy or colonoscopy in FB removal is as well recognized.²⁷ Laparoscopy or laparoscopic instruments had also assisted in some cases.²⁸ Bak et al defined a novel approach for deduction of FB by

employing a single incision laparoscopy surgery port.²⁹ In our study, we utilized instruments like non-conventional laparoscopic grasper for extraction of sex toys, pencils present in descending colon or transverse colon through sigmoidoscope. The mortality and morbidity increases with presence of gut injury. Reported intraperitoneal rectal perforation mortality and morbidity is range from 2.5-20% and 20-40%.³⁰ However, there was no mortality in our study. Our study had some limitation. Sample size was small. However, it was multicentered study and time duration was long (upto 5 years).

CONCLUSION

Our study showed that anorectal foreign bodies can present in variably. The practicing surgeons should keep in mind the possibility of FB as an etiology of rectal injuries who don't fit in some classic diagnosis. Privacy should be provided, investigations should be used accordingly and management should be towards saving life and then restoration of anatomy.

Conflict of interest

The authors have declared no conflict of interest.

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