Foreign bodies in the rectum: a review[1]

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The variety of objects removed from the rectum almost defies imagination, but it can be stated that any object which can be introduced into the rectum has, at some time, been removed (Lockhart-Mummery 1934).

Portal of entry

It is recognized that most foreign bodies which are found in the rectum have been placed there through the anal canal, but occasionally some object becomes arrested in the anorectal region after ingestion. The clinical problems differ so these topics will be discussed separately.

Oral route

There is rarely a history of ingesting a foreign body, but usually the object is a fragment of bone swallowed with meat or fish, which traverses the gastrointestinal tract and lodges in the rectal ampulla or anal canal because a sharp spicule embeds itself (Figure 1). When the foreign

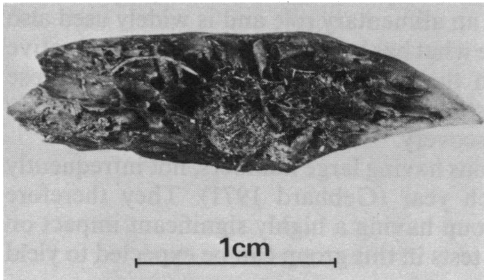

Figure 1. Rectal foreign body after removal. Typical ingested bone fragment found embedded at the anorectal junction

body lodges low in the anal canal, the patient gets severe anal pain suggesting a fissure-in-ano, but if the foreign body is higher then pain is much less marked and the patient goes on to develop sepsis as a consequence of the associated injury. The patient may have a para-anal fistula or may present with other forms of local anorectal sepsis such as a submucous abscess. Not infrequently, these patients have the urinary symptoms of frequency and dysuria due to irritation of the prostate and bladder base. Plain X-ray of the abdomen may be useful but these foreign bodies are often poorly radio-opaque and so may be difficult to see (Figure 2). The key investigation is examination under anaesthesia, both digital and endoscopic. The foreign body is usually obvious and not too difficult to remove. Any associated sepsis requires adequate surgical treatment. It is very rare for the damage and sepsis to be severe enough to require the rectum to be defunctioned by colostomy, but these occasional patients should be recognized and treated accordingly.

[1] Based on paper read at joint meeting of Section of Proctology with Medical Society for the Study of Venereal Diseases, 27 February 1980. Accepted 23 April 1980

0141-0768/80/070510-04/$01.00/0

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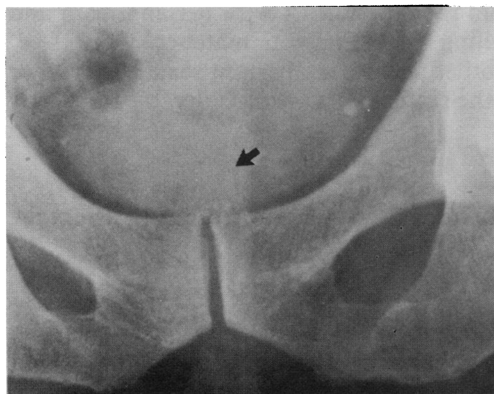

Figure 2. X-ray of pelvis showing same foreign body as Figure 1 (arrowed). Ingested foreign bodies may be poorly radio-opaque although quite substantial

Anal route

A foreign body may be inserted into the rectum by the doctor, by the patient or by some third party as a result of assault, aberrant sexual activity or accident (Table 1). The list of foreign bodies found in the rectum seems almost limitless and certainly includes some unusual objects (Benjamin *et al.* 1969). The problem of the entrapped rectal foreign body is not common in any individual surgical practice, yet over some years this author has seen bottles, a wine glass, a watch, vibrators, flashlights and even a tin of baked beans.

Table 1. Reasons for anal insertion of foreign body

Iatrogenic:	Diagnostic
	Therapeutic
Self administered:	Diagnostic
	Therapeutic
	Autoerotic
	Psychiatric
'Third party' administered:	Aberrant sexual activity
	Assault
	Accident

Objects which the doctor inserts for diagnosis or treatment may become retained in the rectum accidentally, and include anal packs after Lord's procedure, enema tubes and thermometers. I have never had difficulty extracting these, though a general anaesthetic may be necessary. Although it is rare for there to be associated injury, anorectal injuries due to diagnostic procedures, such as sigmoidoscopy and barium enema, do occur and should be recognized and treated promptly (Classen *et al.* 1975).

A wide diversity of objects may be inserted by the patient and it is useful to consider the reasons for insertion (Eftaiha *et al.* 1977). These may be diagnostic, as when a patient 'loses' a rectal thermometer; therapeutic, as in an attempt to treat the symptoms of piles; or the motive may be concealed. In the latter case, the patient may state that he was trying to treat his piles but a hidden motive may be self-eroticism, for example when vibrators are passed. These objects are long and may be felt, still vibrating when the abdomen is palpated, referred to as the 'vibrating umbilicus syndrome' (Haft *et al.* 1976). Occasionally, one sees the definitely psychiatrically disturbed patient, who inserts objects into the rectum from some perverted

motive; for example, a patient referred to me from the psychiatrist with perianal pain and some urinary symptoms had been systematically filling his rectum with matches.

When the foreign body has been inserted by another person, in aberrant sexual activity or assault, the patient is more likely to have injury to the rectum because considerable force may have been used.

Management

The principles of management after location of the foreign body are to remove it, assess the rectum for injury and to treat any associated injury.

Clinical assessment

Most patients are ashamed of the insertion of the foreign body and this leads some patients to omit to mention the occurrence. They present with either urinary symptoms or perianal pain or vague abdominal discomfort. The presence of more severe pain, if coupled with physical signs of peritoneal irritation, should alert one to the possibility of intraperitoneal rectal injury. If the foreign body is radio-opaque, X-ray can be useful to confirm the diagnosis and to locate its position. It should be recalled that foreign bodies can migrate a considerable distance up the colon.

Removal of foreign body

If removal is not easily effected in the outpatient department, the patient should be admitted and removal of the foreign body undertaken under general anaesthesia. Great ingenuity has to be shown in extracting the foreign body, and many unusual methods have been advocated, such as using obstetric forceps or plaster of Paris (MacDonald 1961). If it is at all possible, the object should be removed transanally. The demonstration that maximal anal dilatation for piles rarely produces problems with continence (Lord 1968) has eased our problems, for the anal sphincter mechanism can be widely dilated, if necessary, in order to allow the foreign body to be removed manually. In some subjects, the whole hand can be passed into the rectum to allow removal. Recently, a simple suction device has been described and this may offer some help in extracting the foreign body (Steven *et al.* 1979). The whole exercise is one of ingenuity and patience, which is usually rewarded by success if the object is below the sacral promontory. Rarely, when the foreign body has ascended into the colon, laparotomy is required. The patient is placed in the abdominoperineal position, using Lloyd-Davies stirrups, and the abdominal surgeon milks the object down to the perineal surgeon so that it may be removed. Only as a last resort should the colon be opened and the foreign body removed in this way.

Assessment of associated injury

It seems trite to say that diagnosis of the injury is important but sigmoidoscopy after the extraction is mandatory. Injuries can be either above or below the peritoneal reflexion and so are best classified into extraperitoneal and intraperitoneal injury.

Treatment of extraperitoneal injury: An injury low in the rectum which is considered to be minor can be handled conservatively initially. It is important to give the patient antibiotics and to keep him under observation as an inpatient; if the surgical judgment is good, then the patient recovers uneventfully and rapidly. If the extraperitoneal injury is not felt to be minor, then a laparotomy is required to perform a colostomy above the injury in order to defunction the rectum.

Treatment of intraperitoneal injury: In these patients, abdominal exploration, repair of the defect and colostomy are necessary. Postoperatively the patient will require antibiotics, of which I prefer the combination of metronidazole and gentamycin, started immediately before operation and continued for seven days after operation. The colostomy can be closed at an early date provided the distal bowel is shown by contrast radiography to have healed.

Summary
Foreign bodies which lodge above the anal sphincter mechanism may arrive from one of two portals of entry, the mouth or the anal canal. Ingestion of a foreign body is usually unknown to the patient, who presents with symptoms due to impaction and minor injury to the rectal ampulla or anal canal. The patient may have severe anal pain or sepsis associated with the foreign body. The diagnosis is usually obvious on examination under an anaesthetic, but before this there may be a difficult diagnostic problem.

Foreign bodies passed into the rectum through the anal sphincter are more common and show an extreme variety. The reasons for insertion are discussed. Management of the problem includes extraction of the foreign body and the recognition and treatment of any associated injury, both extraperitoneal and intraperitoneal. Minor extraperitoneal injuries may be treated expectantly, but in all intraperitoneal and major extraperitoneal injuries laparotomy and colostomy are required. It is stressed that most foreign bodies can be removed transanally, and laparotomy to remove the foreign body is rarely required.

References
Benjamin H B, Klamecki B & Haft J S (1969) *American Journal of Proctology* **20**, 413–417
Classen J N, Martin R E & Sabagal J (1975) *Southern Medical Journal* **68**, 1417–1428
Eftaiha M, Hambrick E & Abcarian H (1977) *Archives of Surgery* **112**, 691–695
Haft J S, Benjamin H B & Wagner M (1976) *British Medical Journal* i, 626
Lockhart-Mummery J P (1934) Diseases of the rectum and colon. Ballière, Tindall and Cox, London; p 377
Lord P H (1968) *Proceedings of the Royal Society of Medicine* **61**, 935–936
MacDonald A P (1961) *Practitioner* **186**, 370–371
Steven K, Lykke J & Hansen T S (1979) *British Journal of Surgery* **66**, 418