

Fistula-in-Ano with Broomsticks: An Unusual Etiology

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INTRODUCTION

Fistula-in-ano is a common surgical condition caused by infection of the anal cryptoglands. The mean incidence has been reported as 8.6 per 100,000.^[1] It was first classified in 1976 based on tract location relative to the internal and external sphincters into trans-sphincteric fistula, intersphincteric fistula, supra-sphincteric fistula, and extrasphincteric fistula by Parks, Gordon, and Hardcastle.^[2] Morris *et al.*^[3] in 2000 described St James University Hospital's (SJUH) classification of fistula-in-ano into five grades based on the anatomic location of fistulas on magnetic resonance imaging; grade 1 fistulas are "simple linear intersphincteric fistula," which is the same as the "intersphincteric" in Parks classification. A grade 1 fistula with the presence of an abscess or an additional fistulous tract is a grade 2 fistula. Traversing of the external sphincter denotes a grade 3 fistula, which is also known as a trans-sphincteric fistula. A trans-sphincteric fistula with an abscess or an additional tract in the ischioanal fossa is classified as a grade 4. In contrast, a supra-levator or trans-levator fistula is denoted as grade 5.

ABSTRACT

Fistula-in-ano is caused by idiopathic infection of the cryptoglands located in the anal intersphincteric plane when the resultant cryptoglandular abscess drains internally and externally. It is a common surgical disease that responds well to surgical intervention. In cases of recurrent non-healing fistula-in-ano, an underlying cause should be suspected and searched for. We present a 29-year-old man who had recurrent complex fistula-in-ano caused by broomsticks of an unknown source. Fistulotomy, tactile wound exploration, extraction of the broomsticks, and wound debridement were done. The wound healed well by secondary intention. Few cases of recurrent complex fistula-in-ano had been reported in the literature. However, this is the first time to the best of our knowledge that broomsticks causing non-healing, complex fistula-in-ano that is being reported. We suggest the use of a bending machine instead of mashing broom bunch in the preparation of *Ewedu* soup which is a delicacy for the Yoruba tribe in Nigeria to eliminate the chances of inadvertent ingestion of broomsticks when eating *Ewedu* soup.

KEYWORDS: *Broomsticks, fistula-in-ano, unusual etiology*

Fistula-in-ano is usually an easy condition to diagnose and treat; occasionally, it may be a nightmare when it is chronic, recurrent, or complex. In these situations, a cause such as a foreign body should be looked for, for appropriate decision making.

We present a case of a recurrent fistula-in-ano resulting from an unusual foreign body discovered at repeat surgery.

CASE SUMMARY

A 29-year-old male presented to our Surgical Outpatient Department (SOPD) with recurrent perianal discharge of 7 months' duration. The discharge was sero-purulent; copious and soils the patient's underwear. He had drainage of an ischioanal abscess at another hospital 9 months before presentation. He had no constitutional symptoms, no change in bowel habits, or weight loss. He is not diabetic and does not smoke tobacco.

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Figure 1: Plane pelvic X-ray (precontrast)



Figure 2: Contrast film showing fistulous tracts communicating with abscess cavity



Figure 3: Delayed film



Figure 4: Lateral view of the fistulous tract



Figure 5: Operative field showing the previous scars and fistulotomy wounds



Figure 6: Broomsticks removed from the abscess cavity

On examination, he was not pale, afebrile, anicteric, not cyanosed, and not dehydrated. Pulse rate was 70 beats per minute, blood pressure was 114/67 mmHg, and the temperature was 37.1°C.

Abdominal examination was essentially normal. However, a digital rectal examination showed scar tissue with two external openings located at the perianal skin, each 3 cm from the anal verge at 11 o'clock and 2 o'clock



Figure 7: Bunch of mashing broom

with blood-stained discharge from the anal floor. Anal sphincteric tone was normal. Rectum was filled with feces with an induration felt at the right antero-lateral aspect of the rectal wall, but there was no tenderness. The gloved finger was stained with brown stool. A clinical diagnosis of complex fistula-in-ano was made.

Fistulogram [Figures 1-4] showed fistulous tracts between the internal and external sphincters (intersphincteric) which extends superiorly into a pool of contrast in the supra-sphincteric region with air lucency suggestive of abscess collection. The abscess collection connects to the rectal wall and into the rectum. There is a branching tract proximally that descends laterally toward the skin. This lateral tract appears to pass lateral to the external sphincter (trans-sphincteric). The conclusion of the study was a complex fistula-in-ano with inter-, trans-, and supra-sphincteric components and associated abscess collection.

Hemogram showed hemoglobin of 11.0 g/dl and a white cell count of $5.0 \times 10^9/L$. Electrolytes, urea, and creatinine were normal. Serology was negative for HIV, Hepatitis B, and C.

He had a fistulotomy. Intra-operative findings included: fibrous scars on both sides of the perineum wider and longer on the right side [Figure 5]. The right scar had an external opening about 3 cm from the anal verge at 11 o'clock position connecting to the anal region about 2 cm from the anal verge. The scar on the left had an external opening at 2 o'clock position about 3 cm from the anal verge with a tract extending superiorly in an oblique fashion within the anorectal complex with the presence of two foreign bodies measuring 6 cm and 4 cm, respectively [Figure 6].

The tracts were laid open, and the foreign bodies were extracted. He had twice daily Sitz baths, wound dressing,

antibiotics, and analgesics. He was discharged to the SOPD on the third postoperative day. He was followed up at the SOPD fortnightly and was discharged at third month of clinic attendance when his wounds had healed.

DISCUSSION

Most fistula-in-ano starts from idiopathic infection of anal cryptoglands, which form an abscess that usually drains both into the anorectum and perianal skin, and the resultant fistulous tract is lined by granulation tissue. A classical fistula-in-ano consists of a tract, a primary (internal) opening, and a secondary (external) opening. Fistulae-in-ano caused by ingested foreign bodies are rare, and few had been reported in the literature^[4-6] Those reported were mostly fish bones; others were chicken and pork bones. This is the first case of broomsticks causing chronic, recurrent complex supra-sphincteric fistula-in-ano being reported in the literature, to the best of our knowledge.

The patient did not give a history of ingestion of broomsticks and did not recall ingestion of broomsticks accidentally at any time. He enjoys *Ewedu* (Corchorus leaf) soup which is a delicacy among the Yoruba tribe. Ewedu soup is usually mashed using a bunch of broomsticks made from palm tree (*Elaeis guineensis*) fronds [Figure 7]. He did not give a history of anal pain at presentation but remembered a sudden sharp pain during defecation a few weeks before he developed an ischiorectal abscess which was drained a few months before he presented to us. The majority of ingested foreign bodies pass through the alimentary tract without complications, few may be impacted or cause bowel perforation.

The traveling broom lying parallel to the long axis of the rectum possibly got driven through the anal wall during defecation by the force generated by the rectal mass peristalsis and the anal sphincter which probably resulted in the initial sudden sharp pain he had. The broomsticks then migrated transmurally into the ischiorectal fossa leading to an ischiorectal abscess which was initially drained. Transmural migration of foreign bodies was reported by Olaomi *et al.* in 2014.^[7] The presence of the broomsticks was nidus for recurrent inflammation and pus formation resulting in recurrent discharge from the fistulous tract. The removal of the broomsticks eliminated the focus of infection and resulted in the healing of the fistula.

The broomsticks were not palpable on digital rectal examination because they were in the ischiorectal fossa, and they were radiolucent and therefore not seen on X-ray [Figure 1]. Fistulotomy with a digital exploration of the tracts and the abscess cavity resulted in the discovery of the broomsticks, the removal of the broomsticks from the abscess cavity, and daily dressing, allowed the wound to heal by secondary intention successfully.

CONCLUSION

In cases of recurrent and/or complex fistula-in-ano, an underlying cause including a foreign body should be borne in mind and investigated. Careful digital wound exploration during surgery is likely to be more sensitive in revealing unusual foreign bodies than using a probe. Using a bending machine to mash the *Ewedu* (Corchorus) leaves during soup preparation will eliminate the chances of inadvertent ingestion of broomsticks instead of mashing broom bunch which we think is the likely source of the broomsticks in this case.

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Conflicts of interest

There are no conflicts of interest.

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