



Case report

Bilateral house advancement flap anoplasty for severe anal stenosis secondary to traditional medicine application with excellent outcome: “Case report”

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ABSTRACT

Introduction and importance: Anal stenosis is narrowing of anal canal that may result from true anatomic stricture or functional stenosis. Anal stenosis from irritant chemical application for hemorrhoid is rare and tends to be more severe. There is scarcity of data in the literature regarding anal stenosis secondary to traditional medicine application for the treatment of hemorrhoid. This case report can create awareness to promote health education and health advancement, especially in areas with wide spread use of traditional medicine. In addition, it can motivate general surgeons to prepare themselves to handle such cases in the absence of colorectal surgeons.

Presentation of the case: A 75 years old male farmer presented with worsening of difficulty of passing feces and flatus and intermittent abdominal distention of 3 months. The patient has history of application of irritant chemical by traditional healer for treatment of hemorrhoid. Physical examination led to diagnosis of severe anal stenosis. Bilateral house advancement flap anoplasty done by a general surgeon with excellent result.

Discussion: The commonest cause of anal stenosis is hemorrhoidectomy. Other causes include other anorectal surgeries, anorectal diseases, and radiotherapy. Diagnosis of anal stenosis is by physical examination. Treatment is conservative for mild cases and advancement flap anoplasty for moderate to severe cases.

Conclusion: Health education and health advancement can create awareness, hence preventing people from having wrong treatments. House advancement flap anoplasty is a good option for the treatment of anal stenosis in resource limited setup, as it is easy to do and has good outcome.

1. Introduction

Anal stenosis is a narrowing of anal canal that may result from true anatomic stenosis (stricture) or hypertonic internal anal sphincter (functional stenosis). In anatomic stricture, the normal anoderm is replaced by restrictive scar tissue that follows haemorrhoidectomy in 90% of the cases. Irritant chemical application for treatment of hemorrhoid by nonmedical person can cause chemical burn to the pliable anal mucosa, which later heals by scar tissue causing anal stenosis. Anal stenosis because of unknown irritant chemical application by non-medical person (traditional healer) is a rare scenario with few cases reported in literatures. The scarcity of trained health professionals and wide spread access of the community to traditional healers continues to create problems in developing countries [1,2].

In 2003, there was a report of 24 patients with anal stenosis where the cause was unknown chemical irritation applied by non-medical person (Quacks) for hemorrhoid in seven of the cases. Five of the

seven cases with severe anal stenosis were secondary to irritant chemical application. As compared to the other causes, anal stenosis secondary to irritant chemical application tends to be severe and require treatments that are more complex [3]. Quacks (nonmedical persons) treat hemorrhoids and fistulas with various toxic chemicals and acids, which cause fibrosis and lifetime suffering in majority of the victims [2]. There is also a case report of complete anal obliteration due to one-month history of corrosive chemical application by advice of non-medical person in 25-year-old female patient who presented with pain, abdominal distention, and constipation of seven days [1].

Based on anal examination, by Hill Ferguson retractor or index-small finger, anal stenosis is classified into mild, moderate or severe [4]. Patients present with pain at defecation, constipation, narrow stool caliber, obstipation, and bleeding [5]. The management of mild stenosis is conservative, while that of moderate to severe stenosis irrespective of the cause is surgical. This work is reported in line with the SCARE 2020 criteria [6].

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2. Presentation of the case

A 75-year-old farmer from Oromia, presented with difficulty of passage of feces and flatus and intermittent abdominal distention of 3 months duration. In association, the patient feared to eat and had unquantified significant weight loss. The patient reported history of traditional medicine application for hemorrhoid 10 years back. At the time of application of the chemical, there was ulceration, which healed later. The patient has no history of diabetes, smoking or any known chronic illness. On examination the patient was chronically sick looking, vital sign stable, emaciated, perineal examination revealed severe anal stenosis with circumferential thick scar which does not allow tip of little finger (see Fig. 1 below). Investigations were within the normal range, except prostate enlargement on abdominopelvic ultrasound.

For the diagnosis of severe anal stenosis the patient was taken to operating room after ceftriaxone 1 g and metronidazole 500 mg iv were given to be continued post operatively on bid and tid basis respectively. Under spinal anesthesia, the patient placed in prone Jackknife position, prepped and draped according to the standard. The scar tissue incised at 3 o'clock position from distal to proximal extent of the circumferential scar, which was just 2 to 3 mm distal to dentate line. Then house flap was designed in such a way that the length of the flap was just twice the base. The scar tissue partly excised both anterior and posterior to the initial incision. The flap developed with care to avoid injuring blood supply. Using 2'0' vicryl, the base of the flap was sutured to rectal mucosa. The sides of the flap were sutured to anoderm and perineal skin. The wound distal to apex of the flap was closed primarily (see Fig. 2 below). The same procedure repeated on the other side (see Fig. 3 below). Patient discharged with oral amoxicillin+ clavulanic acid for 5 days, stool softener for 5 days, and sitz bath on second postoperative day until wound heals. Wound healing was good except for apex of the flap with minimal dehiscence at day16 postoperatively which was not due to flap necrosis and was adviced to continue sitz bath and use topical tetracycline ointment (see Fig. 4 below). Then the patient was seen on post-operative day 25, no constipation and donor site wound was granulated well (see Fig. 5 below) and held completely after 8 weeks. Now, it has been eleven months no constipation, patient and family are happy with the results.

3. Discussion

Anal stenosis is narrowing of anal canal that may result from true anatomic stenosis (stricture) or hypertonic internal anal sphincter (functional stenosis). In anatomic stricture the normal anoderm is



Fig. 1. Preoperative photo showing severe anal stenosis with circumferential scarring and keyhole deformity (arrow).



Fig. 2. Left side house advancement flap completed (black arrow) and tight scar on the right (blue arrow). (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)



Fig. 3. Bilateral house advancement flaps were completed (arrow heads), with the donor site primarily closed (arrows).

replaced by restrictive scar tissue [7]. In 87.7% of the cases, it follows previous hemorrhoidectomy [3]. The most common cause of anal stenosis is hemorrhoidectomy with incidence ranging from 1.2% to 10% in the literatures [4,8,9]. Other causes include anorectal surgeries other than hemorrhoidectomy, inflammatory bowel disease, perineal trauma, radiotherapy, chronic diarrhea, chronic anorectal superative disease, and sexually transmitted diseases [9–11]. Unspecified irritant chemical application by nonmedical person for perineal complaints is also a cause for anal stenosis with more severe scarring [1–3].

Based on anal examination, by Hill Ferguson retractor or index- small finger, anatomical anal stenosis is classified into mild, moderate or severe [4,7]. Patients present with pain at defecation, constipation, narrow stool caliber, obstipation, and bleeding [5]. The management of symptomatic mild stenosis is conservative with fiber diet and stool softeners, while that of moderate to severe stenosis irrespective of the cause is surgical [7,11].

A number of surgical treatment options are there for the treatment of anal stenosis. House advancement flap anoplasty is easy to perform, and



Fig. 4. First follow up showing healed base of the flap (arrow heads) with minimal apical dehiscence (arrows) 16th post op day.



Fig. 5. Flap is well healed (arrow heads) and donor site also managed conservatively (arrows) 25th post op day.

result in excellent clinical improvement, quality of life, patient satisfaction and fewest complications in good hands [12,13]. In severe anal stenosis the house advancement flap can be done in 2 to 3 directions or even 4 directions at a time giving adequate expansion of the stenosed anus [14]. House advancement anoplasty have a combined advantage of V-Y flaps, triangular flaps, and rhomboid flaps, in one technique, and if done by experienced surgeon, it has high rate of success and patient satisfaction [14,15]. House advancement flap anoplasty is a relatively easy procedure with the combined advantages of rectangular and V-Y flap anoplasties [16].

In the case presented here, a 75-year-old male farmer presented with worsening of difficulty of passing feces and flatus of 3 months. He gave history of irritant chemical application by traditional healer (nonmedical person) 10 years back. Severe anal stenosis was diagnosed by physical examination, which showed thick circumferential scar which

failed to allow little finger. Bilateral house advancement flap done 11 months back with excellent outcome and patient satisfaction. Finally, experienced general surgeon can treat patients with symptomatic anal stenosis safely in the setting of scarce colorectal surgeons. This case report can add to the scarce literatures on irritant chemical application by nonmedical person for treatment of hemorrhoids as one of the cause of anal stenosis in developing countries.

4. Conclusion

1. Toxic chemical application by traditional healer for hemorrhoid is one of the causes for anal stenosis in developing countries.
2. Experienced general surgeons can safely manage anal stenosis in the scarcity/absence of colorectal surgeons.
3. House advancement flap is a good option because of the ease to do it and its good outcome in terms of success and patient quality of life.
4. Health education and health advancement can create awareness, hence preventing people from having wrong treatments.
5. Scientific support of traditional healers is important so that they can refrain from using toxic chemicals or toxic herbs on patients.

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Ethical approval

The study is exempt from ethical approval in our setup.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Research registration (for case reports detailing a new surgical technique or new equipment/technology)

N/A.

Guarantor

Gosa Bejiga.

CRediT authorship contribution statement

One author did all the work.

Declaration of competing interest

The author has no conflict of interest.

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