Section: General Surgery

Case Reports

ACQUIRED H-TYPE ANOVESTIBULAR FISTULA - A CASE SERIES

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ABSTRACT

An acquired H-type anovestibular fistula (AVF) with a normal anus is a rare anorectal malformation that primarily affects female children. It may develop following infection, inflammation, or cryptitis and is often associated with other anomalies, including anal stenosis, ectopic anus, and urogenital malformations. The clinical presentation typically includes intermittent passage of stools through the vestibule, even with a normally located anus. Diagnosis is confirmed through clinical examination and probing of the fistula tract. Surgical management is preferred in older children and may involve a staged approach with initial faecal diversion followed by definitive repair, such as anterior sagittal anorectoplasty (ASARP). Instead, a single-stage perineal fistulectomy is performed depending on the fistula size, associated anomalies, and the surgeon's discretion. Early recognition and complete excision of the fistula with proper reconstruction provide favourable outcomes and continence. This case series includes five AVF cases with AVF and normal anus who underwent excision of the fistula using different surgical methods.

INTRODUCTION

H-type anovestibular fistula (AVF) with a normal anus is a rare anorectal malformation (ARM) that accounts for approximately 3% of all ARM cases. It is most common in East Asia and India, where it has been reported in up to 12.5% of anorectal malformations.[1] Although usually considered congenital, recent data indicate an acquired aetiology in infants with a history of perineal infection or inflammation.[1,2] Associated anomalies include anal stenosis, ectopic anus, and cardiac and urological defects, which are reported in 20–60% of cases.3

Diagnosis is usually made clinically, but an examination under anaesthesia provides a better understanding of the fistula.[4] Conservative treatment may be sufficient for infants with a narrow fistula, but surgery is preferred if it continues until the age of 18 months. Whereas, direct surgical intervention is opted for in 1-year-old cases and congenital fistula or a wider fistula.[3] Surgical approaches range from simple excision and closure of the fistula to full anorectoplasty with division and repair of sphincters.[5]

In this report, we describe five cases of acquired H-type AVF with a normal anus and the types of surgical management used after failed conservative management.

CASE REPORTS

Case 1

A 45-day-old child was brought in with the initial complaint of white vaginal discharge for 10 days, which later turned pustular and was treated locally. On examination, the child was active, with a normally positioned anus and good anal sphincter tone. Abdominal X-ray and ultrasound (USG) were also normal. A small vestibular opening was noted, through which a 5 Fr feeding tube was passed and appeared via the anus. Conservative treatment was administered until the age of 4 years, and a two-stage procedure with colostomy followed by ASARP after three months was preferred only after no spontaneous closure of the fistula (Figures 1 and 2). The child had a satisfactory postoperative recovery and achieved continence postoperatively.

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Figure 1: Visual examination of preoperative vaginal and anal opening

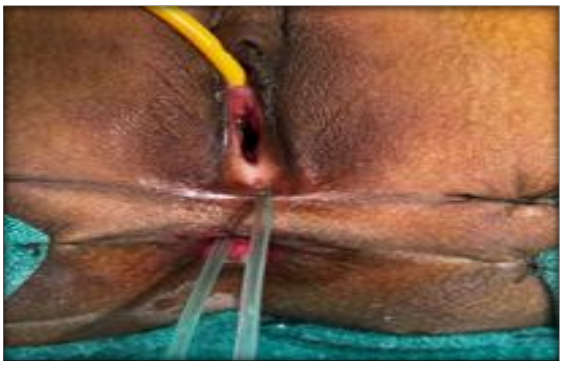

Figure 2: Insertion of a 5 Fr feeding tube through the fistulous tract

Case 2

A 2-week-old female neonate presented with loose stool for 3 days. On examination, the infant was afebrile, hydrated, and had a pulse rate of 136 bpm. A vestibular opening was observed near the rectum. A 5 Fr feeding tube passed through the vestibular opening and emerged from the anus, indicating a fistulous tract. Radiological findings revealed no anomalies in the abdomen. Conservative treatment was administered until the age of 4 years, and a two-stage procedure with colostomy followed by ASARP after three months was preferred only after no spontaneous closure of the fistula. The child had a satisfactory postoperative recovery and achieved continence postoperatively.

Case 3

A 1-month-old girl was brought in with complaints of stool passage through the vagina.

On examination, a normally placed anus was present with stools in the vaginal region. A small vestibular fistula was noted, which was confirmed by the passage of a 5 Fr feeding tube from the vestibule to the anus. Abdominal USG revealed no anomalies. Conservative treatment was administered until the age of 4 years, and a two-stage procedure with colostomy followed by ASARP after three months was preferred only after no spontaneous closure of the fistula (Figures 3-6). The child had a satisfactory postoperative recovery and achieved continence postoperatively.

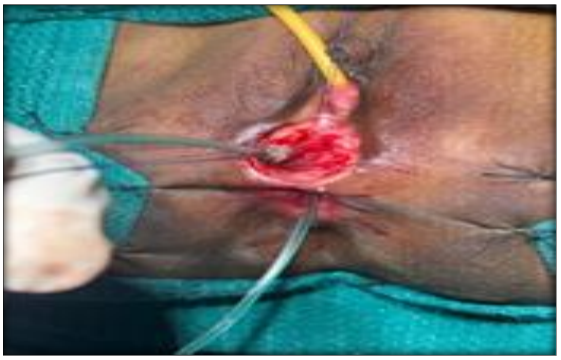

Figure 3: An Incision was made around the tract with a 6 Fr feeding tube in the tract

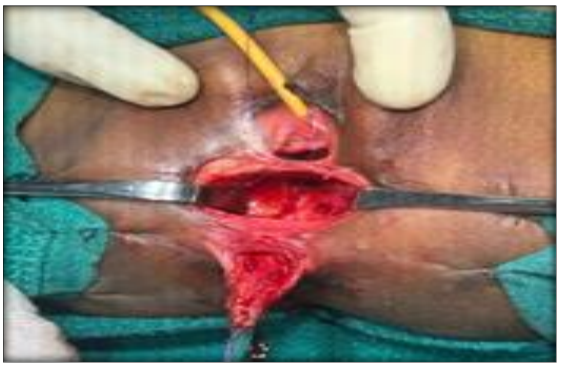

Figure 4: Reconstruction of the vaginal wall and perineal body

Figure 5: Excised fistulous tract mounted over a 6-Fr feeding tube

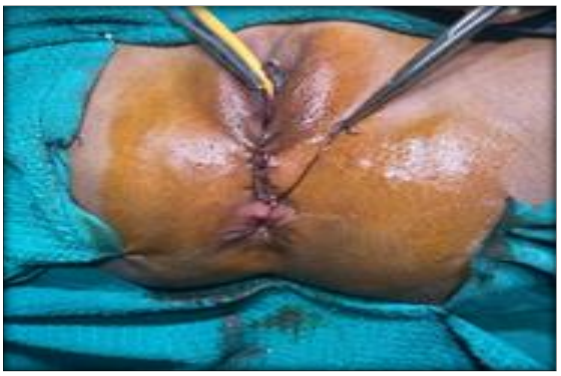

Figure 6: Closure of the perineal skin

Case 4

A 6-month-old girl presented with a persistent perineal rash. Examination revealed redness in the

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anal and perineal regions with a visible anovestibular fistula. The anus was in a normal position, and radiological findings, such as X-ray and USG abdomen, were normal.

The infection was initially managed with antibiotics for two months. After 2 months, the fistulous tract was excised using perineal fistulectomy in a single-stage procedure. Postoperative recovery was uneventful, with complete resolution of symptoms.

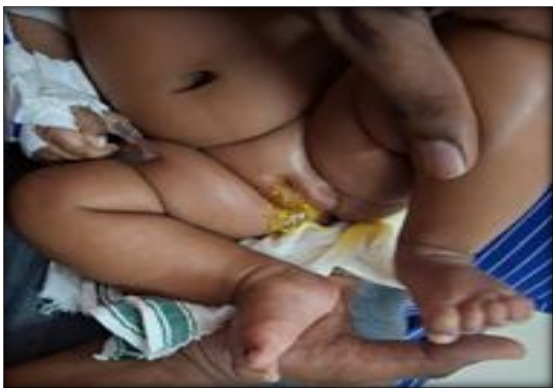

Figure 7: Preop pic with fistula

Case 5

An 8-month-old female child presented to the outpatient department with the passage of stools through the vagina and a history of recurrent urinary tract infections. A normally positioned anus was present, along with a visible anovestibular fistula was observed on examination. Radiological findings revealed a normal X-ray and USG abdomen. The child was treated with antibiotics until 1 year of age, and then excision of the fistulous tract was performed using perineal fistulectomy in a single-stage procedure. The child recovered well and was discharged with follow-up recommendations.

DISCUSSION

Acquired fistulae are rare, affecting only 3.2% of patients with anorectal malformations in the Western population.[6] They have been reported more frequently in Asia, where they are found in 14% of ARM cases.[7] While congenital fistulae are more common, a history of early neonatal vestibular inflammation, absence of anomalies at birth, and delayed fistula onset are observed in acquired fistulae.[2]

H-type fistulas are categorised based on their location: low (anovestibular), intermediate (rectovestibular), and high (rectovaginal). The low type is a double termination between the anal canal and the vestibule, also called the perineal canal. The intermediate type was located between the rectum and the vestibule. The high type is a double termination with a fistula between the rectum and the vagina.8 Jain et al. stated that acquired cases often resolve with conservative management, whereas persistent or wide fistulae usually require surgical intervention for better outcomes.[2]

In our first three cases, the conservative method was initially attempted, followed by a surgical procedure, protective colostomy, and ASARP because of the non-closure of the fistula. ASARP provides direct access to the fistula and allows tension-free closure without sphincter damage.[9] The surgical technique of bringing down the anterior wall of the rectum reduces the rate of recurrences.[10]

Another reliable surgical strategy for treating anovestibular fistula is perineal fistulectomy, which is also preferred by many surgeons for its simplicity and time conservation.[9] We have also successfully performed perineal fistulectomy in two cases, and the patients reported complete recovery without complications. This surgical approach has a 92.4% healing rate, and even if there's any relapse, there's a high chance of secondary healing only with a sitz bath and antibiotic therapy.[9]

Preoperative bowel preparation with an enema, overnight fasting the day before surgery, and preoperative prophylactic intravenous antibiotics were administered to all patients. These preoperative procedures have been recommended in multiple studies for successful postsurgical outcomes in fistula reconstruction.[3] Outcomes were favourable following timely surgical intervention, either through staged ASARP with colostomy or single-stage perineal fistulectomy. This emphasises the need for individualised management, early diagnosis, careful selection of surgical approach, and adherence to perioperative protocols to achieve continence and prevent recurrence.

CONCLUSION

In these five cases, three children initially received conservative management, but persistent fistulae required a staged procedure with protective colostomy followed by ASARP, achieving complete recovery and continence postoperatively. The other two patients were successfully treated with single-stage perineal fistulectomy after initial infection control, resulting in complete healing without recurrence. These cases emphasise that timely diagnosis, appropriate surgical selection, and meticulous perioperative care can ensure excellent functional outcomes with a minimal risk of recurrence.

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