

Transanal approach in repairing acquired rectovestibular fistula in females

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Abstract

AIM: To summarize the operative experience of the transanal approach in acquired rectovestibular fistula repair.

METHODS: Ninety-six cases of acquired rectovestibular fistula in young females were analyzed retrospectively. The etiology and operative procedure were discussed. Operative essential points were, the patient was laid in prone frog position, with the knees and hips flexed at 90°; the perineum was elevated; and the anal opening was exposed. Four stay sutures were applied to the margin of the fistular orifice in the anal opening at points 3, 6, 9 and 12 o'clock. A circular incision of mucosa surrounding the stay sutures was made. The fistula was dissected from its anal opening to its vestibular opening. The wound of vestibule was sutured, and the rectoanal wound was then sutured transversely.

RESULTS: All the 96 patients recovered uneventfully from operation with a successful rate of 93.75%.

CONCLUSION: The transanal approach in the treatment of the acquired rectovestibular fistula is a simple and feasible technique.

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INTRODUCTION

Acquired rectovestibular fistula in small girls is a common anorectal disease. Its etiology is still indefinite. Some of pediatric surgeons described it as a kind of congenital malformation. In China, most thought it as an acquired disease caused by the infection of crypts of *Morgagni*^[1-7]. There are two main surgical procedures that are commonly adopted, transanal and perineal approach^[8-13].

MATERIALS AND METHODS

Patients

Ninety-six patients with an average age of four years and two mo, ranging from 6 mo to 14 years, were admitted and operated. Most patients came with the complaint of passing stool or flatus through vagina. Half of them had a history of perineal inflammation at the early life of 2-3 mo. An external opening

was usually found in the vestibule, a little bit right or left to the vaginal opening, while the internal opening was always found at the mid-point of the dentate line on the anterior anorectal wall. The diameter of fistula orifice ranged from 2 to 8 mm.

Preoperative preparation

Metronidazole tablet (30 mg/kg per day, divided t.i.d) and oral garamycina (15 mg/kg per day, divided t.i.d) were given before operation for 3 d. Nothing but water by mouth was allowed for 1 d before operation day. Enema was performed at the night before operation day and on the morning of the operation day.

Operative methods

Under general anesthesia, patient was laid in prone frog position, with knees and hips flexed at 90° fixed at the caudal end of the operation table, with a soft pillow placed under the pubis. Almost half roll of sterile bandage was inserted into rectum to prevent rectal discharge. The tail of bandage might be soaked with iodophor before being sent deeply into the rectum, and it was tied by a long heavy silk, which was left outside the anal orifice in order to make the removal of the bandage easily after operation. The anal opening was widely stretched bilaterally to expose the inner opening of fistula, four stay sutures were applied to four points at 3, 6, 9 and 12 o'clock respectively. The stay sutures were pulled, and a circular incision of mucosa around the inner opening of fistula was made by Bovie. The fistula was dissected toward the outer opening in the vestibule and resected. The wound of vestibule was sutured interruptedly with 5-0 Dexon. Usually fistula was about 0.8 cm long. The levator ani muscle was approximated longitudinally to abolish the dead space anterior to the rectum. The anorectal wall was freed proximally for about 1.0 cm to make the wound closed without tension. The packing bandage in rectum was pulled out after operation.

Postoperative treatment

Nothing but water by mouth was provided for 3 d after operation, and intravenous antibiotics were given 3 to 5 d. Perianal area was kept clean and dry by warm ventilation 3 to 5 times every day for some 5 d.

RESULTS

Six cases, about 6.25% of all patients, had recurrence of fistula. However, three of them healed spontaneously 2 to 3 wk later without any specific treatment except sitz bath with 30 g/L boric acid.

DISCUSSION

Bryndorf and Madsen reported rectovestibular fistula, a fistulous tract between the bowel and the low female genital tract, in 1960^[14]. The disease is more common in Asian than in Europeans. There were two controversial opinions about its etiology, the congenital or the acquired. Chatterjee *et al.*^[1-5] described rectovestibular fistula with normal anus in females as a kind of congenital malformation, double terminal of the alimentary tract. The family history, coexisting anomalies as

anal stenosis or sacral vertebrae abnormality and the stratified squamous epithelium lining of fistular wall were the basis favouring the congenital consideration. The inflammatory changes of fistula might be secondary.

Most doctors in China believe that the development of rectovestibular fistula with normal anus in small girls was similar to the inflammatory fistula-in-ano in males^[6-8]. The inflammation started by the infection of crypts of Morgagni, perianal abscess formation followed, and finally it ruptured through the vestibule. On the other hand, some deep crypts or anal glands cystoid dilatation as well as infantile hypoergic immunity of the rectoanal mucosa make the rectum mucosa barrier imperfect^[15-17]. All these might play a role in anal fistula formation. Certainly it was not the congenital double termination of the alimentary tract. None of patients had a definite history of fistula at birth, and neither did a surgical specimen show normal histology of mucosa, submucosa and continuous smooth muscle in the fistula tract.

Ninety-six females with acquired rectovestibular fistula were treated by transanal approach in the last 10 years with a satisfactory result. The main experience may be concluded as: (1) Rectal bandage packing may prevent stool contamination during operation. (2) Fistula should be dissected completely by Bovie to make a bloodless operation field. (3) Rectum and vagina should be separated clearly. (4) Anterior rectal wall should be sutured perfectly without tension. (5) Dead space anterior to rectum should be eliminated by suturing the levator ani muscles and central body.

The favorite age for operation ought to be 3 to 5 years in order to wait for the improvement of the symptoms and also for better development of perianal structures of the child.

Recurrence of fistula, if happened, often occurred about 7 d after operation, and its symptoms included perineal inflammation, followed by passing of stool or flatus through the sutured incision. By sitz bath in 30 g/L boric acid and waiting for inflammation subsiding, half of the patients with early recurrent fistula healed spontaneously.

Diverting colostomy provides a clean operation area for anal fistula repair^[11,12], but it needs at least three operations. We believe that a careful preoperative, operative and postoperative treatment offers a satisfactory result without a diverting colostomy.

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