

Fistula-in-Ano in Infants: Is Nonoperative Management Effective?

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Purpose: Recently, a number of studies have reported positive results from the nonoperative management of fistula-in-ano in infancy, although it has not been of use in all patients. The purpose of this study was to discern the effective treatment methods of fistula-in-ano in infants.

Methods: A retrospective review was done of 310 children who required operative management for fistula-in-ano or perianal abscess between January 1991 and July 2000. Eighteen patients displayed an onset of symptoms at less than 1 year of age and a duration of symptoms longer than 12 months. The authors analyzed these patients' medical records.

Results: All patients were boys. The mean duration of the symptoms was 26.6 ± 27.5 months. Fourteen patients had shown an onset of symptoms at less than 6 months of age. The longest duration was 10 years. The patients showed

conservative periods of over 12 months because their parents did not want them to undergo surgery. The disease in these patients followed 2 patterns. One (6 patients) was an onset of symptoms followed by a silent fistula-in-ano state. The other (12 patients) was an onset of symptoms followed by an intermittent relapse of inflammation. All patients underwent fistulotomy, and none of them had recurrent fistula during the follow-up period.

Conclusions: Although the advantages of a nonoperative management of fistula-in-ano in infants include the avoidance of general anesthesia and surgical intervention, the lesions cannot be cured by a period of conservation. Surgical management is more effective in respect to the time factor. *J Pediatr Surg* 36:1367-1369. Copyright © 2001 by W.B. Saunders Company.

INDEX WORDS: Fistula-in-ano, infant, fistulotomy.

FISTULA-IN-ANO occurring in infants is a relatively common condition. Although the pathogenesis of fistula-in-ano is not fully understood, it has certain characteristics including male predominance, manifestation at less than 12 months of age, rarity of complex fistulae, and low incidence of recurrence that distinguishes this condition from that of adults.^{1,5} Surgical management is the widely accepted method for treatment of these patients.²⁻⁵ Recently, however, a few studies have shown positive results from the nonoperative management of fistula-in-ano.^{6,7} These studies found that nonoperative management of perianal abscess and fistula in healthy infants is safe and effective. They also show that fistula-in-ano in infancy is a time-limited and self-limited disorder. However, we believe that many pediatric surgeons still favor operative management. The purpose of this study was to discern the effectiveness of a nonoperative management. We retrospectively analyzed data from patients who underwent surgical management to treat fistula-in-ano.

MATERIALS AND METHODS

The records of patients less than 15 years of age with perianal abscess or fistula-in-ano were collected retrospectively. The cases of fistula-in-ano that developed as a consequence of other anorectal diseases, such as anorectal malformations or inflammatory bowel diseases, were not included. Between January 1991 and July 2000, 310 children with perianal abscess or fistula-in-ano were admitted to our hospital and underwent surgery. Mean age at the operation was

13.8 ± 25.2 months (range, 1 to 168 months; Fig 1), and only 7 patients were girls. Mean duration of symptoms from initial onset to surgery was 4.4 ± 10.0 months (range, 1 week to 120 months). Twenty-four patients (7.7%) underwent second operation because of recurrence. A single lesion was present in 210 patients, and 2 lesions in 88 patients. Twelve patients had 3 lesions. A total of 422 lesions were observed. The most commonly affected site was at the 9 o'clock direction with 150 lesions, followed by the 3 o'clock direction with 119 lesions. A total of 269 (63.7%) lesions were located at these 2 sites.

Among the patients, 242 (78.1%) were under the age of 1 year and 68 (21.9%) were older than 1 year of age. Eighteen patients showed an onset of symptoms at less than 1 year of age and a duration of symptoms longer than 12 months. We retrospectively analyzed those patients' medical records.

RESULTS

All patients were boys, and the duration of symptoms from initial onset to surgery was 26.6 ± 27.5 months (range, 12 to 120 months; 12 to 24 months in 13 patients, 24 to 36 months in 3, over 36 months in 2). Fourteen patients had an onset of symptoms at less than 6 months of age. Additionally, 14 patients had single lesion and 4

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0022-3468/01/3609-0010\$35.00/0

doi:10.1053/jpsu.2001.26372

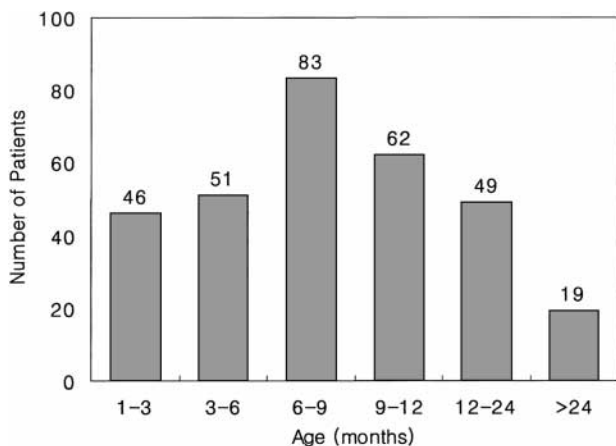


Fig 1. Age distribution of patients.

patients had 2 lesions. A total of 22 lesions were observed. The most commonly affected site was at the 3 o'clock direction with 8 lesions, followed by the 9 o'clock direction with 7 lesions. Fifteen (68.2%) of the 22 lesions were located at these 2 sites.

Initially, all patients were recommended for surgical management; however, their parents desired a conservative approach. They were not treated by any special programs for nonoperative management except local wound care. In the end, this approach failed, and they underwent surgery. The longest duration of symptoms was 10 years. This patient had had a fistula-in-ano at 1 month of age and no treatment for 10 years by his parents. He had silent lesion during the conservative period, although the lesion never healed spontaneously.

Among these patients, 2 patterns of disease emerged. One (6 patients) was the onset of symptoms followed by a silent state. They had fistula-in-ano, but these lesions did not make problems such as abscess formation or inflammation that needed to be treated at a hospital during the conservative period. The other pattern (12 patients) was the onset of symptoms followed by an intermittent relapse of perianal inflammation that needed drainage.

All patients underwent fistulotomy, and there were no complicated fistulae. All patients were cured by operation without operation-related complication, and none of them had recurrent fistula during an average follow-up of 25.4 months (range, 1 month to 81 months).

DISCUSSION

Although the pathogenesis of fistula-in-ano is unclear, surgical management of the fistula is widely accepted, and its results are positive despite reports of recurrence after surgery. Recently, a few reports have

suggested that these procedures may be unnecessary.^{6,7} Watanabe et al⁶ suggested that perianal abscess or fistula in infants is likely to be a period-limited disorder that occurs primarily in infancy and that spontaneously resolves within the first year of life. They also suggested that fistulotomy or fistulectomy should be avoided in infants. Rosen et al⁷ suggested that the nonoperative management of perianal abscess and fistula in healthy infants appears to be safe and effective. They performed a prospective conservative approach to perianal abscess and fistula in 18 male infants. They found none of the patients in their study required surgery and that their lesions were healed by following a nonoperative management. Our study focused on these nonoperative managements. In our institute, we did not perform the nonoperative management to treat perianal abscess and fistula, but we had patients who did not undergo surgery despite the surgeon's recommendation. In this retrospective study, we do not know how many patients would be treated by these de facto nonoperative treatments because they usually did not visit the hospital when their lesions disappeared. However, our data show all patients cannot be treated nonoperatively.

In our study, 18 patients (5.8%) had their symptoms during infancy and showed symptoms for more than 12 months. We do not believe that this is a small number because the other patients underwent surgery before a sufficient number of conservative periods. These results conflict with those of other studies,^{6,7} but many reports support the operative management of perianal abscess and fistula-in-ano.²⁻⁵ These studies have suggested that the surgical treatment of perianal abscess or fistula is easy and has a very low complication rate.

Our series provides additional support for the surgical management of fistula-in-ano. Nonoperative management of fistula-in-ano may be effective in some patients; however, it cannot guarantee a successful cure of all patients. Surgical management consisted of a simple fistulotomy, and this was enough for treatment.

Although the advantages of a nonoperative management are the avoidance of general anesthesia and surgical intervention, the risks of general anesthesia in this patient group are extremely low, and the surgical technique is simple and the results are excellent.^{1,4,5} Additionally, although the presence of the fistula with intermittent drainage for several months did not cause serious problems, many parents undergo great anxiety during the conservative period. If the lesion was not cured by the period of conservation alone, as in our cases, surgical management is more effective with respect to time factor.

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