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TREATMENT OF ANOVAGINAL FISTULAS WITH AN ANOCUTANEOUS FLAP IN PATIENTS WITH CROHN'S DISEASE

SUMMARY

We report on a new and simple operative technique for closure of anovaginal fistulas with an anocutaneous flap in patients with Crohn's disease. From January 1999 till Decembar 2001 this operation was performed in 10 women with Crohn's disease. Seven of the ten patients suffered from Crohn's proctitis. In these patients a protective enterostomy was applied before the operative closure of the fistula. All fistulas healed primarily. Within a median follow up of 18 months (7–24) a relapse occurred in 3 patients; two of these were treated successfully with fibrin injection in one case and further operative closure of the fistula using the same procedure in the second case. In the third patient a seton was placed into the recurrent fistula track, which is still present after 4 weeks.

Key words: **anovaginal fistula, anocutaneous flap , Crohn's disease**

INTRODUCTION

Anal fistulas are a typical complication in Crohn's disease occurring in about 15–30% of patients (1–5). A special problem is anovaginal fistula, causing sexual problems in the often young women.

We report on 10 women with Crohn's disease and anovaginal fistula, who were treated surgically with a new and simple technique in our clinic in the three years.

OPERATIVE TECHNIQUE

In lithotomy position the anovaginal fistula track was completely excised, beginning at the vaginal opening. Secondary fistula tracks are excised with a cuvette. Then the internal opening in the anal canal was exposed using a Pratt or Sims anoscope. The anoderm or mucosa around this opening was excised and beginning at the fistula area an anocutaneous flap with a wide base at the perineum, reaching from ten to two o'clock, was created. Cicatrised parts at the apex of the flap was excised to provide a fresh flap with a good blood supply. The opening in the internal sphincter after excision of the fistula was closed with 3 absorbable sutures (Vicryl® 2–0).

The anocutaneous flap was advanced and the apex anastomosed with the rectal mucosa with 3–4 sutures (Vicryl® 2–0), seizing fibres of the internal sphincter with every stitch. The lateral sides of the flap were not sutured. The opening in the external sphincter was closed with 2 sutures Vicryl® 2–0 from the vaginal side. The vaginal mucosa was left open for better drainage.

RESULTS

From January 1999 till Decembar 2001 patients with Crohn's disease and anovaginal fistulas

were treated. The medium age was 25 years. Cronh's disease was localized in the small bowel alone in 10%, small and large bowel in 30% and large bowel only in 60%. The rectum was involved in 70%.

The internal opening of the anovaginal fistula was at the dentate line in two cases only. In 8 cases the fistula opened into the vaginal orifice or lower part of the vagina and 2 times at the inner side of the labia. Secondary perianal fistula tracks were found in 3 patients (table 1). 3 patients had oedemateous skin tags, one patient had a second dorsally localized transphincteric fistula and 5 patients suffered from chronic ulcerations in the anal canal combined with stenosis of the anal canal (table 1).

Table1. Localisation of the internal and external opening of the fistulas in 10 patients with anovaginal fistulas and Crohn's disease and accompanying anal disease

	n	%
localisation of the internal opening		
lower anal canal	0	0
dentate line	2	20
upper anal canal	8	80
localisation of the external opening	n	%
vaginal introitus/lower vagina	8	80
inner side of the labiae	2	20
secondary perianal openings	3	30
accompanying anal diseases	n	%
skin tags	3	30
fissure/ulcerations	5	50
stenosis	5	50
multiple anal fistulas	1	10

In the 3 patient there was a permanent or occasional passage of fluid stool through the fistula, but none of the patients suffered from uncontrolled loss of solid or fluid stool through the anal canal due to a disturbance of the sphincter. Three of the patients sufferd from urgent impulse to defecate. All patients showed a chronic infection of the vagina.

Seven patients suffered from rectal Crohn's disease. In these cases 2-9 months (3 months median) before the operative closure of the fistula a protective enterostomy (6x ileostomy, 1x colostomy) was performed. In all these patients this operation was combined with a bowel resection. After remission of the local infection the reapir of the fistula was done in an inactive phase of Crohn's disease. Two to five months later (3 months median) the enterostomy was closed. In 3 patients without Crohn'disease of the rectum the repair of the anovaginal fistula was performed without a protective enterostomy. In all 10 patients th fistula primarily healed after the operative closure.

In 8 patients this procedure was th first repair of the anovaginal fistula, in 2 patients another operation with a different technique had been performed previously.

In the same period 3 patients with anovaginal fistulas and Crohn's disease were operated with different methods. In one of them the skin at the perineum was destroyed by several openings of secondary fistula tracts. In this case the anocutaneous flap could not be used and an endoanal mucosal flap was performed under the protection of an ileostomy, which is not yet closed. In the other 2 patients a proctocolectomy was performed because of non healing ulceration and destruction of the sphincter, but not because of the anovaginal fistula. These patients are not included in this study.

FOLLOW UP

All fistulas healed completely after the operative reapir. In one patients, the protective enterostomy is not yet closed, although the fistula completely healed. In the other 9 patients the follow up time after closure of the enterostomy (or after repair of the fistula in 3 patients without enterostomy) was median 18 months (range 9–24 months).

Sliding the wide flap of normal skin into anal canal improved in 4 of 5 affected cases the stenosis of the anal canal. In only one case a gentle dilatation with a bougie was performed before closure of the ileostomy.

All patients, in whom the enterostomy is already closed or the operation was performed without a protective enterostomy, are continent for solid and fluid stool.

Three patients developed a recurrent anovaginal fistula after 4, 8 and 13 months. One had a diameter of less than 1 mm and was successfully closed with fibrin injection. 10 months after this procedure there were no signs of relapse. In the second patients a new fistula repair was performed under the protection of a loop ileostomy. The incorporated anocutaneous flap was mobilized, the fistula track excised and the defect in the sphincter closed with 2

layers of sutures. The fistula bearing apex of the flap was cut off and the flap anastomosed with the rectal mucosa as described above. The fistula healed without complications and the ileostomy was closed 3 months later. 10 months after the closure of the ileostomy the patients remains well. In the third patient a seton was placed into the recurrent fistula track, which was there 4 weeks.

DISCUSSION

Anal complications in Crohn's disease are frequently seen with colonic involvements (2,3,6). This is also true for anovaginal fistulas (7). In our study only one patient suffered from disease of the small bowel alone (10%), 3 patients (30%) had small and large bowel involvement and 6 patients (60%) presented with Crohn's disease of the colon alone. Seven patients (70%) presented with inlamation in the rectum. This incidence is almost identical to date reported by Morrison et al. (11). These numbers can be compared with 23 women with Crohn's disease without anovaginal fistulas, who where admitted for surgery into our clinic during the same period. Of these patients 26% presented with disease in the small bowel alone, 65% in small and large bowel and only 17% had large bowel involvement alone. Only 30% of these patients suffered from inflammation of the rectum.

For a long time the operative treatment of rectovaginal fistulas in Crohn's disease was thought to be of little success. Today some authors still recommend conservative surgery including conservative surgery i.e. incision of local abcesses (5). Hellers at al. (1) reported in 1980 that a proctocolectomy is inevitable in the long term if the rectum is involved simultaneously. On the other hand some reports published since the late 1970s decribed a successful closure of fistulas in selected patients (9–13). In a series from St. Marks hospital, reported by Radcliffe et al. (14), a proctocolectomy was performed in 34 of 74 patients. Of these patients 34% suffered from severe perianal lesions. Only 5 patients had rectovaginal fistulas, which is needed proctocolectomy for cure. Twelwe patients received a local closure of the fistula by surgery. Most of these patients had no Crohn's disease elsewhere in colon or rectum. Three patients received a protective stoma. The primary success of this procedure was 66%. Reoperation cured an additional patient and in 2 patients the Crohn's disease became asymptomatic even though the fistulas perisisted. Among these 12 patients proctocolectomy became necessary because of failure of surgery in one case and in 2 patients because of the other reason. Sixteen patients were treated by conservative therapy. Finally 8 of 16 patients became asymptomatic but in 5 patients symptoms persisted. In our series 2 patients received proctocolectomy because of severe, therapy-resistant Crohn's proctitis with almost complete destruction of the anal sphincter during the time of the study. The anovaginal fistula was not important for the decision to perform this operation. In 10 patients the fistulas were closed with a plastic procedure. Of these patients 70% presented with inflammation of the rectum. If the rectum was involved the patients received a protective enterostomy prior to the operative closure of the fistula. This may explain the high number of stomata in our study compared to Radcliffe's report. On the other hand all fistulas closed by operation healed primarily.

The follow up in our study was only median 18 months. Three of the nine patients, in whom the stoma is already closed or a stoma was not performed, developed a recurrence of the anovaginal fistula (33%). In 2 of them the recurrent fistula was closed successfully with a second procedure. In long term follow up we have to expect in some patients the need for proctecolectomy due to Crohn's proctitis with anal destruction, regardless of a relapse of the anovaginal fistula. On the other hand, most of our patients are young (less than 30 years), which means they are in a sexually active phase of their life and perhaps wish to start a family. It might be very important for them to avoid the chronic infection of the vagina or to postpone a proctecolectomy for some years.

Numerous procedures have been decribed for the treatment of rectovaginal fistulas. The simplest procedure is the conventional incision in patients with a lower anovaginal fistula (16). In our series this could have been used in only 2 patients. Even though incision of lower anovaginal fistulas rarely results in incontinence (14), this procedure leads to destruction of the perineum. In 2 patients, who are not included in this study, we observed destruction of the perineum after incision of anovaginal fistulas, which made the patient incontinent for thin stools. Some authors (8,4,17) recommend for closure of rectovaginal fistulas, even in patients with Crohn's disease, the endorectal advancement flap, decribed by Rohenberger et al. (18). The excision of the primary fistula with closure of the fistula at the high pressure side leads to an exact closure (14). But the application of this technique in patients with anovaginal fistulas and Crohn's proctitis, even in an inactive form, might be difficult, because scars often cause stenosis of the anal canal or lower rectum (50% of our patients). The mucosa-muscle flap is originated in scared tissue and suturing the excised area results in an additional narrowing of the anus. In contrast our procedure has some advantages. It is technically simple. After initial excision of the su-

perficial scar tissue in most cases the anal canal is wider as a result of the cutaneous flap. However, the intact skin in the perineal area is required for this procedure. In one patient we couldn't use this technique, because the perineal skin was destroyed by secondary fistulas.

A new technique for the treatment of rectovaginal fistulas with Crohn's disease is decribed by Bauer et al.(19) with a transvaginal approach, performing a wide flap of the vaginal wall. In this study 4 of 13 patients suffered from Crohn's proctitis. In all 13 patients the fistula repair was done under the protection of an enterostomy. In one patient the operation failed. The other patients are relapse-free after median 50 months. In our series the vaginal opening was mostly situated very low in the vaginal fourchette or at the inner side of the labia. We don't know whether the creation of a wide vaginal flap in the way decribed by Bauer is possible in this situation.

The follow up in our study was short. The relapse rate, of 33% is expected to increase because of reactivitaion of the Crohn's proctitis in long term follow up. On the other hand we could demonstrate that the closure of anovaginal fistulas using a plastic technique was possible even with Crohn's disease in the rectum. Using this technique all fistulas healed primarily.

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TERAPIJA ANOVAGINALNE FISTULE SA ANOVAGINALNIM REŽNJEM U BOLESNIKA SA KRONOVOM BOLEŠĆU

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SAŽETAK

Saopštavamo novu i jednostavnu operativnu tehniku zatvaranja anovaginalnih fistula anovaginalnim režnjem kod pacijenata koji boluju od Kronove bolesti. Od januara 1999. do decembra 2001. operisano je 10 žena koje boluju od Kronove bolesti. Sedam žena imalo je tegobe Kronovog proktitisa. Pre zatvaranja fistule kod svih žena je prethodno izvedena enterostoma. Sve fistule su zarasle per primam. Unutar vremena praćenja pacijenata, koji je iznosio 18 meseci (7–24), recidiv se javio kod 3 žene; dve žene su uspešno tretirane aplikacijom fibrinskog lepka od kojih je kod jedne to urađeno u dva navrata. Kod treće žene primenjena je seton ligature recidivne fistule u trajanju od 4 nedelje.

Ključne reči: **anovaginalna fistula, anovaginalni režanj, Kronova bolest**