Sliding Skin Grafts in the Treatment of Anal Fissures*

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MOST SURGEONS AGREE that the treatment of chronic fissure in ano is surgical whereas the treatment of acute anal fissure is nonsurgical. A chronic fissure must be differentiated from the acute anal fissure which is a superficial tear or abrasion and often is associated with pruritis ani and excoriation of the anal canal.

The cause of a chronic fissure in ano, however, is a cryptoglandular infection. Proctologic examination shows a chronic ulcer with an infected crypt, hypertrophied papillae, and a classical sentinel pile of Brodie.

Methods used for the surgical treatment of chronic fissure in ano include: 1) injection of a local anesthetic; 2) sphincter dilatations; 3) sphincterotomy; 4) fissurectomy with saucerization; 5) fissurectomy with primary closure; 6) excision with skin graft.

Results obtained from sphincterotomy and sphincter dilatation are inconsistent, and relief of symptoms is often transient. Injection of anesthetic agents relieves the pain but does nothing to eliminate the original disease.

The classical fissurectomy with saucerization is the most reliable and satisfactory method of treatment. This open wound, however, carries with it all the disadvantages of secondary wound healing. Meticulous postoperative care is needed to prevent anal stenosis or recurrent fissures since there is inflammation which results in scarring.

Wound healing per primum is certainly possible around the anal canal, as evidenced by the success of those of us who employ closed hemorrhoidectomy. Fissurectomy by excision with primary closure is usually impossible since the extent of tissue removed results in undue tension on suture lines. The only other procedure in which primary wound healing can be accomplished is a skin graft of the anal canal.

Materials and Methods

From July 1, 1964, to July 1, 1968, we used sliding skin grafts in the treatment of anal fissures in 2,072 patients.

The preoperative preparation was that used in routine anorectal surgery. The patient was placed in the prone position on the operating table. In each case caudal or epidural anesthesia was used.

Most of the lesions in the series were posterior or posterolateral because an anterior fissure frequently does not have enough suitable adjacent skin to cover the defect.

The fissure and the crypt-bearing hemorrhoidal tissue were completely excised. The mucosa was incised transversely to assure removal of all crypt-bearing tissue and an adequate amount removed to assure against a wet anus. A flap, its base cephalad to the anal canal, was then elevated in continuity with the excised fissure, using the basic principles of plastic surgery. The length–breadth ratio was always less than 3:1 to assure against necrosis by providing adequate blood supply. A curved incision was used cephalad to insure a broad base and a thick flap made to assure blood supply. A large flap was mobilized to avoid tension on the suture line and meticulous attention paid to hemostasis to prevent hema-

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toma, which increases tension and the chance of infection. The mobilized flap was advanced and sutured to the mucosa with interrupted 2-0 chromic catgut sutures. Tapes holding the buttocks apart were removed when there appeared to be undue tension. The flap was then advanced and the defect of the skin closed with non-absorbable sutures. Nylon sutures produce the least reaction in the tissue and were used to close the defect.

Associated disease processes, such as other hemorrhoids, other crypt-bearing areas, fissures, fistulas, etc., were corrected. The closed method of hemorrhoidectomy was carried out in most instances. A Gelfoam pack and pressure dressing were employed. The pressure dressing was removed eight hours postoperatively.

Postoperative care was minimal. Routinely, the patients were given a mild bulk laxative and a nonabsorbable sulfa, phthalylsulfacetamide. The wounds were examined on the first postoperative day. A

![Fig. 1. Chronic posterior fissure and crypt-bearing hemorrhoidal tissue excised.](image1)

![Fig. 2. Broad-based flap of skin elevated. Base cephalad with 3:1 length-breadth ratio.](image2)

![Fig. 3. Skin flap sutured to rectal mucosa with interrupted 2-0 chronic catgut. New mucocutaneous junction is formed.](image3)