

# Recurrent Pilonidal Cyst and Sinus

## A Plan of Preoperative Preparation, Operation and Postoperative Care

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THE VARIED surgical techniques proposed for the eradication of pilonidal cysts or sinuses are evidence of the lack of a completely satisfactory method of management of this surgical problem.

Most of the procedures have some merit and are based on seemingly sound surgical principles, but regardless of the methods employed, there is recurrence in a significant proportion of cases.

It is proposed here to present a plan of preoperative management, a not entirely new, but modified surgical technique, and rules of preoperative and postoperative care which have given excellent results, not only in primary, uncomplicated pilonidal cyst, but most especially in the chronic, recurrent and persistent cases.

For the purpose of evaluating the procedure herein described, a review was made, after a follow-up period of ten years or longer, of a series of 50 consecutive cases of pilonidal cyst and sinus in which this plan of preparation, operation and care was applied. These were chronic, persistent or recurrent cases. The patients had undergone, previously, from one to five operations for the condition, including incision and drainage, and various methods of excision. Figure 1 is typical of chronic, recurrent cases in which multiple sinuses have developed. At times, one of the sinuses may be located far laterally, necessitating a "T" type of excision.

In the series of 50 patients here reported upon, the duration of symptoms varied from ten days to six years. Healing was achieved in all but one in which overlapping of the approximated skin margins resulted in delayed healing in the lower half of the wound. There were no complications or sequelae except for annoying ingrowing hairs at the suture line in one patient. Since only 33 of the 50 patients could be located for accurate follow-up, these only were included in calculating recurrence rate. There were three recurrences or 9 per cent. The 33 patients were followed for a period of 10 years or longer.

Of prime consideration is the fact that in recurrent pilonidal cyst or sinus, the field dealt with is infected or potentially infected. In fact, many of the patients are seen in a state of acute exacerbation of

• Evaluation ten years following radical excision and primary closure of recurrent pilonidal cysts led to the conclusion that the method of preoperative and postoperative care and the surgical technique employed gave satisfactory results. In 50 patients operated upon, the duration of symptoms varied from ten days to six years. Primary healing was achieved in all but one case in which there was slight skin overlapping. Thirty-three of the 50 patients were located for appraisal at the end of ten years. Three had had recurrences.

The procedure involved eradication of acute infection preoperatively, wide, en bloc radical excision, with primary closure reattaching flaps centrally to the presacral fascia, and drainage of the depths of the wound.

infection, frequently with abscess formation. Others have draining sinuses, which may be single or multiple and fairly widely scattered in the sacrococcygeal region; and often there are areas of chronic inflammation and/or acute cellulitis.

If there is an acute abscess, it is opened by an incision just large enough for complete evacuation and subsequent drainage. All patients are instructed to take sitz baths for a half hour three to four times a day for several days before operation. Chemotherapy is started and continued throughout the preoperative, operative and postoperative period; usually it is discontinued after the fourth to seventh postoperative day. In the period covered by the present

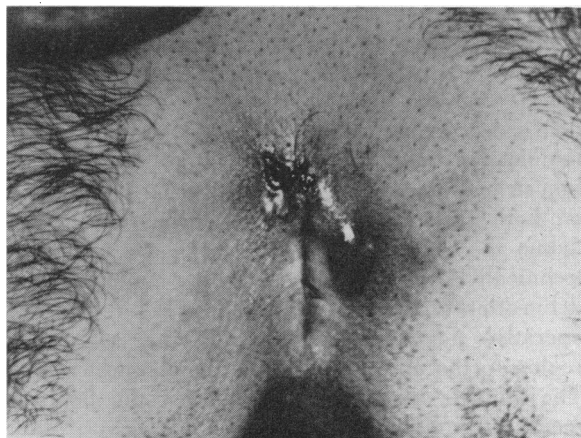


Figure 1.—Typical chronic recurrent case in which multiple sinuses have developed.

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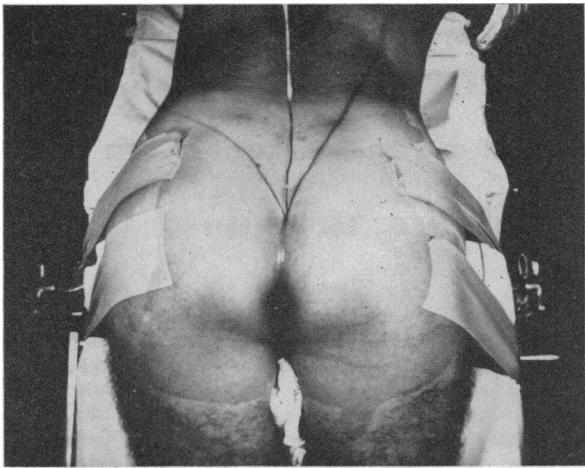


Figure 2.—Patient in operative position with adhesive traction straps in place.

study, the following plan was carried out: 30,000 units of penicillin was given intramuscularly every three hours, and sulfadiazine orally, 4 gm. daily, in divided doses. (At present, however, sulfadiazine is omitted and penicillin is given in a single daily injection of 300,000 units.)

Usually within a few days all acute cellulitis and active inflammation subsides and drainage from the sinuses decreases to a minimum. When the signs of inflammation in the surrounding tissues have disappeared and only slight irritation at the mouth of the sinus opening is present, and when the patients have been afebrile for several days, the lower back, sacral, gluteal, and perineal regions are carefully shaved and cleansed with green soap or Phisoderm.®

#### OPERATIVE TECHNIQUE

A low spinal anesthetic is given and the patient is placed in a prone position on the table, which can be broken at the pelvis, and a pillow is placed beneath the hips to elevate the gluteal region. Wide adhesive straps with tie-down ends are then applied, over tincture of benzoin, along the posterolateral aspect of both buttocks, leaving free an operative field extending on both sides to the junction of the middle and outer third of each buttock. The traction straps, which must be applied with equal tension on both sides, are of great importance, for they flatten the gluteal contours, making the dissection technically less difficult and allowing a more precise delineation of the area of excision (Figure 2). The operative field is prepared from the midlumbar region to the upper third of the thighs posteriorly. The anus is carefully isolated from the field by means of a folded sterile towel and skin clips.

The extent of the incision is next outlined, to allow for a wide block excision through normal healthy

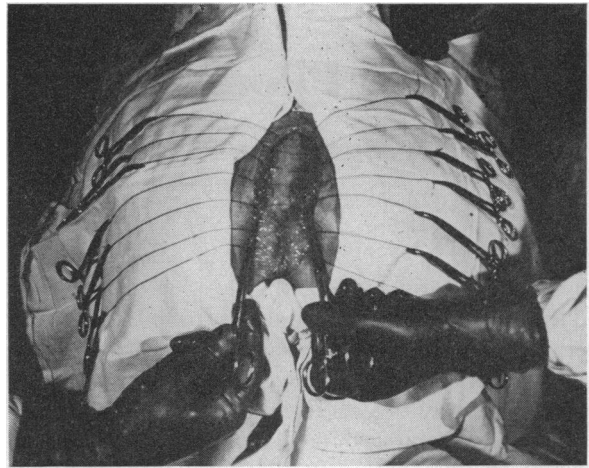


Figure 3.—Chromic catgut sutures in place. When tied they approximate soft tissues to the presacral fascia in the midline.

tissue, staying clear of all scarred or previously involved tissues in the central area. The incision begins at the junction of the middle and upper third of the sacrum and extends well down to the tip of the coccyx below, so that only a small margin of normal skin remains between the lower limits of the operative incision and the perianal skin.

A large percentage of the pilonidal cysts occur in the lower coccygeal region, but they also may extend higher over the sacrum or may be displaced laterally, especially in recurrent cases. Therefore, in order to be sure of including all secondary cysts or scattered sinuses, incision must be carried down through normal tissue, which can only be done by wide excision. The depth of the incision is down to the presacral fascia which is identified readily by its white, shiny, tough fascial surface. In extending the incision downward, one should maintain traction by elevating, with the aid of hemostats, the central block of tissue. Placing all the tissues on tension greatly facilitates dissection. Care should be taken to avoid cutting through old scars, branching sinus tracts or other areas of previous inflammation which may not have been circumscribed adequately. Any such suspicious area should be given wide margin.

The next step is the elevation of suitable flaps for closure of the fat and skin in the midline. Overlying the presacral fascia there is an area of fat and areolar tissue with tough fibrous strands and blood vessels, running more or less at right angles to the plane of the sacrum. This tissue is freed laterally and superiorly, the line of dissection remaining close to but above the presacral fascia, until the gluteal fat has been undermined for a distance of about an inch and a half.

All bleeding points are secured with plain No. 00 catgut ligatures. The lateral adhesive traction straps

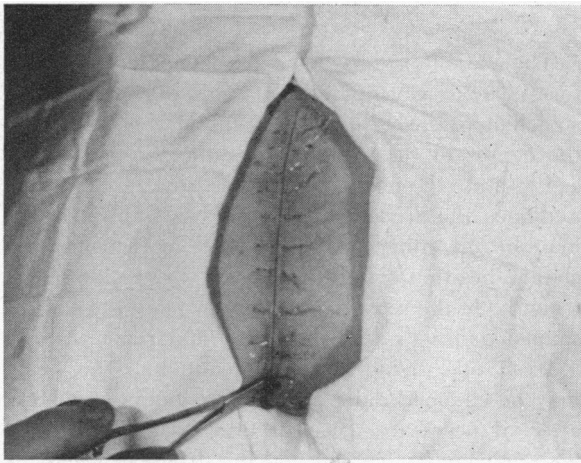


Figure 4.—Mattress sutures of No. 30 stainless steel wire placed close together to approximate full length of incision, with only the drainage site at the lower angle of the wound left open.

are removed from both sides, thus permitting the sliding of the lateral flaps medially to close the midline defect. Interrupted sutures of chromic No. 1 catgut are then placed through the deep gluteal tissue on both sides and anchored to the presacral fascia in the midline. The free ends of the sutures are left long and are held back out of the way with hemostats (Figure 3). All the sutures are placed before any are tied. The sutures near the level of the coccyx are merely passed from the gluteal fatty flap on one side to that on the other side without going through the midline fascia, since if the lowermost sutures passed through the fascia overlying the coccyx, they might cause a variable amount of coxalgia by traction on the mobile coccyx.

Figure 3 shows the extent of excision, the flaps undermined and the interrupted sutures in place. The sutures are then tied, the highest pair first and then in order downward, approximating the soft tissues to the midline and anchoring them to the presacral fascia. A drainage incision an inch and a half to two inches long is then made downward and outward at a 45° angle from the tip of the coccyx. This incision is made through normal, healthy, fatty tissue. Communicating as it does at this level with the previously undermined space above, it provides an excellent escape vent for accumulated serum, blood or liquefied fat, a certain amount of which inevitably forms in the region which was fairly widely undermined, and which, without adequate drainage, is responsible for a great many of the wound complications and recurrences encountered with other procedures.

Closely applied interrupted vertical mattress sutures of No. 30 stainless steel wire are then used to approximate the full length of the incision, leaving

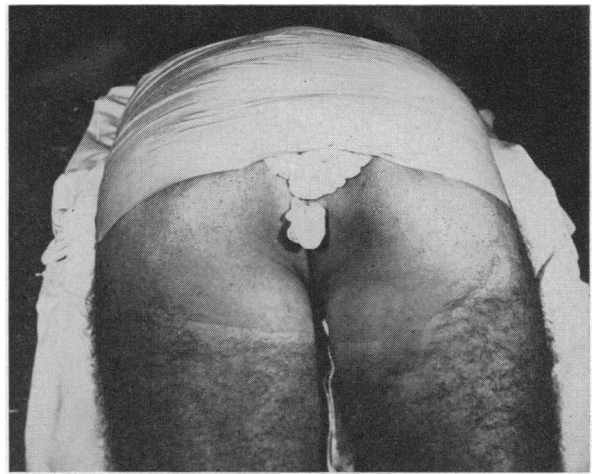


Figure 5.—Pyramidal dressing, folded pressure gauze over coccyx, conical gauze drain in place, and wide adhesive straps to prevent distraction of buttocks.

open only the drainage site at the lower angle of the wound (Figure 4). The sutures must be placed fairly close together to get good apposition; otherwise there is likely to be troublesome overlapping of the skin margins and poor healing due to the moist condition of the skin in this area. Using a long, curved needle with a cutting edge, the deep portion of the vertical mattress suture is placed so as to grasp a generous portion of the deep, soft tissue on either side and approximate the tissue to the midline, thus preventing distraction from the line of incision and relieving some of the tension on the underlying catgut sutures.

If one passes a finger through the drainage wound to the tip of the coccyx, sufficient space will be felt beneath the lowermost catgut suture to allow free drainage of the previously undermined area above this point. Two 3 x 4 inch gauze squares are then rolled diagonally to form a point at one end which is inserted up to the tip of the coccyx. The outer end of the gauze drain is sufficiently bulky to keep the fatty drainage wound open.

The application of the dressing is technically a very important step in promoting good wound healing. A pyramidal gauze dressing is applied in the gluteal crease in such a way that it will follow the contours of the sloping buttocks on either side. This is done by first placing a narrow folded gauze strip for the full length of the incision, and then three increasingly wider folded gauze strips above the first, so that each folded strip of gauze placed is wider than the one below it. Four 4 x 4 inch pads are then folded into a small cube and placed above the previously applied dressings directly over the coccyx. This step is important, for it affords gentle pressure over the coccyx as it slopes downward and

## POSTOPERATIVE CARE

The patient is instructed to lie flat on the back for six hours postoperatively. This position affords sufficient pressure to prevent vascular oozing from the depths of the wound. After that, if the patient can tolerate the position, it is best that he lie on the abdomen the greater part of the time. However, he may lie on either side. He must be instructed to change position carefully to avoid distraction of the wound. On the second postoperative day the conical shaped gauze drain is removed and replaced with a fresh one, using sterile precautions. The drain may be changed daily for three to four days thereafter, if necessary. By that time practically all of the drainage has ceased and the drainage wound is attempting to heal.

Penicillin is continued for a period of four to seven days postoperatively, depending upon the acuteness and extent of the infection present before operation.

The wound is not disturbed for ten days, at which time the dressing is changed for the first time. The wire sutures are removed ten to twelve days after operation. By that time the wound should be excellently healed per primum with a hairline scar. Figure 6 shows an example of excellent primary healing two weeks after operation.

All patients are instructed to avoid sitting as much as possible for two weeks, and, when sitting is necessary, to sit directly on the ischial tuberosities and not slump down in a chair with the weight on the sacrum and coccyx.

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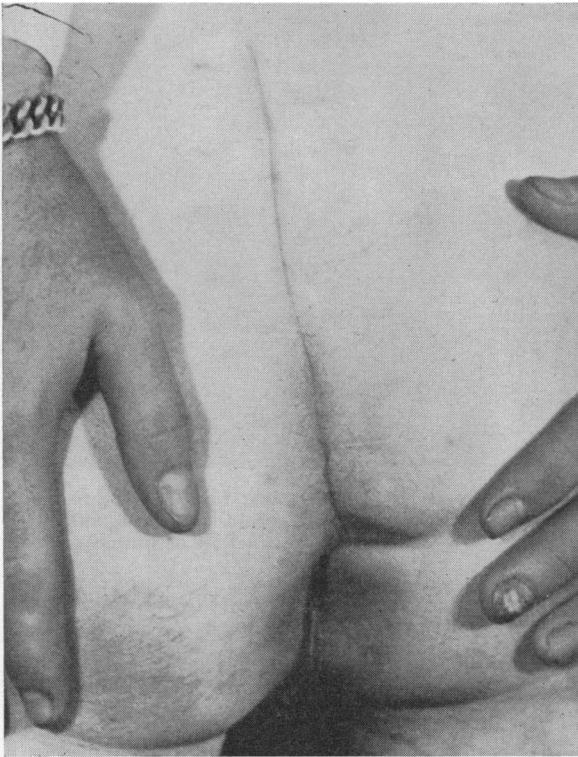


Figure 6.—Example of excellent primary healing two weeks after operation.

somewhat forward just above the anus. If this last pledget of gauze is not used there will be a dead space at this point which is not firmly supported by dressings. Adhesive straps are then placed across both buttocks to draw them together snugly against the pyramidal dressing (Figure 5).

