

# Management of Nonhealing Perineal Wounds

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- \*The manifestations of perianal Crohn's disease vary from primary lesions such as skin tags and fissures, to diffuse septic destruction of tissue and sphincter muscle.
- \* These manifestations are often persistent and refractory to surgical treatment.
- \* however, a more disappointing scenario is when the treatment itself results in a chronic wound.

- \* The approach of some surgeons is to do nothing more than drain sepsis; this approach is based on the experience that aggressive treatment is ineffective and poorly tolerated in the setting of Crohn's disease.
- \* At the other end of the spectrum, is the use of aggressive surgical approaches with unrealistic expectations, often results in disappointing consequences.
- \* The ideal approach is likely between these two extremes and involves basic surgical principles, careful patient selection, and realistic expectations.

## GENERAL PRINCIPLES

\*First, choose suitable procedures that account for all patient factors and symptoms.

For example...

Asymptomatic skin tags and ulcers can be conservatively managed with medical therapy and observation.

The management of hemorrhoids deserves careful consideration as several studies suggest hemorrhoidectomy in Crohn's disease results in complications and should be avoided.

\* Second .. identify and drain all areas of sepsis. Abscess drainage is one of the most common procedures performed for perianal Crohn's disease. It is best performed during an examination under anesthesia, which allows not only incision of an abscess, but also evaluation of the perianal area

- \* A third important principle is to consider carcinoma as the cause of delayed or unhealed perineal wounds
- \* If carcinoma is suspected, even in the cases of asymptomatic primary lesions, a biopsy should be performed. The amount of tissue must be adequate for histologic examination, but not so extensive as to exacerbate an already difficult wound.
- \* A fourth principle is to establish guidelines for which patients will benefit from fecal diversion
- \* Loop ileostomy is particularly helpful to allow tissue to heal prior to surgical repair of underlying lesions. The repair can then heal under the protection of the ileostomy and can be reversed after satisfactory healing has occurred.

\*However, several studies have suggested that the improvement seen after diversion is limited. In a significant number of cases, overall disease progression does not stop with fecal diversion alone, and patients may require permanent diversion or proctectomy

## PROCTECTOMY AND CROHN'S DISEASE

\*A subset of patients with Crohn's disease will require proctectomy, particularly those individuals with refractory perianal disease and rectal involvement

\*While proctectomy is intended to relieve debilitating symptoms and improve the quality of life, post-operative perineal wound complications are a significant source of morbidity and sometimes are more devastating than the preoperative perianal manifestations.

## PREVENTION OF UNHEALED PERINEAL WOUNDS FOLLOWING PROCTECTOMY

- \*Prevention is better than is management.
- \* First, the patient should be in optimal condition. Chronic comorbid conditions such as diabetes and obesity should be controlled as much as possible and nutritional status should be optimized.
- \*Smoking cessation. Medications, particularly steroids and immunomodulating agents, should be evaluated to adequately assess operative risk.

- \* A second strategy is to heal the perineum as much as possible before proctectomy; this method may require preliminary operative examination and debridement to drain and control all areas of active sepsis .

- \* Even a staged proctectomy should be considered

- \* However, the benefits of a low Hartmann's are debatable.

- \* A percentage of patients with perianal Crohn's disease who undergo diversion develop symptomatic disease in the excluded rectal stump, requiring further surgery.

- \* Similarly, although the amount of tissue left behind after a low Hartmann's is much less, the remaining anal canal can continue to be a source of morbidity due to discharge, hematoma, and sepsis



- \*To achieve satisfactory results in one stage, inter-sphincteric proctectomy for inflammatory bowel disease has been well-described.
- \*Dissection is performed in the intersphincteric plane (between the internal and external sphincters), which minimizes the size of the perineal wound, and thus decreases the incidence of unhealed perineal wounds. The external sphincter and levators are left intact and can be used for a secure closure

## \* ASSESSMENT OF THE UNHEALED PERINEAL WOUND

- \* Etiology primary or secondary to ano rectal procedure
- \* . History should focus on the overall condition of the patient, the systemic status of the Crohn's disease, the nature of the drainage from the wound, and the extent of symptoms.
- \* Physical examination should determine the extent of the defect and the type of reconstruction that will be needed.

- \* On physical examination, the size of the defect, condition of the skin and surrounding tissue, and the presence of active infection are identified. Potential involvement of the urethra or vagina should be considered.
- \* Investigated with fistulogram, small bowel series, computed tomography (CT) scan, and magnetic resonance imaging (MRI). The purpose of imaging studies is to exclude undrained fluid collections and evaluate communication with other structures.

## \*TREATMENT OF THE UNHEALED PERINEAL WOUND

- \* Delayed perineal wound healing is defined as a wound that has not healed within 4 to 6 months following proctectomy, but eventually heals.
- \* An unhealed peri-neal wound is generally defined as one which has not healed at 6 months

\*The initial approach is conservative management. Patience, hygiene, periodic debridement of necrotic tissue, and regular follow-up may be the only treatment necessary.

\*In clean wounds in which communication with bowel has been excluded, a vacuum-assisted closure device may be useful during this period.<sup>49</sup> As long as the wound is making some progress in healing, *conservative management should be continued for up to 12 months.*

\*The operative approach for superficial sinuses or wounds with adequate surrounding tissue should be *examination under anesthesia with curettage of granulation tissue, debridement of necrotic tissue, and unroofing of small cavities. This procedure may be repeated as the wound gets smaller and until it eventually heals.*

- \* The use of fibrin glue is appealing, but has had disappointing results and high recurrence rates.
- \* Excision and primary closure has had success in a small number of patients. However, if wide excision of fibrotic tissue is necessary, the resulting defect usually cannot be closed completely because the dead space easily becomes infected.

- \* Excision of a perineal sinus with skin grafting of the defect has been described.
- \* Skin grafting is difficult in cavitating wounds and long sinuses. Some have described “saucerization,” where excision of the sinus includes a thorough debridement and *curettage to change the tunnel shape to a flat wound*; skin grafting is performed immediately or as a delayed procedure.

- \* Larger wounds and tissue defects require reconstruction with a bulk of well-vascularized tissue. Several options are available. Yamamoto and colleagues used excision and omentoplasty for persistent perineal sinus after proctectomy for Crohn's disease in 6 patients.
- \* Five of the 6 patients achieved successful healing; in one patient, the omentum necrosed and the patient remains with a perineal sinus.
- \* The procedure was performed safely in this small series. However, the laparotomy required for mobilization of the omentum is a major procedure with significant potential intraoperative and postoperative morbidity

- \* The **rectus abdominis myocutaneous flap** is preferred by some surgeons because of its bulk and ability to adequately fill the fibrotic cavity, which often accompanies unhealed perineal wounds.
- \* Rectus abdominis myocutaneous flaps have excellent healing rates, but involve lengthy abdominoperineal procedures. In addition, patients with Crohn's disease have a high likelihood of requiring a subsequent laparotomy harvesting the rectus muscle could limit stoma construction options.

- \*The gluteus maximus flap is another option for muscle flap.
- \*For large, persistent unhealed perineal wounds is **the gracilis muscle interposition is preferred** . The use of the gracilis muscle to heal complex perineal fistulas and sinus tracts has been reported in the literature.

- \*The gracilis muscle offers a bulk of well vascularized tissue to repair these difficult wounds
- \*Gorenstein and colleagues reported 2 patients with rectovaginal fistulas following restorative proctocolectomy treated with gracilis muscle interposition. The fistulas were successfully treated using the gracilis muscle, demonstrating its usefulness in cases of complex perineal fistulas.



\*Rius and colleagues recently updated their experience of gracilis interposition for the treatment of *rectovaginal and rectourethral fistulas*. In a review of 53 patients with these fistulas, many of whom had failed prior attempts at repair, the success of gracilis interposition approaches 90%.

## \* ADDITIONAL STRATEGIES



- \* When faced with the challenge of unhealed perineal wounds, the surgeon should remember the other factors not specifically reviewed here. For example, medical management including antibiotics, immunomodulators, infliximab, and tacrolimus may play a role in treatment, but may also impair postoperative healing.
- \* Consulta-tion with a gastroenterologist is strongly encouraged to ensure that patients are receiving maximal benefit from medical therapy before proceeding with operative intervention. Surgeons should not hesitate to consult other disciplines such as plastic surgery and wound care specialists.

- \*The unhealed perineal wound in Crohn's disease is a challenging condition. To avoid overly aggressive techniques that can worsen the situation, careful patient selection and well-planned strategies will lead to elimination of debilitating and troublesome symptoms and successful healing.

