

40. Antibiotics (imidazoles) may be effective and should be considered in treating simple perianal fistulas (249) (strong recommendation, moderate level of evidence).
41. The addition of antibiotics to infliximab is more effective than infliximab alone and should be considered in treating perianal fistulas (250) (strong recommendation, moderate level of evidence).
42. Drainage of abscesses (surgically or percutaneously) should be undertaken before treatment of fistulizing Crohn's disease with anti-TNF agents (251) (expert opinion) (conditional recommendation, very low level of evidence).
43. Placement of setons increases the efficacy of infliximab and should be considered in treating perianal fistulas (251,252) (strong recommendation, moderate level of evidence).

The presence of a perianal abscess in CD should prompt surgical drainage (Summary Statement).

Fistulizing CD is a therapeutic challenge that requires careful evaluation and coordination of care between medical and surgical providers in order to direct therapy appropriately.

Fistulas occur in approximately one-third of patients with CD, with perianal fistulas representing the most common location. Internal fistulas rarely require therapy and are often asymptomatic. If fistulas occur and they are symptomatic and represent major fistulas (stomach to ileum; mid or proximal small bowel to colon) and are associated with diarrhea or small intestinal bacterial overgrowth, then surgery or medical therapy is advocated. Before initiation of immunosuppressive therapy with agents such as biologic therapy or antimetabolite therapy (azathioprine, 6-mercaptopurine, or methotrexate), pyogenic complications such as abscess should be excluded with cross-sectional imaging. If abscesses are present they should be treated initially with drainage before initiation of biologic therapy or immunosuppression (253).

Small (<5 mm) abscesses may not require surgical drainage. For asymptomatic simple perianal fistulas, no treatment is required. Symptomatic simple fistulas may be treated with noncutting setons or fistulotomy. Complex fistulae with or without abscess should be treated with seton placement (254), typically in combination with appropriate medical therapy. The timing of seton removal depends on subsequent therapy and drainage of abscess. A surgical advancement flap may close simple fistula or complex fistula, for example rectovaginal fistula, in the setting of no active infection or inflammation (255–257).

The presence of high-output fistulas typically mandates surgical intervention (proximal bowel diversion, bowel segment resection, or surgical fistula closure) and historically do not close spontaneously or with medical therapy. Low-output fistulas may be treated with antimetabolite therapy or biologic therapy alone or in combination with each other; however, the evidence supporting the use of anti-metabolite is not very robust. In addition, these agents can be used individually or in combination with antibiotics.

When assessing patients with perianal fistulas (the most common fistula location in patients with CD) we categorize the fistulas as either simple (located distal to the dentate line primarily in the anal sphincter region with a single track) or complex. A complex fistula can be transsphincteric, suprasphincteric, and intersphincteric in its location and may have multiple fistula tracts. This classification is important to perform as treatments may differ among these categories.

In the absence of active mucosal involvement in the rectum, patients with simple fistulas who have CD may respond well to fistulotomy or mucosal advancement flap surgery, whereas patients with mucosal involvement may benefit from seton placement rather than fistulotomy. Consideration may also be given to immunomodulators, vedolizumab, or anti-TNF- α agents, with the best evidence supporting the efficacy of infliximab.

The optimal management of complex perianal fistulas should include a combination of surgery with an anti-TNF. The surgery involves an exam under anesthesia with identification of abscesses and fistula tracts. The pelvic sepsis related to fistula abscesses leads to tissue destruction of the tissue, anal sphincter, and more extensive perianal, gynecologic, and genitourinary complications. To that end, any fistula with an abscess or complex fistula (i.e., involving the anal sphincter, vagina, or multiple tracts) should be drained of infection. Setons are the most common method to allow for continued drainage of infection and inflammatory fistula tracts and should be performed before initiation of immunosuppression (258). Several studies have shown the benefit of placement of setons followed by infliximab. The combination of a seton with infliximab has demonstrated a better overall fistula healing response, longer duration of fistula closure and prevention of repeated abscess, and lower overall fistula recurrence rate (252,259,260). In the setting of significant refractory disease a proximal diversion to enable rectal and/or perianal healing may be necessary. After the diversion, initiation of a new therapy such as anti-TNF therapy with or without an immunomodulator additionally may promote healing of the perineal disease. However, a systematic review suggests that the long-term success of diverting ostomy for perianal CD is very low (261). In very severe clinical scenarios, proctectomy or total proctocolectomy with permanent stoma may be necessary. Surgical advancement flaps play a role in the improvement of long-term healing rates in combination with an anti-TNF (262).

Internal fistulas remain more difficult to treat. Internal fistulas may occur in the form of rectovaginal fistulas, enterovesical (or colovesical) fistulas, or enteroenteric fistulas. Appropriate management of rectovaginal fistulas classically entails use of medical therapy with immunomodulator therapy (monotherapy with azathioprine/6-mercaptopurine or anti-TNF antibody or combination therapy with both) as initial treatment. This treatment regimen is usually considered before surgery. The goal of medical therapy is to heal the inflamed bowel mucosa and then subsequently to enable surgical intervention. Surgical options for the treatment of rectovaginal fistulas might include excision of the fistula and the interposition of healthy tissue between the rectum and vagina. In general, the surrounding tissues are best when not inflamed. The