A Case report on the Medical Management of Vulvar Crohn’s Disease by Topical Therapy

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Abstract

Crohn’s Disease is one of two forms of Inflammatory Bowel Disease. It presents with gastrointestinal pathology and it may also be associated with a variety of cutaneous manifestations. Anogenital Crohn’s Disease may occur as a contiguous presentation or it may present as a noncontiguous or metastatic display. This disease, on rare occasions, affects the vulva. Typically, vulvar disease is improved as gastrointestinal disease is treated. Treatment typically is directed systemically with oral sulfasalazine, steroids, metronidazole, and azathioprine. Nutritional therapy is advocated, as well. Even intralesional steroid injections have been undertaken. This paper focuses on a case of vulvar Crohn’s that was treated successfully with topical application of medication when more pressing medical problems necessitated the interruption of her systemic Crohn’s therapy.

Key Words

Crohn’s Disease, Vulvar Crohn’s, granulomatous cutaneous inflammation, Inflammatory Bowel Disease, Ulcerative Colitis, Topical Therapy

Introduction

Inflammatory Bowel Disease is a general categorization for Crohn’s disease (AKA Regional Ileitis/Enteritis and transmural colitis) and ulcerative colitis. The etiology of Crohn’s disease is unknown, but it has been associated with recalcitrant cheilitis granulomatosa [24], oral ulcerations [30], granulomatous cutaneous inflammation [17], [27] acrodermatitis enteropathica-like syndrome [27], pyoderma gangrenosum, erythema nodosum, cutaneous vasculitis, flexure lesions of the abdomen, sub mammary regions [29], axillary folds [08], and Vulva [01], [11], [14], [16], [22], [23], [26]. Other associations include Granulomatous Hidradenitis suppurativa [09], Bowel Associated Dermatitis- Arthritis Syndrome [07], Subacute Cutaneous Lupus Erythematosus [12], Lichen planus, Lichen Nididus, Erythema Nodosa [02], Polyarteritis Nodosa [13], Colorectal carcinoma, Sneddon-Wilson Disease [04], pemphigus Vulgaris, pyostomatitis vegetans [06], Erythema Multiforme [21] and dermatomyositis [07]. Ulcerative Colitis, on the other hand is associated with psoriasis 5 percent of the time, Rheumatoid Arthritis-Like syndrome 20 percent of the time and cirrhosis 5-10 percent of the time. The etiology of Ulcerative Colitis is unknown, as well [19]. The incidence of both is equal in men and women and peaks between 20 and 40. Both forms of inflammatory Bowel disease can exist.

Crohn’s symptoms include intermittent pain, melena and constipation while Ulcerative Colitis is characterized with intermittent pain, diarrhea and mucus and blood in the stool. Crohn’s complications include obstruction, perforation and fistulation, rare malignancy and clubbing of the fingers. Ulcerative Colitis complications include perforation, fistulation, peritonitis,
uncommon clubbing of the digits and malignancy in about 10 percent of the cases.
Eighty percent of the time Crohn’s disease affects the terminal ileum and forty percent of the
time the colon. Skip lesions are characteristic. The wall is very thick. Radiographic descriptors
include “Rubber hose,” “Eel in rigor mortis” and “String sign.” All layers of the intestine are
involved, and the lesion may extend to the mesentery. The wall of the intestine is moderately
thickened in Ulcerative Colitis; lesions are most severe in the mucosa and submucosa. Ulcers
occur over the taenia coli with pseudo polyps occurring between ulcers.

Crohn’s Disease is differentiated from Ulcerative Colitis microscopically by the presence of
Sarcoid-like noncaseating granulomas and chronic inflammation in over 80 percent of cases.
Microscopic findings in Ulcerative Colitis are nonspecific. Paneth cells are commonly abundant,
but granulomas are absent [19].

The involvement of Crohn’s Disease in the anogenital region [10], [20], [29] is a common
cutaneous [27] manifestation of this form of Inflammatory Bowel Disease. The purpose of this
paper is to present a case of vulvar Crohn’s [01], [11], [14], [16], [22], [23], [26], a rare
manifestation of the cutaneous metastatic lesions [29] associated with regional ileitis. Additionally,
I would like to suggest that topical treatment may have significant benefit in the management of the
genital involvement of Crohn’s Disease.

Case Report

An 81-year-old white female presented to a local hospital emergency department with acute onset
of nausea and vomiting. The patient was admitted by her family physician with clinical evidence
of pancreatitis. Gastroenterology consultation was obtained. Recent history revealed the patient to
not have been feeling well over the past several weeks. On evaluation she was complaining of
abdominal pain and discomfort. She denied gross hematemesis, coffee-ground emesis, dysphagia,
or odynophagia; however, some weight loss had been noted over the past several months.

On physical examination a functional colostomy was noted. The patient could not recall the
reason for the colostomy. Evidence of prior cholecystectomy presented in the form of an old
well-healed right infracostal margin abdominal incision. Of particular note was the appearance of a
marked inflammatory appearance of the skin, suggesting active dermatitis, of the lower abdominal
area and the pelvis. Stool presented without gross appearance of blood. Hemoglobin was 12.5 mg/
dl, hematocrit was 39 percent, WBC was 11,000, AST was 45, Alkaline phosphatase was 318,
GGT was 578, bilirubin was 0.2, BUN was 58, creatinine was 2.9, amylase was within normal
limits and lipase was 379.

CT evaluation of the abdomen without contrast was significant for moderate dilatation of the
common bile duct to the level of the pancreatic head without evidence of intrahepatic ductal
dilatation. Fluoroscopic examination revealed a 6 mm calculus within the pancreatic duct. Mild
narrowing of the pancreatic and common bile ducts were noted near the level of the ampulla.
Mild intrahepatic and moderate extrahepatic biliary ductal dilatation was appreciated. The
The patient underwent an ERCP for pancreatic lithiasis and sphincterotomy secondary to papillary stenosis of the pancreatic duct. In addition, she was referred for dermatologic evaluation and management.

Dermatologic consultation was provided for a painful vulvar condition. The family physician had treated her empirically for severe intertrigo with systemic fluconazole and itraconazole. Improvement had been only temporary. This patient had a history remarkable for Crohn’s disease and prior colectomy. It was also noted that the patient had been managed with Azulfidine and folic acid prior to admission. History was also significant for heart disease and prior myocardial infarction.

Physical examination revealed an 81-year-old [20] female immobilized due to severe pain of the intertriginous areas of the groin. The vulva and groin folds were erythematous edematous and generally inflamed. Prominent tender wide fissures were observed bilaterally in the groin folds (see figure 1).

![Image of vulvar Crohn's Disease](image1.jpg)

**Fig. 1** Vulvar Crohn’s Disease is characterized by prominent tender wide bilateral groin fissures commonly referred to as “knife cut” lesions.

There was no overt vaginal drainage, however the area was malodorous. A well-demarcated pink patch was noted around the colostomy site, suggestive of recent contact dermatitis from an adhesive dressing. The perianal area was tender, erythematous and presented scattered superficial erosions. No oral lesions were noted, nor were there any other cutaneous findings (see figure 2).
Vulvar biopsy revealed subepithelial granulomas suggestive of Crohn’s (see figure 3).

Acid fast and fungal stains were negative. Cultures were negative for yeast or fungus as well [20]. The historical findings and dermatological features were most consistent with a clinical diagnosis of cutaneous Crohn’s disease. Due to her laboratory abnormalities and certain other medical concerns at the time, the family physician and the gastroenterologist temporarily held systemic treatment of Crohn’s with sulfasalazine [28] and/or prednisone [20].
Topical therapy was therefore initiated with halobetasol propionate cream 0.05 percent for a ten-day trial. The patient reported prompt relief of her symptoms with clinical reduction in the erythema and edema on observation (see figure 4).

![Figure 4](image)

Fig. 4 Pronounced diminution of edema and erythema following topical therapy of the vulva.

She was subsequently started on oral sulfasalazine 500 mg twice daily with further clearing of cutaneous lesions when re-evaluated at six weeks. Residual fissures (see figure 5) were treated with topical Silvadene cream until totally healed three weeks later.

![Figure 5](image)

Fig. 5 Healing “knife cut” fissures.
Discussion

The involvement of the anogenital region in Crohn’s Disease presents in two forms: contiguous, wherein there is direct extension from the affected intestine, and noncontiguous, in which “metastatic disease” [29] occurs at a distant site. Contiguous involvement of the perianal area is very common, presenting in 30 percent of all patients and up to 80 percent of patients with colon-affected disease. Noncontiguous genital involvement is very rare. Lavery, Pinkerton and Sloan reported that only eight cases had been reported in the literature in 1966 [26]. In 1994, however, Lynch and Edwards suggested fewer than 25 cases of vulvar Crohn’s had been reported and one review of the literature suggested that two percent of women with Crohn’s disease had associated vulvar involvement by 1994 [20]. The disease occurs most commonly in young woman, and up until now the age range was reported to be from 11 to 70 years. This patient was 81 at the time of diagnosis.

Extension lesions from the perianal area, as reported in the medical literature, occur primarily as anal abscesses or draining fistulae. Noncontiguous lesions appear as labial swelling. Abscesses, nodules and ulcers may be present. Metastatic Crohn’s describes a granulomatous reaction in flexures separated from the affected areas of the gastrointestinal tract by normal Skin [29]. A prominent and distinctive finding that may be present is the tendency to develop linear fissures within the intertriginous folds. This finding, referred to as the “knife cut” sign, is clearly defined on the patient (see figure 2). It is very important to rule out granuloma inguinal in the differential of this disease, for it commonly presents with deep linear fissures [20].

Other diseases to be considered when granulomatous changes are present include hidradenitis suppurativa, sarcoidosis, genital Melkersson-Rosenthal disease and granulomatous fungal and mycobacterial infection. Therefore, one will understand the importance of obtaining acid fast and fungal stains and cultures for yeast or fungus, following biopsy results which revealed granuloma to be present (see figure 3).

Anogenital disease tends to persist for long periods of time without serious evidence of spontaneous remission. It does tend to improve as active gastrointestinal disease is brought under control. The patient had signs of active bowel disease, but her systemic medication had been discontinued owing to elevated liver enzymes, renal failure and acute pancreatitis. Therefore, initial therapy for the painful vulvar disease was initiated in a topical format prior to restoring oral sulfasalazine. This approach, using powerful steroids in a cream base, worked surprisingly well and dramatic resolution was noted at a six-week follow-up. Oral therapy was able to be reinstituted and residual fissuring responded to Silvadene cream administration. Typically, treatment of the disease includes nutritional support, including B-complex vitamins, Ascorbate and Zinc [27].

The therapeutic benefit of sulfasalazine and the metabolite 5-aminosalicylic acid has been demonstrated in the literature, however sulfapyridine, another sulfasalazine metabolite, was not shown to be efficacious [25]. Metrodidazole [20] may also be helpful. Severe cases often respond to oral corticosteroids [31], azathioprine [20] or both. Intrallesional steroid injection has also been shown effective [21]. These medications were contraindicated initially, and nutritional supplementation was
not addressed. Consequently, the results obtained appear to be attributable to topical steroid application.

The etiology of Crohn’s disease continues to remain elusive. Evidence has been put forth suggesting infectious agents causing granuloma formation or intestinal bacteria provoking inflammatory reactions. Still proof is lacking. Immunologic factors may be important, but a genetic basis may be a more favorable hypothesis. There is a high incidence of this disease in Jews and a low incidence in blacks. A high frequency of the HLA-B27 haplotype is observed. The patient was not tested for this haplotype, but then she did exhibit the hallmark stigmata of vulvar Crohn’s Disease and prior history and treatment were confirmatory for this subset of Inflammatory Bowel Disease.

Summary

Crohn’s Disease is an interesting subset of Inflammatory Bowel Disease. It not only presents as a gastrointestinal disorder but often spills over to the cutaneous system by either direct extension or by metastatic manifestation. Vulvar Crohn’s Disease is a rare manifestation of non-contiguous anogenital disease. Our case was particularly interesting for a number of reasons. First, vulvar disease doesn’t occur very commonly. Secondly, this gentle lady was a decade older than the range reported by Lynch and Edwards. Thirdly, this is the first case that I am aware of that has been treated using topical agents, the routine therapeutic modalities having been electively held initially for the benefit of other medical problems which this patient was suffering from.

References


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