Case Report

Pyoderma Gangrenosum Associated With Inflammatory Bowel Disease. Report of Two Cases With Good Response to Infliximab

Carmen Carrasco Cubero,* M. Mar Ruiz Tudela, José Javier Salaberri Maestrojuan, José Javier Pérez Venegas

Servicio de Reumatología, Hospital de Jerez de la Frontera, Cádiz, Spain

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ABSTRACT

Among the extraintestinal manifestations of inflammatory bowel disease (IBD), pyoderma gangrenosum (PG) often poses a therapeutic challenge. We describe two cases of PG associated with inflammatory bowel disease, who responded to treatment with Infliximab.

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Introduction

Pyoderma gangrenosum (PG) is a neutrophilic dermatosis of unknown cause that manifests as painful skin ulcers. It was described by Brunsting et al.1 in 1930. Approximately 50% of patients have a background systemic disease, the most common being inflammatory bowel disease (IBD), myeloproliferative disorders, and different forms of arthropathy (both spondylitis and rheumatoid arthritis).2 Sometimes skin lesions can precede, follow, or occur simultaneously with the disease with which it is associated. In some patients with IBD, control of bowel disease also leads to the control of PG, but this does not occur in all patients. The diagnosis is based on clinical suspicion and exclusion of other causes of ulceration by histology and microbiological studies.

Clinical Cases

Case 1

Male patient, 55 years old with a history of type 2 DM, HLA-B27+ankylosing spondylitis, diagnosed at 18 years of age, followed up by the rheumatology service and treated with sulfasalazine. The patient had Gleason 7 acynar adenocarcinoma of the prostate (T2N0M0) and was operated by radical prostatectomy in September 2008, subsequently receiving adjuvant radiotherapy from January through March 2009. He also presented cellulitis and a perianal abscess. No other relevant history was present.

The patient was hospitalized (July 7, 2009) for presenting an ulcerated lesion with loss of substance and a purplish erythematous halo on the back of the left hand (Fig. 1A), in addition to severe fistulizing perianal lesions. He had no fever, abdominal pain, or altered bowel habits, nor joint, eye, or constitutional symptoms.

On examination, the patient had mucocutaneous pallor. The abdomen showed no tenderness or other abnormalities on examination. It showed two skin ulcers on the back of the left hand, infiltrated, with a jagged edge, elevated and erythematous, painful
Among the extraintestinal manifestations of IBD, pyoderma gangrenosum is a particular concern. It typically presents as an ulcer with purplish edges and geographic contours located on an erythematous nodule (lesion after 24 h of administration of bolus methylprednisolone, with obvious improvement). (Fig. 1A) Pyoderma gangrenosum can also affect the perianal region, with severe fistulizing lesions.

Case 1

33-year-old male with a history of Crohn's disease of several years of progression, treated with mesalamine. He presented frequent outbreaks of intestinal disease and polyarthralgia, which required treatment with corticosteroids.

One week before admission, the patient had a painful ulceration on the right perimalleolar region and began to suppurate without fever or gastrointestinal symptoms. Because of the suspicion of septic arthritis, we performed a surgical drainage of the abscess in addition to starting intravenous antibiotic therapy with unfavorable results. A few days later, there was necrosis of the surgical wound with great loss of substance, showing progressive worsening after each lavage.

After his hospitalization (September 15, 2007), the patient presented fever, abdominal pain, and diarrhea (more than 20 stools per day), with pathological features. The patient had mucocutaneous pallor, with general malaise and abdominal tenderness. Upon the anal inspection, he presented several tracts and drainage sites. His right ankle had a skin ulcer, with significant loss of tissue (Fig. 1B).

Due to the severity of the disease, we opted for the use of infliximab in the treatment. We performed an MRI of the abdomen and pelvis, which showed severe involvement of the descending colon, sigmoid and rectum with loss of haustra, edema of the colon wall and perirectal fat and severe complex and bilateral perianal fistulizing disease.

Parenteral nutrition was begun in the operating room and catherization was performed for perianal fistula drainage with placement of two separate drains, partially improving intestinal function.

Steroid and antibiotic treatment, in addition to general measures, improved the patient's general condition without achieving success regarding the right ankle ulcer. A biopsy was taken from the wound edge and was compatible with PG.

Treatment was initiated with intravenous infliximab (5 mg/kg), with dramatic improvement. Gradually, the patient achieved remission of bowel disease. The ulcer required a skin graft to cover the severe loss of substance (Fig. 2B).

Discussion

Extraintestinal manifestations complicate the course and treatment of IBD in 20–40% of patients. Among the extraintestinal manifestations, mucocutaneous PG appears in 1%–5% of patients with IBD.

It is more common in ulcerative colitis than Crohn's disease, and manifests itself initially as painful pustules that increase in size forming ulcers with purple edges and a necrotic base, may be multiple and scars after healing. It is most frequently located in the lower extremities.

PG can respond to the basic treatment of IBD, but its relationship disease activity is less obvious than in other mucocutaneous extraintestinal manifestations, such as erythema nodosum.

The pathogenesis of PG is not fully elucidated but appears to be an immune-mediated injury similar to IBD. Therefore, various therapies that act to control the inflammatory response, such as...
infliximab, have been used in its treatment. It has also been speculated that the effect of infliximab in PG is a consequence of the healing of intestinal lesions underlying IBD, or is a direct drug effect on skin injuries.

The use of infliximab on extraintestinal manifestations such as mucocutaneous PG has recently been described in some publications of small series or isolated cases\(^5,6\) and opens new perspectives in its management. The skin lesions responded well in most cases. The dosing of infliximab used in cases published is very diverse and in many of them chose an initial infusion and then at weeks 2 and 6, and a significant percentage of new doses were administered thereafter. In our case, we chose to follow the recommendations of the Spanish Group for the Study of Crohn’s disease and ulcerative colitis.\(^7\)

On the other hand, there are studies in which it has been shown that patients with chronic skin ulcers, such as PG, have an increased risk of serious infections (septic shock) while undergoing treatment with anti-TNF alpha, so individual prophylaxis should be provided before initiation of treatment.\(^8\)

**Conclusions**

In the cases reported, treatment with infliximab proved to be able to achieve remission of PG associated with Crohn’s disease after failure of immunosuppressive therapy.

**Disclosures**

The authors have no disclosures to make.

**References**