

## Acne Inversa Treated with Infliximab: Different Outcomes in 2 Patients

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Sir,

Acne inversa, also known as Verneuil's disease or hidradenitis suppurativa, is a common disorder resulting in a chronic, recurrent and debilitating disease. This condition usually presents with painful, inflamed lesions in the apocrine-gland-bearing areas of the body, most commonly the axillary, inguinal and anogenital areas. The disease usually occurs after puberty and before the age of 40 years, suggesting a hormonal influence on the pathogenesis of the disease. Occlusion of the apocrine duct by a keratinous plug and defects of the follicular epithelium have usually been considered the aetiology of acne inversa. Contributing factors include friction from axillary adiposity, sweat, heat, stress, tight clothing and genetic and hormonal components (1). Acne inversa can be treated with antibiotics, retinoids, corticosteroids, cyclosporine, incision and drainage, local wound care, local excision, radiation and laser therapy. Although there are a wide range of therapies suggested for the treatment of acne inversa, the disease is often resistant and the psychological impact on the patient can be great (2), encompassing social, personal and occupational challenges. We describe here 2 case reports of patients affected by acne inversa resistant to traditional therapies, who were treated with infliximab.

### CASE REPORTS

**Case 1.** A 34-year-old woman, affected by acne inversa from the age 18 years presented with painful tender nodular lesions in the inguinal region (Fig. 1A). In the past the patient had been treated with isotretinoin,

oral contraceptive agents, antibiotics, topical triamcinolone, incision and drainage without a resolution of the lesions. We decided to treat the patient with infliximab. Laboratory tests, Mantoux's test and chest X-ray found no exclusion criteria. Treatment was initiated at a dosage of 5 mg/kg on weeks 0, 2 and 6. Maintenance therapy was given every 8 weeks. Considering the possibility of superinfection of the inguinal lesions, the patient was treated with amoxicillin and clavulanic acid (1 g twice a day) for the first 2 weeks of therapy with infliximab. Two weeks after the first infusion the patient reported a great improvement in her physical condition, with reduction in pain, erythema and infiltration (Fig. 1B). The patient is still under therapy with infliximab with infusion every 8 weeks, and after 10 infusions improvement is persisting and no adverse effects have been reported.

**Case 2.** A 39-year-old man affected by acne inversa presented with severe inguinal, scrotal and perineal nodular lesions which were refractory to systemic and local traditional therapy. The patient was affected from the age of 23 years, and a colonoscopy excluded Crohn's disease. Laboratory investigation and chest X-ray excluded contraindications for the treatment with infliximab. Due to the presence of a suppurative *Escherichia coli* infection of the inflammatory nodules, we decided to treat the patient with systemic antibiotics (amoxicillin and clavulanic acid, 1 g twice a day) 10 days before starting infliximab infusion. Infliximab treatment was initiated at a dose of 5 mg/kg on weeks 0, 2 and 6. Since the patient did not present improvement after week 12 following the first infusion, the treatment



Fig. 1. (A) Nodular lesions in the inguinal region. (B) Clinical improvement after treatment with infliximab.

was not continued. Clinical examination revealed the presence of multiple confluent and suppurative inflammatory nodules of the perineum and perianal region, associated with erythema and induration of the scrotum and groin. Due to resistance to all medical treatments, the patient was admitted to the plastic surgery department for a surgical treatment.

## DISCUSSION

Acne inversa is a chronic inflammatory disease involving the apocrine-gland-bearing areas of the body. Although the aetiology and pathogenesis are still unknown, the association with Crohn's disease suggests the inflammatory nature of the pathology (3). In fact, in the first phase the occluding-spongiform infundibulofolliculitis induces dilatation of the follicle, followed by its rupture and leakage of contents into the surrounding dermis, with an inflammatory cell infiltrate (4). In the chronic phase of the disease granuloma with giant cells may be seen (5) and tumour necrosis factor alpha (TNF- $\alpha$ ), a pro-inflammatory cytokine, plays a central role. Infliximab is a chimeric monoclonal antibody that inhibits TNF- $\alpha$  and is used to treat inflammatory diseases, such as Crohn's disease, psoriasis, rheumatoid arthritis and other immune-mediated pathologies. Infliximab has been used successfully in other dermatological diseases, such as Behçet's disease, SAPHO syndrome (synovitis, acne, pustulosis, hyperostosis, osteitis), sarcoidosis, subcorneal pustular dermatosis, Sweet's syndrome, toxic epidermal necrolysis, Wegener's granulomatosis and acne inversa (6).

Several cases of patients affected by acne inversa associated with Crohn's disease and treated successfully with infliximab have been reported in the literature (7–10). More recently Scheinfeld (11) and Moul & Korman (12) have reported on the treatment of acne inversa with adalimumab, while Cusack & Buckley (13) and Handerson (14) reported the efficacy of etanercept.

Although the pathogenesis of acne inversa is not well understood, successful case reports of patients with acne inversa responding to treatment with anti-TNF- $\alpha$  suggest that there is an inflammatory component that supports the chronic evolution of the disease.

However, there is the possibility of resistance (15), as for the other dermatological diseases treated with

anti-TNF- $\alpha$  therapy. Further research is necessary to establish anti-TNF- $\alpha$  therapy as a treatment option for patients with severe and recalcitrant acne inversa.

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