Treatment of severe recalcitrant hidradenitis suppurativa with adalimumab

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Summary
Hidradenitis suppurativa is a chronic inflammatory skin disease featuring inflammatory nodules, fistulas and discharge of secretions in the intertriginous regions. Without therapy the disease is chronic and progressive. The most effective treatment is the radical wide excision of the affected areas. Systemic antibiotics, immunosuppressants, oral retinoids or antian- drogens have limited beneficial effects. TNF-α antagonists may represent a new therapeutic approach for patients suffering from severe hidradenitis suppurativa offering promising positive influence on the outcome of the disease. In contrast to infliximab and etanercept, there are only few reports describing the use of adalimumab in severe hidradenitis suppurativa. Here we report a case of a patient with severe recalcitrant hidradenitis suppurativa successfully treated with adalimumab.

Keywords
hidradenitis suppurativa – adalimumab – therapy

Introduction
Hidradenitis suppurativa is a chronic inflammatory skin disease featuring abscesses, fistulas and scarring predominantly in the intertriginous regions. The multitude of hypotheses on pathogenesis has recently been summarized by Meixner et al. [1]. Treatment in the initial phases of the disease usually consists of topical antiseptic measures; in more advanced stages topical and systemic conservative therapies are generally of limited success. In the literature surgical therapy is recommended as treatment of choice with the goal of complete excision, if possible at an early stage [2]. Tumor necrosis factor α antagonists (TNF-α antagonists) represent a new therapeutic option for patients with severe recalcitrant hidradenitis suppurativa. To date primarily the chimeric TNF-α antibody infliximab (Remicade®) as well as etanercept (Enbrel®), a fusion protein with soluble TNF-α receptor function, have been employed [1, 3, 4]. We successfully treated a patient with adalimumab (Humira®), a human monoclonal antibody targeted against TNF-α; only few case reports on this use have been published [5, 6].

Case report
History
A 32-year-old man (175 cm/ 83 kg) had suffered from severe hidradenitis suppurativa bilaterally in the inguinal, genital and axillary regions with recurrent abscess formation for the past 12 years. He had experienced severe acne conglobata on his back, face and chest for about 20 years. He smoked about 20 cigarettes daily. Previous systemic and topical therapies with multiple systemic antibiotics, topical antiseptics and incision and drainage of inguinal and axillary sites resulted in only limited improvement. Systemic therapy with isotretinoin was discontinued due to muscle pain, inadequate response and the formation of a deep anal fistula. The patient presented with recalcitrant hidradenitis suppurativa and another exacerbation. The quality of life of the young patient was severely restricted especially due to severe pain.

Clinical findings
In the inguinal region, on the medial aspect of the thighs and on the mons pubis, he had sinus tracts some of which were spontaneously discharging pus. In addition, erythema extended onto his abdomen. Edema with erythema, sinus tracts and highly inflamed papules were observed over the sternum (Figure 1). Non-inflammatory scarring was seen in both axillae following incision and drainage. The scrotum and penis were edematous.

Bacteriology
Bacteria of the physiologic resident flora were cultured from the abdomen as well as on the medial aspect of the left thigh.

Disease course
After comprehensive information and exclusion of latent tuberculosis (tuberculin test QuantiFERON® test, chest x-ray) the patient was treated initially once with 80 mg adalimumab subcutaneously, thereafter with 40 mg once weekly. Within six weeks there was a good reduction in inflammatory activity with regression of erythema, pain, pus secretion as well as flattening of indurated erythema. The patient presented at regular intervals in our outpatient department for control visits. He had remained under good control for six months on this regimen (Figure 2).

Discussion
Hidradenitis suppurativa in its severe form can be a disabling disease. The quality of life of those affected is severely reduced; often patients are unemployed...
The disease has a multifactorial background; pathomechanisms are unclear at present. Contributing factors in addition to familial occurrence are smoking and obesity. The treatment of choice is early surgical intervention with the excision of involved tissue [1, 2]. Conservative measures as treatment options as well as preoperative treatment with the goal of reducing inflammatory activity include systemic antibiotics, topical antiseptics and cryotherapy [2]. Retinoids such as isotretinoin and antiandrogens such as 5α-reductase inhibitors, as well as dapsone and cyclosporine, have been tried with moderate to good success [2, 7]. The development of TNF-α antagonists opened up a further conservative treatment approach. The proinflammatory cytokine TNF-α apparently plays a role in the chronic inflammatory reaction in hidradenitis suppurativa. Several case reports have been published showing promising responses of hidradenitis suppurativa to infliximab and etanercept. Only two case reports exist on the use of adalimumab [5, 6]. As in our case these two patients responded excellently with regression of erythema in part within six weeks after start of treatment. Adalimumab, a human monoclonal antibody targeted to TNF-α, is licensed an adults for the treatment of active rheumatoid arthritis, ankylosing spondylitis, active and progressive psoriatic arthritis, and Crohn disease as well as recently for the treatment of moderate to severe psoriasis. In psoriasis it is administered subcutaneously in a dosage of initially 80 mg in the first week of treatment and subsequently 40 mg every other week in long-term therapy. Due to severe nature of his disease, our patient received adalimumab at a higher dosage of initially 80 mg subcutaneously followed by 40 mg once weekly. As with other TNF-α antagonists, the special risk of impaired immune response with the development of severe infections as well as reactivation of latent tuberculosis and autoimmunity exists [7, 8]. There is also a possible increased risk of developing lymphoproliferative disease during therapy with TNF-α antagonists. Therefore, the decision to treat hidradenitis suppurativa with adalimumab should not be made lightly and the course closely monitored. Furthermore, this constitutes an “off-label” use with expected legal considerations. Comprehensive counseling of the patient with regards to the side effects as well as routine clinical and laboratory controls are necessary to prevent severe infections and other complications. In addition to the TNF-α antagonists such as etanercept and infliximab used to treat recalcitrant hidradenitis suppurativa, adalimumab offers a further conservative therapy option that might help avoid surgery or can be administered preoperatively in the sense of “down-staging”.

Conflicts of interest
None.

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