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Ustekinumab in the Management of Hidradenitis Suppurativa: A Retrospective Study

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INTRODUCTION

Hidradenitis suppurativa (HS) is a chronic, inflammatory skin disease characterized by the formation of recurrent abscesses in apocrine-bearing areas.[1] In advanced stages, chronic inflammation leads to sinus tract formation and cicatrization.[1] It is a debilitating condition that can have a significant impact on quality of life.[2] The estimated prevalence is 1–4%.[3] Genetics, smoking, and increased body mass index are known risk factors, however, the pathogenesis of HS is still poorly understood.[1] Clinical and scientific evidence suggests strongly that HS is a disease of immune dysregulation.

The British Association of Dermatology (BAD) guidelines and European HS guidelines recommend multiple medical treatments including antibiotics and immunosuppressive agents, which are used as monotherapy or in combination with surgical intervention. Adalimumab and infliximab are the two biologic agents recommended for use in HS.[1,4]These agents have provided valuable options for patients with severe refractory disease, however, for a considerable number of patients TNF-α inhibitors are ineffective. Recent research has sought to identify additional treatment options that target cytokines central to the HS cascade.

IL-23 and IL-12 are abundantly expressed in HS skin.[5] Positive responses to ustekinumab, a monoclonal antibody directed against IL-12 and IL-23, have been reported in patients with moderate-to-severe HS. In a prospective uncontrolled study in which 17 patients with Hurley stage II and III HS received either 45mg or 90mg of ustekinumab, a reduced Sartorius score ≥50% was demonstrated in 35% of patients at week 40.[6]

The aim of our study was to evaluate the response, tolerability, and drug survival of ustekinumab in a HS population. We conducted a retrospective review of patients treated with ustekinumab at a specialist HS clinic. The inclusion criterium was all patients treated with ustekinumab having attended one follow up appointment.

Sixteen patients received ustekinumab between January 2017 and September 2020. Twelve (75%) were female. The mean age commencing ustekinumab was 37 (range, 22–70) and mean weight was 102kg (56–169kg). All patients had moderate-to-severe HS as graded by Hurley stage 2 (25%) or 3 (75%). Eight were current smokers, 4 ex-smokers. Comorbidities included depression (n=5), Crohn's disease (n=3), pyoderma gangrenosum (n=2), and psoriasis (n=2).

All patients had failed first-line treatments as outlined by the BAD HS guidelines. Prior treatments included: tetracycline 100% (n=16), clindamycin and rifampicin 69% (n=11), metformin 69% (n=11), dapsone 50% (n=8), liraglutide 25% (n=4), anakinra 25% (n=4), and spironolactone 12.5% (n=2). All (n=16) had failed adalimumab as monotherapy and 56% (n=9) failed infliximab. Three commenced ustekinumab for management of co-existing Crohn's disease.

All patients were reviewed by a consultant dermatologist with a specialist interest in HS. Subjective clinical improvement was seen in 9 (56%). Improvement was recorded by the reviewing dermatologist and was defined as reduced flare count and improvement in patient quality of life (QoL). Flare counts were patient reported and based on an increased symptoms and formation of new lesions. Improvement in QoL was measured using the Dermatology Life Quality Index (DLQI). Responders had moderate to severe disease: eight patients with Hurley stage III and one patient with Hurley stage II.

No clinical improvement was documented in 4 (25%). The remaining three (19%) commenced ustekinumab for management of co-existing Crohn's disease. All three of these patients maintained good control of HS following a switch from adalimumab to ustekinumab. The mean pre-treatment DLQI was 16.6 (range, 1–25) and mean follow-up DLQI was 10.25 (range, 1–27).

The mean duration of treatment was 16 months. Drug survival at 6-,12-, 24-, and 36 months was 94% (15/16), 61% (8/13), 50% (4/8),

TABLE 1.

Drug Survival of Ustekinumab	
6 months	94% (15/16)
12 months	61% (8/13)
24 months	50% (4/8)
36 months	33% (2/6)

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and 33% (2/6), respectively. Eight patients (50%) discontinued treatment for the following reasons: primary failure (n=3), secondary failure (n=1), suboptimal clinical improvement (n=2), recurrent infections (n=1), and quiescent Crohn's disease (n=1).

The treatment of HS is challenging and there is a paucity of effective therapeutic options for patients with moderate-to-severe disease. This retrospective chart review found ustekinumab to be an effective and safe option for patients with refractory HS and for patients with co-existing HS and Crohn's disease. Adverse effects and complications lead to treatment withdrawal in one patient. This is an uncontrolled, retrospective review with a small sample size. Further prospective studies using validated assessment tools are warranted to establish the place of ustekinumab in the current treatment armamentarium for HS.

DISCLOSURES

B.K. conducts clinical trials for AbbVie, Almirall, Merck Sharpe & Dohme, Novartis, and UCB Pharma. B.K. is in receipt of research grants from AbbVie, Janssen, and Almirall; he has acted as a consultant and/or speaker for AbbVie, Almirall, Janssen, LEO Pharma, Lilly, Novartis, and UCB.

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