

# Patient journey from referral to biologic in hidradenitis suppurativa

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## Introduction

Hidradenitis suppurativa (HS) is a chronic inflammatory disorder of the pilosebaceous units affecting 1-4% of the population<sup>1</sup>. It is characterised by comedones, nodules, cysts, sinus tracts and scarring in the axillae, groin and inframammary folds<sup>1</sup>. HS is complicated by its association with metabolic syndrome, psychological morbidity and diagnostic delay<sup>1</sup>. Therapeutic options are limited with antibiotics, acitretin, dapsone, spironolactone and hypoglycaemic agents<sup>2</sup>. Adalimumab and infliximab are the only currently recommended biologics for patients with moderate to severe disease<sup>2</sup>. Recently, a window of opportunity for intervention with adalimumab has been proposed advocating for earlier more aggressive systemic treatment of patients with HS to deliver better outcomes<sup>3</sup>. As patients progress from Hurley stage 1 disease to Hurley stage 2/3 with the formation of sinus tracts and scarring becoming more confluent, it follows that ongoing tissue destruction results in more difficult to control disease and poorer outcomes<sup>4</sup>.



## Aims/Methods

We completed a retrospective cohort study reviewing all patients on a biologic for HS attending two dermatology departments in the Belfast Health and Social Care Trust (BHSC). In our Trust, patients with moderate to severe disease who have failed a conventional systemic therapy may be offered adalimumab as per the National Institute of Health and Care Excellence (NICE) guidelines<sup>5</sup>. Patients may be offered infliximab on the basis of an individual funding request.

Our aim was to evaluate patient journey from referral to commencement and beyond including assessment of prior and concurrent treatments. Patients were identified for inclusion using the BHSC biologics database from June 2004 to Sept 2020 with data collection by chart and electronic care record review.

## Results

We identified 33 patients (20 female, 13 male) varying in age from 20 to 70 years. 17 patients were current smokers, 9 ex-smokers and average weight was 89.1kg (median 89; IQR 26.15). The common co-morbidities in our cohort were depression/anxiety (n=11), follicular occlusion (n=9), asthma/COPD (n=7), psoriasis (n=6), inflammatory bowel disease (n=4) and spondyloarthropathy (n=4). 26 patients were on adalimumab and 7 on infliximab. Three patients switched to infliximab following primary failure to adalimumab and one patient switched treatment due to an injection site reaction. Two patients on adalimumab had a history of Crohn's disease with prior infliximab failure. One patient stopped adalimumab following a diagnosis of metastatic colorectal cancer and a further patient due to numbness/tingling with no neurological cause identified.

- Mean age of disease onset was **29.5 years** (median 34; IQR 18)
- Average time from disease onset to first dermatology review was **7.6 years** (median 5; IQR 8.25)
- Mean time from initial dermatology consultation to commencement of a biologic was **34.8 months** (median 23; IQR 38) [32.9 months (median 29; IQR 25.75) with patients commenced prior to NICE approval excluded]

- Average **5 treatments** trialled prior to a biologic (antimicrobials, oral retinoids, dapsone, metformin, spironolactone and zinc)
- **Seven patients upstaged** from Hurley stage 2 to stage 3 from their initial consultation to starting their biologic



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- 21 patients received concurrent systemic therapy due to ongoing flares with 38% (n=8) reporting benefit with the addition of lymecycline, doxycycline and rifampicin/clindamycin from month 4 to month 12
- No additional benefit reported with metformin, spironolactone, acitretin, dapsone and topical agents
- Patients remained on adalimumab for an average 35.6 months (median 29; IQR 31.5)
- Patients remained on infliximab for an average 41.6 months (median 34; IQR 41)
- 48% improvement in dermatology life quality index (DLQI) from a baseline of 23.5 reducing to 12.2 at their most recent visit on treatment

## Discussion

Our review highlights the important issues of **diagnostic and therapeutic delay** in the care of patients with HS. Patients had suffered with their disease for an average 7.6 years prior to dermatology review similar to previous reports<sup>6</sup>. There is an under-recognition of HS in other specialties, social stigma and embarrassment associated with the disease and socio-economic barriers to care<sup>6-8</sup>. Patients received an average 5 treatments from their general practitioner and dermatologist prior to a biologic and seven patients (21.2%) upstaged their disease in the 34.8 months prior to commencement. The addition of concurrent systemic treatment in our cohort conferred benefit in 38% of patients. An almost 50% improvement was reported by patients on adalimumab and infliximab in keeping with previous studies<sup>9</sup>. The limitations to our study are its retrospective nature and lack of controls for patients with HS not on a biologic agent. Management of HS remains a challenge with multi-disciplinary input required including smoking cessation services, clinical psychology, dietetics, weight management, general and plastic surgeons and dermatologists. We propose that biologic drugs should be considered earlier in this disease to anticipate progression and minimise disease burden.

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