Use of biological treatments in patients with hidradenitis suppurativa

Gemma Martín-Ezquerra* (1), Emili Masferrer* (1), Marta Ferran (1), M. Sánchez-Regaña (2), Helena Collgros (2), Xavi Bordas (3), Jaume Notario (3), Mercè Alsina (4), Immaculada Gil (5), Noelia Izquierdo (6), Glòria Aparicio (7), Jordi Mollet (7), Vicente Garcia-Patos (7), Agustí Toll-Abelló (1), Ramon M Pujol-Vallverdú (1)

(1) Dermatology, Hospital del Mar, Parc de Salut Mar, Barcelona. (2) Dermatology, Hospital Sagrat Cor, Barcelona. (3) Dermatology, Hospital de Bellvitge, Barcelona. (4) Dermatology, Hospital Clínic, Barcelona. (5) Dermatology, Hospital Sant Joan de Reus, Reus. (6) Dermatology, Hospital de Son Espases, Palma de Mallorca. (7) Dermatology, Hospital de la Vall d'Hebron, Barcelona

*these two authors contributed equally to the writing of this paper

Introduction

Hidradenitis suppurativa (HS) is a chronic skin disease characterised by painful, recurring skin nodules and abscesses, most commonly in the axilla, groin and perianal and perineal areas, which develop into hypertrophic scars and fistulas. The condition has a very large impact on patients' quality of life. Many different treatments have been described for HS but systemic antibiotics, in monotherapy or in combination, are one of the mainstays of the treatment. Surgical drainage of the suppurating lesions or wide excision of the affected areas can be of benefit. Cases have been reported of response to dapsone, cyproterone, finasteride, retinoids and systemic immunosuppressants. Series of cases have recently been published with improvement using biological drugs.

Material and methods

A total of 18 patients diagnosed with HS who had received at least one biological treatment over the course of their condition were included. Epidemiological, clinical and laboratory data for all the patients were analysed retrospectively. A subjective assessment by both the physician and the patient of the effectiveness of the treatment was included.

Results

Table 1: shows the clinical and epidemiological characteristics of the patients included.

Gender	10 males and 8 females
Mean age (range)	24 (range 18-43)
Smoker	14 (77.7%)
Obesity	7/18 (38.8%)
Mean BMI (range)	29.5 (range 20.4-47.2)
Concomitant conditions	3 (16.6%) plaque psoriasis 2 (11.1%) rheumatoid arthritis 1 (0.6%) ankylosing spondylitis 1 (0.6%) Still's disease 1 (0.6%) SAPHO
Hurley Stage at start	II in 8/18 (44.4%) III in 10/18 (55.5%)
VAS mean pain	7.3
Mean CRP at start (range)	3.54 (0.54-12.72)

BMI: Body Mass Index; VAS: Visual Analogue Scale: CRP: C-Reactive Protein

The characteristics of the patients included are in accord with the associations previously described in the literature. **This condition is more common in smokers, patients have high BMI and it is associated with multiple rheumatic disorders.**

An important feature of the condition is that it causes chronic pain; **mean VAS (visual analogue scale) score was 7.3** prior to starting biological treatment.

Before starting biological treatment, all the patients had previously received some other treatment for HS, including: various courses of broad-spectrum antibiotics, in monotherapy (minocycline, cefalexin, clotrimazole) and in combination (cefalexin + rifampicin, rifampicin + clindamycin); oral retinoids; finasteride; and zinc gluconate, among others. In all cases, **surgical debridement had been required at least once**.

Table 2: shows the biological treatments tested and the responses.

First Biological tested	N	Time kept on drug (mean in months)	Not discontinued	Complete response	Partial improvement	Ineffective	Worsening
Adalimumab	8/18 (44.4%)	9	5/8 (62%)	0/8 (0%)	6/8 (75%)	2/8 (25%)	0/8 (0%)
Infliximab	7/18 (38.8%)*	13	3/7 (42%)	3/6 (50%)	2/6 (33.3%)	0/6 (0%)	1/6 (16.6%)
Ustekinumab	2/18 (11.1%)	18	1/2 (50%)	1/2 (50%)	1/2 (50%)	0/2 (0%)	0/2 (0%)
Etanercept	1/18 (5.55%)	8	0/1 (0%)	0/1 (0%)	0/1 (0%)	1/8 (12.5%)	0/1 (0%)

Second Biological tested	N	Complete response	Partial improvement	Ineffective	Worsening
Adalimumab	3/6 (50%)	0/3 (0%)	1/3 (33.3%)	2/3 (66.6%)	0/3 (0%)
Infliximab	1/6 (38.8%)	0/1(0%)	1/1 (100%)	0/1 (0%)	0/1 (0%)
Ustekinumab	1/6 (11.1%)	0/1 (0%)	1/1 (100%)	0/1 (0%)	0/1 (0%)
Etanercept	1/6 (11.1%)	0/1 (0%)	0/1 (0%)	1/1 (100%)	0/1 (0%)

Third Biological tested	N	Complete response	Partial improvement	Ineffective	Worsening
Adalimumab	1/2 (%)	0/1 (0%)	1/1 (100%)	0/1 (0%)	0/1 (0%)
Infliximab	1/2 (38.8%)	0/1 (0%)	1/1 (100%)	0/1 (0%)	0/1 (0%)

**One case was not assessed due to having a severe reaction after the first infusion.*

The doses were in all cases the same as those used in psoriasis regimens.

In 7 cases, the first-line drug was not replaced and the patients have remained on it for periods ranging from 14 weeks (in the case of the patient most recently started on biological therapy) to 24 months.

The average VAS pain score during treatment with the first biological drug was 4. CRP during the treatment was 1.5.

In 6 cases, treatment was changed to a second-line biological agent, with adalimumab being used in 3 (two patients changing from infliximab and one from etanercept), infliximab in one, ustekinumab in one and etanercept in one. In three cases, there was no response and in another three, partial improvement was described. There were only two cases in which a third line was tested, one with adalimumab and the other with infliximab, and partial improvement was reported in both.

Discussion and conclusions

The cases reported in this series show that the use of biological drugs in our setting in patients with HS is indicated **in cases of severe disease** (high Hurley stages, presence of multiple lesions, high pain score, concomitant conditions and poor response to traditional treatments).

Response to treatment varies greatly; we found a reduction of 3 points on the VAS pain scale and a reduction in CRP.
In the majority of cases, the treating physician's assessment of response was "**partial improvement**", although worsening was described in one case.

The drug most used as first biological agent was adalimumab, followed by infliximab.

The lack of therapeutic guidelines for HS means there is no consensus on which drug to use. As a result, in our series, the decision was made on the basis of which drug was most appropriate for the patient's concomitant conditions (psoriasis, rheumatic disease); similar criteria were applied for the dosage, since the doses were those commonly used in dermatology or rheumatology. **The available literature supports the use of higher doses for the control of HS.**

Clinical trials need to be conducted which include traditional treatments and biological therapies in order to determine the effectiveness of both strategies in the treatment of a condition as complex as HS.

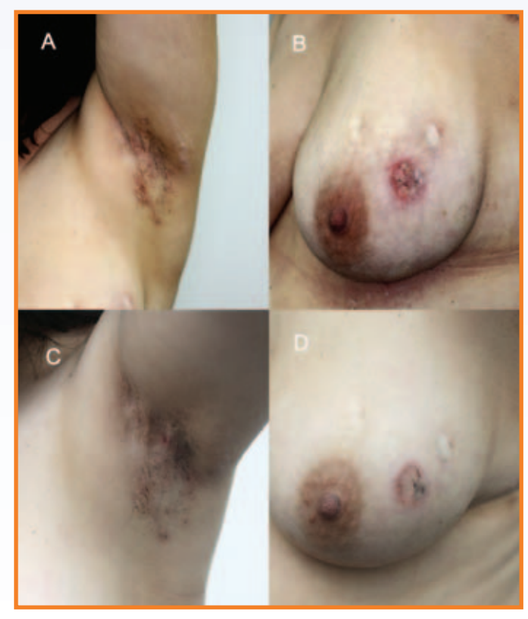

Figure 1: Patient with Stage III HS: prior to starting on biological treatment (A and B), fistulous areas and abscesses with inflammation can be seen in axilla, breast and skin under the breast; reduction in erythema and exudation can be seen after induction with adalimumab (C and D).

Hospital del Mar

Parc de Salut MAR Barcelona