



# THE ASCLEPION EFFECT

## Case Reports

- MeDioStar -

# Hair Removal for treatment of hidradenitis suppurativa with the Asclepion MeDioStar HC Laser

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## Introduction

Hidradenitis suppurativa (HS) or acne inverse is a chronic, recurrent, inflammatory disorder localized in the intertriginous areas such as the axillary, inguinal, perianal or inframammary region causing painful, fistulating sinus tract formation with malodorous purulence and hypertrophic scarring. Its prevalence is estimated up to 4%, and the disease is three times more likely to occur in women than men.

The major challenge is the choice of the optimal treatment. Options proposed based on the patient's disease severity include local wound care, antibiotics, hormone therapies, incision and drainage, limited or radical local excision or laser therapy up to immunosuppressive medication and biologics.

Regarding to pathogenesis of HS recent histopathologic studies suggest that the primary event in HS is an infundibular hyperkeratosis, hyperplasia of the follicular epithelium and perifollicular inflammation leading to an occlusion and subsequent rupture of the follicle.

These findings provide a rationale for the use of laser therapy in the early stages of the disease before sinus tracts, fistula and scarring formation occur.

## Case reports

Two patients with HS Hurley stage II (Hurley stage II = one or more abscesses widely separated with tract formation and scarring) on the axilla and one of the groin were included.

Both participants received seven treatments at month intervals with the Asclepion MeDioStar, a 810-nm diode laser. Settings were chosen based on Fitzpatrick skin-type (treatment parameters: spot size 12mm, fluence of 25 J/cm<sup>2</sup> for patient 1 and of 35 J/cm<sup>2</sup> for patient 2). Treatment response was scored using the hidradenitis suppurative score (HS-Score). This scoring system incorporates the anatomic regions involved, number and types of lesions involved, the distance between lesions and the presence of normal skin in between lesions.

## Results

In general the treatment was well tolerated by the patients. Due to Asclepion's contact-cooling hand piece pain and postoperative bruising was rare. No postoperative hyperpigmentation or scarring scars occurred as a result of treatment. Apart from the expected significant reduction in hair density the disease activity dramatically improved in the course of the treatment (see figures 1 and 2). During treatment and the follow-up period of 3 months up to now there was no need for antibiotics or operative treatment.

Doctor Bechara, in charge of a wide HS patient population at the Department of Dermatology at the Ruhr-University Bochum (Germany), states: "Hidradenitis suppurativa can significantly reduce the patients quality of life due to the pain and social embarrassment limiting daily and professional activities. Early diagnosis and specialist treatment may spare the patient years of struggling and radical operations. Laser epilation for example with the MeDioStar HC by Asclepion seems to be a promising treatment approach of mild to moderate cases of hidradenitis suppurativa with a low incidence of side effects. A prospective side-control study with long-term follow up is currently conducted at our dermatologic surgery unit. This will be the first long-term-follow-up study including a large cohort of patients regarding laser epilation as a treatment approach of hidradenitis suppurativa. We are really excited about the long term results!"

## References

1. Ralf Paus, L., Kurzen, H., Kurokawa, I., Jemec, G. B. E., Emtestam, L., Sellheyer, K., Giamarellos-Bourboulis, E. J., Nagy, I., Bechara, F. G., Sartorius, K., Lapins, J., Krahl, D., Altmeyer, P., Revuz, J. and Zouboulis, C. C. (2008), What causes hidradenitis suppurativa?. *Experimental Dermatology*; 17: 455-456.
2. Bechara FG, Hartschuh W. (2010), Acne inversa. *Hautarzt*; 61: 39-46.

## Figures:



**Fig. 1.**

Axilla: visible reduction of inflamed papules and nodules after laser epilation.

A:  
Before laser treatment  
(HS-score 15)

B:  
After 7 laser treatments  
(HS-score 2)



**Fig. 2.**

Groin: visible reduction of inflamed papules and nodules after laser epilation.

A:  
Before laser treatment  
(HS-score 14)

B:  
After 7 laser treatments  
(HS-score 3)

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