Hidradenitis Suppurativa: The Disease Which Stimulates Researchers and Clinicians

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Hidradenitis suppurativa (HS) is a chronic inflammatory skin disease of relapsing nature presenting with abscesses, nodules, and suppurating lesions mainly located in the intertriginous areas of the skin. Although there are divergent data coming from epidemiological studies, it is suggested that the disease affects around 1% of the general population [1]. HS is frequently misdiagnosed, especially in its early stages. A multicenter study clearly pointed out a 7.2-year delay in the correct diagnosis of HS. On average, the patients visit four physicians to have the final diagnosis established [2]. Patients suffer from pain and itch [3]. Moreover, HS is associated with comorbid diseases, named immune-mediated inflammatory disorders, such as colitis ulcerosa, Crohn's disease, seronegative arthritis, or pyoderma gangrenosum. Clinical manifestation, subjective symptoms, and malodor all contribute together to the profound burden of the disease. The quality of life in HS patients is heavily decreased; patients are stigmatized and develop secondary psychiatric disorders such as depression and anxiety, resulting in an increased risk of suicide [4]. The financial burden affects not only

the sick individual, but also the whole family. The etio-pathogenesis of HS is not completely clear; it is multifactorial with several factors (i.e., genetic predisposition, hormonal and environmental ones) contributing to disease development and exacerbation. The complex nature of HS is a challenge for clinicians in the diagnostic process, assessing the disease severity and therapeutic approach. During recent years there has been huge progress in the treatment of HS, but effective treatment options still remain very limited [5]. We do think that HS represents one of the most important disease with unmet needs in the whole field of dermatology.

Almost three decades ago, when one of us (J.C.S.) began his career in dermatology, there was almost no interest in HS. The recurrent, suppurative, debilitating nature of HS with only few therapeutic options, quite commonly not satisfactory both for physicians and patients, created the atmosphere of undesirable disease in our daily clinical practice. That time only a few research groups concentrated on studies on the pathogenesis, clinical aspects, and therapeutic modalities in HS. Less than ten papers per year dealing with HS topics were published in the medical international literature. Nowadays, the situation is completely different. Due to new techniques in basic science allowing deeply studying the pathogenesis of HS,

Fig. 1. The annual total number of publications on hidradenitis suppurativa/acne inversa in PubMed increased rapidly from 2013 to 2019.

introducing new, more effective therapeutic options, we have recently observed an enormous increase in HS interest within the medical community. This became clear when we looked at the number of published papers (searched in PubMed with the key words: “hidradenitis suppurativa” and “acne inversa”) during the last years. In 2013, this number for the first time reached 100 publications, in 2018 there were almost 400 papers published, and until December 2019 almost 500 scientific contributions were recorded in the PubMed database (Fig. 1).

It is important to underline that in 2005 the Hidradenitis Suppurativa Foundation, Inc. was created and in 2012 the European experts on HS decided to begin the European Hidradenitis Suppurativa Foundation (EHSF). Both those organizations grouped researchers and clinicians devoted to the field of HS and definitely stimulated basic and clinical studies in HS. In February 2018 we had the pleasure to welcome in Wrocław, Poland HS experts from not only European countries, but also from the USA, Canada, Chile, China, and India for the 8th EHSF Conference. For the first time in the history of EHSF Conferences more than 400 participants created the atmosphere of an HS European celebration. During the three days of the meeting the plenary lectures were grouped into 14 scientific sessions. Moreover, 57 poster communications were presented. The 8th EHSF Conference was preceded by the European Academy of Dermatology and Venereology HS/Acne Inversa Course for specialists and residents in dermatology. Looking at the success of the above-mentioned conference and course, we are pleased that now we, a so numerous European group, work together to understand the interdisciplinary character of HS, and we are sure that all those efforts will result in increasingly better care for HS patients in the near future.

It is our honor to invite you to this special issue of *Dermatology*, which is composed of papers prepared based on communications presented during the 8th EHSF Conference in Wrocław, Poland. We acknowledge Editor-in-Chief Prof. Dr. Gregor Jemec, world-class expert in HS, for creating this unique platform to present and discuss the hot topics in HS research. In this special issue you will find papers dealing with different aspects of HS. We would like to draw your attention to two papers focusing on the psychosocial burden of HS [6, 7]. Only a few years ago itch was reported and characterized in detail in HS [3, 8]. Here, we have the direct confirmation that both itch and malodor are important factors worsening the quality of life of HS patients. Interestingly, the authors documented that itch and malodor were linked with slightly different aspects of HS [6]. HS with its signs and symptoms, located frequently in anogenital areas, has a significant influence on patients’ sexuality. Cuenca-Barrales and Molina-Leyva [7] showed that more than 50% of female HS patients presented with sexual dysfunction and that 60% of males with HS had erectile problems. Several scoring systems to assess the clinical severity of HS exist. Our group studied the interrater and intrarater reliability of the main HS scoring systems to answer the question whether residents in dermatology could adequately evaluate HS severity [9]. It seems crucial to educate our young colleagues on the most useful assessment tools for this disease. The treatment of HS is difficult, requires a holistic approach, and depends on clinical manifestation and staging of the disease. More than two decades ago biological agents were registered in selected immune-mediated inflammatory disorders. However, the first biological drug – adalimumab – was approved for HS patients by

regulatory authorities only a few years ago. This year we reviewed the literature on biologics in HS, showing that many biological agents may be promising for HS patients and several new drugs are under development for this indication [10]. Moreover, it seems that individualized therapy for special groups of patients and/or special types of HS will be required. This is discussed by Zouboulis et al. [11], who propose dose intensification of adalimumab for recalcitrant HS. We also read with great interest a report on a series of HS patients controlled with ustekinumab [12]. Despite the newest therapeutics, we should also remember older modalities, such as intralesional injections of triamcinolone, which appeared beneficial for fistulous tracts in HS [13]. It is well known that disturbance in iron metabolism is associated with proinflammatory activation in many chronic diseases. To the best of our knowledge, the deranged iron status in HS patients was reported for the first time by Ponikowska et al. [14]. This could play a role in the inflammatory pathogenesis of HS. Katoulis et al. [15] discussed the role of increased colonization of HS patients with *Staphylococcus aureus*. They demonstrated that one-fourth of HS patients were colonized with *S. aureus* and that more than one-third of the strains were methicillin-resistant ones. The authors underlined the need for further microbiological studies in HS to clarify the clinical significance of their findings.

In summary, we hope that you, as we did, will enjoy reading papers in this special issue of *Dermatology*. We are sure that we will all meet again soon in Athens in 2020 for the next EHSF Conference to discuss new research results in HS and exchange our experience.

Key Message

HS is still a disease of unclear nature, integrating the research community for further extensive scientific investigations.

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