Can hydradenitis suppurativa be associated with inflammatory joint involvement? Report of a case series and review of the literature

Dario Graceffa,[1] Martina Silvestri,[1] Norma Cameli,[1] Viviana Lora,[1] Antonio Cristaudo,[1] Claudio Bonifati,[1] Carlo Cota,[2] Pier Luigi Saraceni[1]

[1]Clinical Dermatology, San Gallicano Dermatological Institute, Rome; [2]Dermatopathology Research Unit, San Gallicano Dermatological Institute, Rome, Italy

Dear Editor,

Hidradenitis suppurativa (HS) or acne inversus, is a chronic inflammatory cutaneous disease with a significant negative impact on the patient's quality of life, from a psychological, social and occupational point of view. The disease mainly affects the female sex and occurs between puberty and 40 years of age. It is estimated that in Europe the prevalence of the disease in the general population is 1%.[1]

Recent studies have shown a high incidence of inflammatory arthritis, in particular spondyloarthritis, in patients with HS.[2]

In this report, we present 18 cases of patients with hidradenitis suppurativa, visited at the San Gallicano Dermatological Institute, who presented joint symptoms.

Twenty-nine patients (21 F; 8 M) with hidradenitis suppurativa visited the San Gallicano Dermatological Institute from September 2021 to June 2022. They had a mean age of 24,5 years (range 16–64 years) and the average age at disease onset was 19 years. Two patients presented family history of hidradenitis suppurativa. The anatomical areas mainly involved were the axillary, groin and buttocks. Disease severity was assessed using the Hurley staging system, which has 3 distinct severity groups (stage I): single or multiple abscesses without fistulous tracts and scarring; stage II: recurrent abscesses with formation of fistulous tracts and scarring and single or multiple lesions with uninvolved skin between the lesions; stage III: total or semi-total involvement of the area with multiple interconnected fistulas and abscesses with no normal skin between lesions). Three patients had severe disease (stage III), eleven patients had moderate disease (stage II) and the remaining fifteen had mild disease (stage I). The following data were recorded for each patient: age at onset, BMI, presence of other inflammatory skin diseases other than HS, presence of diabetes, arterial hypertension, hyperlipidemia or other diseases, familiarity for HS. Joint symptoms and enthesis pain were found in eighteen subjects (12 F; 6 M). All patients with HS and who had joint disorders were evaluated by a rheumatologist and after a careful clinical examination underwent ultrasound assessment. Five patients were diagnosed with active synovitis (2 F; 3 M), five patients presented active enthesitis (3 F; 2 M), and the remaining eight patients had both synovitis and enthesitis (7 F; 1 M). Synovitis predominantly involved the metacarpophalangeal, proximal interphalangeal joints, and the wrists. Enthesitis was found on elbows at the common extensor tendon origin from the lateral epicondyle of the elbows and on Achilles tendons inertions. Mean baseline pain and fatigue numeric rating scale (NRS) scores were 4.3 and 5.5, respectively.

The association between HS and inflammatory rheumatological disease has been previously demonstrated. A meta-analysis of 200,361 patients with HS illustrated an increased risk of spondyloarthritis, rheumatoid arthritis (RA), ankylosing spondylitis (AS).[2]

Previous studies show inflammatory arthritis to be more common in patients with severe HS; in particular, the prevalence of rheumatoid arthritis, psoriatic arthritis and other forms of synovitis could be increased in individuals with severe HS than in those with milder disease.[3]

The pathogenetic mechanisms underlying the correlation between HS and inflammatory arthritis are not fully known, but the influence of genetic, immune, environmental and cytokine alterations is hypothesized. Rondags et al. evaluated the prevalence of of HS in patients with axial Spondyloarthritis (SpA) demonstrating that in patients affected by axial SpA, HS was more prevalent than in the general population (9.1% versus 0.053-4.1%).[4]

Van Straalen et al. investigated the prevalence of clinical enthesitis, the key feature of SpA, among 100 patients with HS: 53% of patients presented clinical signs of enthesitis in at least one enthesis. However, the prevalence of sonographic enthesitis was 25%; in fact, tenderness at entheseal sites has usually an unspecif-

Correspondence: Dario Graceffa, Clinical Dermatology, San Gallicano Dermatological Institute, via Elio Chianesi, 53, 00144, Rome, Italy.
E-mail: dario.graceffa@ifo.it

Contributions: all the authors made a substantive intellectual contribution, read and approved the final version of the manuscript and agreed to be accountable for all aspects of the work.

Conflict of interest: the authors declare that they have no competing interests, and all authors confirm accuracy.

Availability of data and materials: the data supporting the findings of this paper are available from the corresponding author upon reasonable request.

Received: 1 August 2023.
Accepted: 23 August 2023.

Licensee PAGEPress, Italy
Dermatology Reports 2024; 16:9815
doi:10.4081/dr.2024.9815

ic nature.[5] In our study the presence of synovitis and enthesitis was confirmed in all patients by ultrasound. The cited studies highlighted that the onset of skin manifestations in HS generally precedes joint symptoms by 1 to 20 years, therefore it is important to carefully assess, in patients with HS, symptoms indicative of inflammatory arthritis such as peripheral joint pain, morning stiffness and lower back pain.

In conclusion, report confirms the association between HS and joint inflammatory processes, such as synovitis and enthesitis; the overlap of these conditions can further reduce the quality of life of patients with HS.

References

1. Revuz JE, Canoui-Poitrine F, Wolkenstein P, et al. Prevalence and factors associated with hidradenitis suppurativa: results from two case-control studies. J Am Acad Dermatol 2008;59:596-601.
2. Almuhanna N, Finstad A, Alhusayen R. Association between Hidradenitis Suppurativa and Inflammatory Arthritis: A Systematic Review and Meta-Analysis. Dermatology 2021;237:740-747.
3. Kimball AB, Sundaram M, Gauthier G, et al. The co- morbidity burden of hidradenitis suppurativa in the United States: A claims data analysis. Dermatol Ther (Heidelb) 2018;8:557–69.
4. Rondags A, Arends S, Wink FR, et al. High prevalence of hidradenitis suppurativa symptoms in axial spondyloarthritis patients: A possible new extra-articular manifestation. Semin Arthritis Rheum 2019;48:611-617.
5. van Straalen KR, Boeren AMP, Wervers K, et al. High and discordant prevalences of clinical and sonographic enthesitis in patients with hidradenitis suppurativa. Br J Dermatol. 2020;183:763-765.