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Case reports

Non-Occupational Dermatological Diseases with Significant Professional Impact: Severe Hidradenitis Suppurativa as a Case-Based Illustration

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Abstract

Dermatological diseases should not be omitted as cause of functional impairment or reduced work capacity, even when they are not formally classified as occupational. Chronic inflammatory dermatoses may interfere substantially with professional activity through pain, mobility limitation, recurrent exacerbations, and psychosocial burden. Hidradenitis suppurativa (HS) is a paradigmatic example of a non-occupational skin disease with major implications for work ability and employment stability.

This article aims to highlight the occupational impact of severe HS through a detailed clinical case and to discuss workplace-related aggravating factors and management strategies relevant to occupational medicine. We present the case of a 46-year-old male with severe HS (Hurley stage III), integrating clinical, laboratory, histopathological, and occupational health assessments. Disease severity and burden were evaluated using the International Hidradenitis Suppurativa Severity Score System (IHS4) and the Dermatology Life Quality Index (DLQI). Despite multiple systemic treatments, disease control remained incomplete, with recurrent inflammatory flares requiring hospitalization.

Several occupational factors, including mechanical friction, heat, sweating, chemical exposure, and tobacco smoke, were identified as contributors to disease exacerbation. The condition resulted in marked work disability,

characterized by reduced work ability, absenteeism, presenteeism, and fear of job loss. This case underscores the importance of recognizing the professional impact of non-occupational dermatological diseases and supports the integration of occupational health strategies into the multidisciplinary management of hidradenitis suppurativa.

Keywords: *hidradenitis suppurativa, work ability, occupational impact, non-occupational dermatoses, occupational medicine.*

Introduction

Dermatological diseases constitute a heterogeneous group of conditions that frequently affect individuals of working age and may significantly interfere with occupational performance. Even when not classified as occupational diseases, many chronic skin disorders are associated with pain, pruritus, functional limitation, visible lesions, and psychosocial distress, all of which can negatively influence work ability, productivity, and professional stability [1, 2]. As a result, dermatological conditions represent an important yet often underestimated cause of absenteeism, presenteeism, and reduced quality of professional life [1, 3].

In occupational medicine, classical work-related dermatoses—such as irritant or allergic contact dermatitis and occupational contact urticaria—are well recognized and extensively studied due to their clear causal relationship with workplace exposures. In contrast, non-occupational dermatological diseases with substantial professional consequences have received comparatively less attention, despite growing evidence that they may impose significant functional restrictions and require workplace adaptation [1, 4].

Hidradenitis suppurativa (HS) is a chronic, recurrent inflammatory disease of the pilosebaceous unit, characterized by painful nodules, abscesses, draining sinus tracts, and scarring, predominantly affecting intertriginous regions such as the axillae and groin [5, 6]. The disease typically begins in early adulthood, coinciding with the most active period of professional life. Beyond its clinical manifestations, HS is associated with profound impairment in quality of life, psychological well-being, and social functioning [3, 7].

An increasing number of studies have demonstrated that HS has a substantial impact on work ability, with affected individuals reporting higher rates of absenteeism, presenteeism, reduced income, and increased risk of unemployment compared with the general population [1, 2, 8, 9]. Although HS is not currently classified as an occupational disease, workplace-related factors—such as mechanical friction, heat, sweating, irritant exposures, and tobacco smoke—may exacerbate disease activity and contribute to cumulative functional impairment [1, 5].

The objective of this article is to illustrate the professional impact of severe hidradenitis suppurativa through a detailed clinical case and to discuss the relevance of occupational factors and interdisciplinary management strategies from the perspective of occupational medicine.

Case Study

A 46-year-old Caucasian male, active smoker, with no significant personal or familial history of dermatologic, metabolic, or autoinflammatory diseases, was evaluated for a severe, long-standing form of hidradenitis suppurativa. The patient reported disease onset more than ten years prior, with recurrent inflammatory flares that had progressively increased in both frequency and severity. At the time of assessment, the disease was classified as Hurley stage III, with an International Hidradenitis Suppurativa Severity Score System (IHS4) value of 39, corresponding to very severe disease, and a Dermatology Life Quality Index (DLQI) score of 21, indicating a marked impairment in quality of life and psychosocial functioning.

Clinical examination revealed multiple painful deep nodules, recurrent abscesses, extensive interconnected sinus tracts, and pronounced scarring in the axillary regions. During severe inflammatory episodes, vegetating, exophytic axillary lesions were observed, raising suspicion of a pyoderma gangrenosum–like inflammatory variant associated with advanced HS. The lesions were accompanied by pain, malodor, and functional limitation, significantly restricting upper-limb movement and daily activities.

Laboratory investigations demonstrated a chronic inflammatory profile, including anemia of inflammatory origin, elevated erythrocyte sedimentation rate (ESR) and C-reactive protein

(CRP), and leukocytosis with neutrophilia. Viral hepatitis screening was negative. Comprehensive gastrointestinal evaluation, including upper and lower endoscopy and abdominal computed tomography, excluded inflammatory bowel disease, malignancy, or other systemic conditions that could influence disease management.

Histopathological examination of an active axillary lesion revealed features characteristic of advanced hidradenitis suppurativa, including pseudoepitheliomatous hyperplasia of the epidermis and a dense mixed inflammatory infiltrate within the dermis, composed predominantly of neutrophils, lymphocytes, plasma cells, and histiocytes. These findings supported the diagnosis of chronic follicular rupture with persistent inflammatory activity.

Over a two-year period, the patient received multiple therapeutic interventions, including topical antiseptics, topical and systemic corticosteroids, dapsone, colchicine, and combination antibiotic therapy with clindamycin and rifampicin. Despite these treatments, disease control remained incomplete, with frequent exacerbations requiring hospitalization. Given the severity and refractory nature of the condition, initiation of anti–tumor necrosis factor alpha (anti–TNFα) therapy was proposed.

A detailed occupational history revealed several workplace-related exposures with potential relevance to disease exacerbation. The patient was employed as a seafarer, working onboard maritime vessels with prolonged periods at sea. His occupational activity involved repetitive upper-limb movements, resulting in sustained mechanical friction in the axillary regions. He worked in an environment with variable temperatures and limited ventilation, contributing to excessive sweating and moisture in intertriginous areas. Daily tasks included handling cleaning agents, leading to repeated exposure to irritant chemicals. The patient was exposed to tobacco smoke at the workplace, both actively and passively, as reported during occupational history taking.

The cumulative effect of severe disease and occupational exposures led to substantial professional impairment. The patient reported a progressive decline in work ability, recurrent episodes of absenteeism during disease flares, and frequent presenteeism due to persistent pain and restricted mobility. He expressed concern regarding job security and long-term employability, reflecting the broader occupational burden associated with severe HS.

Discussion

This case illustrates the complex interaction between a non-occupational dermatological disease and the professional environment, highlighting the significant occupational burden associated with severe hidradenitis suppurativa. HS is increasingly recognized as a condition characterized by cumulative life-course impairment, in which chronic inflammation, recurrent flares, and psychosocial distress progressively reduce functional capacity and professional participation [2, 10].

International studies consistently demonstrate that patients with HS exhibit significantly reduced work ability, as reflected by lower Work Ability Index scores, increased absenteeism and presenteeism, and a higher risk of unemployment compared with unaffected individuals [1, 2, 9]. These outcomes are driven by persistent pain, drainage, limited mobility, fatigue, and psychological comorbidities, all of which interfere with sustained occupational performance. The professional trajectory of the patient described in this report closely mirrors these findings.

A comparison with classical occupational dermatoses further emphasizes the relevance of HS from an occupational medicine perspective. In occupational contact urticaria, such as the cases described by Sano et al., a direct causal relationship between workplace exposure and disease onset can often be identified, and symptom improvement may occur following exposure avoidance or job modification [11]. In contrast, HS is not directly caused by occupational exposure and therefore does not meet current criteria for classification as an occupational disease. Nevertheless, workplace factors may play a crucial role in aggravating disease progression and perpetuating chronic inflammation.

Mechanical friction, heat, sweating, prolonged pressure, irritant chemical exposure, and tobacco smoke have all been implicated as aggravating factors in HS pathophysiology [1, 5]. These exposures may promote follicular occlusion, microtrauma, and sustained inflammatory responses, thereby increasing flare frequency and severity. The occupational profile of the patient presented incorporated multiple such factors, providing a plausible explanation for the difficulty in achieving long-term disease control despite appropriate medical therapy.

To contextualize these findings within the existing literature, a targeted search of major medical databases, including PubMed and Elsevier, was performed, focusing on studies addressing

hidradenitis suppurativa and occupational outcomes. While several publications document reduced work productivity, income loss, and increased unemployment among HS patients [1,2,8,9], detailed occupationally oriented case analyses remain limited. This relative scarcity of occupational medicine–focused HS reports contrasts with the growing recognition of HS as a disease with profound functional and socioeconomic consequences, underscoring the need for further research in this area.

Management of HS with significant occupational impact requires a multidisciplinary approach that extends beyond pharmacological treatment. Individualized workplace adaptations—such as reducing mechanical friction, improving ventilation, minimizing exposure to irritant substances, implementing ergonomic adjustments, and promoting smoking cessation—may play a critical role in reducing disease burden and preserving work ability [12]. Early involvement of occupational medicine specialists is essential to identify modifiable risk factors and to support sustained professional participation.

The main limitation of this report lies in its single-case design, which restricts generalizability. However, detailed case analyses provide valuable real-world insight into the occupational implications of severe HS and complement epidemiological data by illustrating the practical challenges faced by affected individuals.

Conclusions

Hidradenitis suppurativa is a chronic inflammatory skin disease with major professional and functional consequences, despite not being classified as an occupational disorder. Severe forms of HS can profoundly impair work ability through pain, restricted mobility, recurrent inflammatory flares, and psychosocial burden, leading to absenteeism, presenteeism, and increased risk of unemployment.

Occupational factors frequently act as disease aggravators, emphasizing the importance of early identification of workplace-related risks and timely implementation of appropriate adaptations. Integrating dermatological care with occupational medicine strategies is essential to reduce cumulative functional impairment, preserve employment, and improve long-term outcomes for patients with hidradenitis suppurativa.

References

1. Tzellos T, Zouboulis CC, Gulliver W, et al. Impact of hidradenitis suppurativa on work productivity. Br J Dermatol. 2019;181:758–765.
2. Marzano AV, Genovese G, Moltrasio C, et al. Unemployment in hidradenitis suppurativa: cumulative life-course impairment. Dermatology. 2024;240:181–188.
3. Kouris A, Platsidaki E, Christodoulou C, et al. Quality of life and psychosocial aspects in hidradenitis suppurativa. Dermatology. 2016;232:687–691.
4. Friedman AJ, Kirby JS. Impact of hidradenitis suppurativa on employment. Br J Dermatol. 2023;188:9–10.
5. Jemec GBE. Clinical practice. Hidradenitis suppurativa. N Engl J Med. 2012;366:158–164.
6. Ingram JR, Collier F, Brown D, et al. BAD guidelines for the management of hidradenitis suppurativa. Br J Dermatol. 2019;181:76–90.
7. Revuz JE. Hidradenitis suppurativa: a severe disease with substantial social burden. J Am Acad Dermatol. 2009;60:S33–S36.
8. Friedman AJ, Kirby JS. Professional life impact in hidradenitis suppurativa. Br J Dermatol. 2023;188:122–130.
9. Garg A, Kirby JS, Lavian J, Lin G, Strunk A. Work loss, indirect costs and income in hidradenitis suppurativa. Br J Dermatol. 2020;183:758–764.
10. Patel ZS, Hoffman LK, Buse DC, et al. Pain and psychological comorbidities in hidradenitis suppurativa. Curr Pain Headache Rep. 2020;24:1–7.
11. Sano A, Yagami A, Suzuki K, et al. Two Cases of Occupational Contact Urticaria Caused by Percutaneous Sensitization to Parvalbumin. Case Rep Dermatol. 2015 Aug 29;7(2):227-32. doi: 10.1159/000439080. Erratum in: Case Rep Dermatol. 2015 Nov 11;7(3):328.
12. Casseres RG, Prussick L, Cohen SR. Management of hidradenitis suppurativa in the workplace. Clin Cosmet Investig Dermatol. 2023;16:1–7.