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Case Report

Self-Inflicted Cutaneous Ulcers in the Context of Zoomorphic Hallucinations: A Case Report

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Abstract

Diagnosing skin ulcerations can be challenging, especially when accompanied by unusual clinical features and a complex medical history. We present the case of a 79-year-old woman who presented to our emergency care department with multiple large (some > 5 cm in diameter) skin ulcers affecting various areas of her body. The lesions were previously diagnosed as a multitude of dermatological diseases, including prurigo nodularis, granuloma annulare, bullous IgA dermatosis, and bullous pemphigoid. Consequently, she was prescribed treatments with systemic corticosteroids and azathioprine, but the lesions progressively worsened over the past two years.

Further investigation revealed a unique aspect: the patient's belief that small organisms emerged from the ulcers, leading to self-induced lesions through scratching and digging into the affected areas. Neurological and psychiatric evaluations confirmed the hallucinations, resulting in the implementation of psychological interventions alongside wound care and infection management. Biopsy results also suggested nonspecific ulceration, possibly exacerbated by repetitive mechanical trauma, with a potential diagnosis of acquired perforating collagenosis. Bandaging and psychological support facilitated gradual ulcer healing, indicating a favorable prognosis.

In conclusion, this case underscores the importance of thorough anamnesis and psychiatric evaluation in dermatological patients with difficult-to-define and refractory skin conditions. The complex relationship between dermatological manifestations, psychiatric symptoms, and patient perceptions requires identifying deliberate or unintentional acts of self-harm. Multidisciplinary approaches integrating dermatological, neurological, and psychiatric expertise are essential for effective treatment and patient recovery. Incorporating these comprehensive evaluations supports a holistic approach to patient care, addressing both the physical and psychological dimensions of the condition, ultimately enhancing the quality of care and improving patient outcomes.

Keywords: Factitial Dermatitis; Ulcers; Parkinson's Disease; Hallucinations

Abbreviations

DA: Dermatitis Artefacta; APC: Acquired Reactive Perforating Collagenosis

Introduction

Dermatitis artefacta (DA), also referred to as factitial dermatitis, involves self-induced skin damage to fulfill an emotional need, whether consciously or unconsciously [1]. It is important to differentiate DA from malingering, where skin damage may be caused for the purpose of gaining external benefits [2–4]. The dermatologic clinical features of DA vary widely, typically manifesting as non-distinctive cutaneous lesions that pose a diagnostic challenge due to their inability to fit into a specific disease category. These lesions often arise on normal-appearing skin and can range from erythematous plaques, excoriations with lichenification and hyperpigmentation, to burns, purpura, or ecchymosis. More severe presentations may often include ulcers and lesions mimicking pyoderma gangrenosum [5-8]. DA is believed to be more common than reported because it often goes unrecognized, with patients typically not admitting to causing their own cutaneous lesions. Additionally, diagnosing DA is exceedingly challenging when dealing with patients who have multiple comorbidities, complex medical histories, and non-specific lesions. Therefore, conducting a thorough medical history and closely observing the patient's behavior are imperative. It is crucial to recognize that patients may display unusual and sometimes unintentional self-harm behaviors that can lead to severe wounds. Although DA may be suspected during the initial consultation, it is crucial to employ a detailed differential diagnosis before confirming the diagnosis. DA is typically a diagnosis of exclusion, and therefore other potential conditions must be thoroughly considered and ruled out.

Case Report

We present the case of a 79-year-old female patient who presented to the emergency room for multiple severely ulcerated and pruritic skin lesions, affecting the anterior aspect of the trunk and lower extremities.

The patient was known to have a personal history of depression, chronic obstructive pulmonary disease, allergic asthma, heart failure NYHA class II, type 2 diabetes, Parkinson's disease, pulmonary embolism and a previous cerebral infarction. From the medication regimen, we highlight the administration of lorazepam and levodopa.

The physical examination revealed the presence of multiple well-demarcated, oval-round ulcers, with surrounding erythema, disseminated only in accessible parts of the body, such as the lower extremities, chest, periumbilical region, scalp, front of the neck, and forearms. Exposed tendons, granulation tissue and fibrinous exudate were present within the ulcers. There was no purulent drainage from any of the ulcers. While some of the erosions were recent and had minimal serous leaking, many of them were older scars that indicated previously healed-up lesions.

During anamnesis, the patient stated that the lesions had developed over the course of the past 2 years. She also reported the presence of small organisms coming out of the ulcers and admitted to picking at the lesions. In addition, she presented us some indurated, oxidized skin fragments and detritus, which she believed to be insects consuming her tissue. Moreover, she alleged experiencing severe pruritus.

Upon presentation, the patient had previously sought medical attention at other healthcare facilities. She was firstly diagnosed with granuloma annulare and received treatment with dermatocorticoids. Subsequently, she was diagnosed with prurigo nodularis for which she was prescribed antihistamines and topical corticosteroids. Furthermore, she was then suspected of bullous pemphigoid and linear IgA bullous dermatosis for which she underwent treatment with oral corticosteroids, doxycycline and azathioprine. Eventually, the patient underwent a biopsy that revealed lichen simplex chronicus, for which she received treatment with high-potency topical corticosteroids. Despite these prior treatments, the lesions persisted.

During hospitalization, we repeated the punch-biopsy which this time indicated nonspecific ulceration, possibly exacerbated by repetitive mechanical trauma, with a potential diagnosis of acquired perforating collagenosis. The skin fragment included central ulceration, covered by fibrino-leukocytic and necrotic detritus which incorporated vertically oriented basophilic collagen fibers with focal extrusions through the epidermis. Adjacent hyperkeratosis and hypergranulosis and minimal superficial

dermal lymphohistiocytic infiltrate on a fibrotic background were seen. There was no evidence of leukocytoclastic vasculitis or other significant pathological changes.

The patient was initially managed with both systemic and topical treatment. For the purpose of ruling out the possibility of prurigo nodularis, we emplyed anti-parasitic treatment with oral ivermectin. Wound care included topical antiseptics such as 2% boric acid solution and specialized bandaging with ointments containing silver sulfadiazine and hyaluronic acid 0,2%. The diagnosis of organic affective disorder was made after the neurological and psychiatric evaluations verified the presence of hallucinations. Thus, therapy with sertraline and quetiapine was initiated and lorazepam was discontinued due to hallucinations being listed as possible side effects [9]. Providing the patient with bandaging and psychological support facilitated the ulcers to heal gradually, indicating a favorable prognosis.

Discussion

This particular case is remarkable as it highlights how easily multiple misdiagnoses can occur due to inadequate communication with the patient and the disregard of her complaints, something that is unfortunately likely linked to her Parkinson's dementia. Consequently, an elderly patient with multiple severe comorbidities received prolonged treatment with immunosuppressants, including azathioprine and various corticosteroids, for nearly two years before presenting to our clinic. This extensive treatment regimen ultimately resulted in the development of iatrogenic type 2 diabetes and the progressive worsening of the disease, leading the patient to develop significant deep ulcerations that profoundly impacted her quality of life and that of her caregivers. Another unique aspect of the case is that the patient inflicted the lesions completely unconsciously, without any emotional need to satisfy as it usually happens in DA, but rather as a consequence of hallucinations that tormented her.

The origin of visual and auditory hallucinations remains a topic of debate. Visual hallucinations are prevalent in Parkinson's disease, affecting up to 75% of patients over the course of the illness [10,11]. Our patient displayed several established risk factors, including longer duration of PD, older age, female sex, cognitive impairment, depression, and anxiety. On the other hand, chronic Levodopa therapy, as well as the preexisting pronounced depression, may contribute to the development of these types of hallucinogenic psychoses [12-14]. Nonetheless, the onset of visual hallucinations has been demonstrated to have a profound impact on the quality of life for both patients and their families, as they are closely linked with cognitive decline, increased mortality rates, and are the strongest predictor for earlier placement in care homes [10]. The caregiver has had to undertake the task of performing extensive bandaging on her wounds to prevent further scratching and digging into the ulcers, as well as to prevent secondary infections. Thus, in this case we present, the follow-up at 6 weeks showed remarkable dedication and care from the caretaker, resulting in significant improvements from this simple act of diligent bandaging, despite the hallucinations continuing.

Furthermore, the histopathology examination uncovered compelling findings as it confirmed non-specific ulceration caused by scratching, but also suggested the possibility of acquired reactive perforating collagenosis (APC) characterized by transepidermal elimination of collagen. This condition is typically associated with chronic kidney disease, malignancy, or longstanding diabetes mellitus [15,16]. As our patient lacked these usual causative factors for APC and the disease showed no tendency to self-heal and worsened over time, we hypothesized that the histopathological features of APC stemmed from chronic rubbing due to pruritus, potentially resulting in epithelial hyperplasia, dermal material elimination, and abnormal keratinization [17,18]. The dermatopathologist also hinted at the possibility of an underlying prurigo in the early stages of the disease. As a further argument, the patient's previous use of doxycycline was considered. Our patient had undergone a course of doxycycline for the suspected bullous pemphigoid, but showed no clinical improvement, despite doxycycline being cited as effective in treating APC [19-21]. This lack of response to doxycycline further supports our hypothesis that the underlying issue may be related to chronic rubbing due to pruritus rather than a typical APC presentation. Therefore, we justified the use of ivermectin in this case to provide additional relief to the patient, despite not identifying a parasitic infection [22]. Oral ivermectin is well-established for managing various intestinal parasites, nematodal and ectoparasitic infections, as well as filariasis and onchocerciasis [23,24]. Additionally, its anti-inflammatory, anti-cancer, and anti-viral/bacterial properties contribute to its versatility as a therapeutic agent [23].

Conclusion

We would like to emphasize the comprehensive approach that is needed in examining the patient, from gathering essential medical history to observing both voluntary and involuntary movements such as scratching, and closely inspecting the location of the lesions. In this particular case, spending time with the patient led us to uncover her tendency to pick at her lesions, and crucially to her showing us hardened, oxidized pieces of skin and debris that she perceived as insects eating away at her flesh. Importantly, all the lesions were in easily accessible areas for the patient, including the knees, chest, periumbilical region, scalp, front of the neck, and forearms.

Finally, we underscore the necessity of a multidisciplinary approach in managing such patients. Although the results from treating the ulcers and limiting the patient's access to the wounds were promising, we, as dermatologists, could not fully address her psychological burden. Therefore, it is crucial to collaborate closely with neurologists and psychiatrists to alleviate her mental struggles and support her overall well-being.

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Conflict of Interest

The authors declare no conflict of interest.

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