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Psoriasis And Depression: About A Clinical Case

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Summary:
Psoriasis is a chronic, non-contagious, and non-allergic erythematous-scaly inflammatory dermatosis, often accompanied by itching. It affects over 2% of the global population, impacting both men and women equally, and can manifest at any age. This multifactorial disease exerts a considerable physical and psychosocial impact, negatively affecting the patient's quality of life. It leads to psychological repercussions and difficulties in self-acceptance and interpersonal relationships. Numerous studies have highlighted an increased prevalence of depression among psoriasis patients, estimating this psychiatric comorbidity at approximately 30%. This psychological state can either trigger or worsen psoriatic flares, underscoring the importance for dermatologists to be well-versed in recognizing and screening for these symptoms. The primary objective of this article is to emphasize the psychological impact and its causal connection with psoriasis, illustrated through a clinical case study.

Keyword*: psoriasis, inflammation, quality of life, depression.*

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I. Introduction

Psoriasis is a chronic inflammatory dermatological condition affecting approximately 2% to 3% of the general population [1]. Its elementary dermatological lesion is an erythematous-scaly plaque, and the condition tends to progress in recurrent episodes, varying in duration from one individual to another. Primarily afflicting adults, psoriasis typically manifests between the ages of 20 and 40 [2]. The condition significantly impacts the patients' quality of life on social, familial, and professional levels [3-4]. Due to the compromised quality of life, psoriasis is often associated with depression as well as other emotional and psychological disorders. According to studies, the prevalence of comorbid depression in psoriasis patients is estimated to be between 20% and 30% [5-7]. These rates are 1.5 times higher than those observed in the general population and among patients with other skin conditions.

A cross-sectional study conducted over twelve months by Barrimi M and colleagues in 2016 [8] highlighted a link between dermatological conditions, especially psoriasis, and depression in 28.2% of cases. This comorbid association involves various intertwined factors, including stress. Numerous studies have emphasized the role of stressful events in triggering and exacerbating psoriasis [9-11]. It is noteworthy that depression can reach the level of "melancholia" in approximately 10% of cases, with suicidal thoughts associated between 2.5% and 7.2%, depending on the affected body surface area [12]. However, some case studies attribute this depressive severity to the phenomenon of stigmatization rather than the severity of psoriatic involvement [13-14].

Ultimately, the interactions between psoriasis and depression are complex, with each pathology potentially influencing the onset, progression, exacerbation, or persistence of the other. Unfortunately, the diagnosis of depressive disorder is often delayed because the complaint is frequently masked by somatic symptoms. Additionally, dermatologists tend to focus their attention on the skin lesions, emphasizing the importance of recognizing and screening for depression. The main objective of this article is to demonstrate the psychological impact of psoriasis through an illustration of a clinical case.

II. Patient And Observation

The patient is Mr. MX, a 32-year-old, unmarried individual, currently unemployed and on sick leave. He is the second of three siblings and comes from divorced parents. Mr. MX was admitted to a dermatology ward due to an extensive and therapeutically challenging case of psoriasis. Family history indicates the presence of vitiligo in the maternal uncle. Regarding personal history, the patient has a complete vaccination record, with no significant medical or surgical history.

Dermatological Examination:

Regarding the history of the dermatological condition, the onset of symptoms dates back more than a decade, marked by a scaly scalp condition. Initially, the patient sought outpatient care and received local treatments. The course of the disease has been characterized by several flares and remissions. The second flare, occurring three years after the onset of symptoms, led to hospitalization in a specialized setting due to erythroderma. The patient was initially treated with oral methotrexate but switched to the injectable form due to digestive intolerance, resulting in significant improvement.

Subsequently, there were two more hospitalizations, four years apart, for pustular psoriasis flares treated with injectable methotrexate. The patient experienced three distinct generalized flares of pustular psoriasis, each occurring between two to three months apart. These flares were induced by therapeutic interruptions, advised by medical personnel due to disruptions in blood pressure readings, once for a flu-like syndrome, and the last one for a COVID-19 infection. After each interruption, the patient was readmitted for erythroderma and treated with injectable methotrexate at a dosage of 15mg per week. Following stabilization of the lesions and clearance of psoriatic plaques with local treatment and injectable methotrexate, the patient discontinued the treatment and was readmitted for an extensive psoriasis flare.

The current hospitalization is characterized by the patient's overall good health despite the skin lesions, and the blood pressure readings are within normal range.

Skin Examination:

Psoriasis is a skin condition that can concentrate on specific areas of the body (knees, elbows, scalp) or spread across the entire body, manifesting as plaques, scales, and redness. The lesions can be highly visible, to the point of being debilitating. In our patient, erythematous-scaly lesions are extensive, involving (Fig. 1 to 6):

- Upper limbs
- Trunk
- Abdomen
- Scalp with a scaly cap
- Healthy oral mucosa, black hairy tongue, and poor oral hygiene
- Genital mucosa with intertrigo in the perianal and inguinal regions
- Fingernails showing a pitting pattern, xanthonychia at the distal ends of the toenails

A systematic scratching (Grattage méthodique de Brocq) test was positive. The Psoriasis Area Severity Index (PASI) score was 15.2(> 10), indicating severe chronic plaque psoriasis in our patient. It's worth noting that PASI is a score used to quantitatively assess the severity of psoriasis based on various parameters, including elementary lesions (erythema, infiltration, desquamation), affected surfaces, and the extent of the lesions. For the extent of lesions, the palm of the hand represents approximately 1% of the body surface area. This score is valid only when cutaneous involvement is at least 3% of the body surface area, which is the case for our patient.

Extra-Dermatological Examination:

The patient presents with some cervical and inguinal lymphadenopathies.

Complementary Examinations:

Blood tests, frontal chest X-ray, and ECG showed no abnormalities.

Local treatment involves dermocorticoid and emollient therapy, along with injectable methotrexate® at a dosage of 15mg per week. However, the clinical evolution was poor. The patient exhibited significant fatigue, had a reduced appetite, remained non-verbal, and experienced insomnia.

Due to therapeutic resistance and the worsening clinical picture, the patient was referred to a psychiatrist for specialized evaluation.

Psychiatric Examination:

The patient's presentation, coupled with the mental examination, revealed a young man of undifferentiated build, dressed in a long-sleeved blouse concealing the skin lesions visible through the fabric. His face was covered with crusted lesions, and he avoided eye contact, keeping his hands hidden under the examination table, which were also covered in lesions (Fig. 3). Initially, establishing contact was challenging, but after building a trusting physician-patient relationship based on empathy, the patient began to verbalize his health concerns, albeit with a slowed speech rate (bradyphrenia).

In his discourse, emotional distress was evident, with a sense of changes in body image. The conversation focused on the visible bodily lesions that significantly disturbed his daily life, triggering feelings of stigmatization, low self-confidence, and a constant sense of being repulsive and contagious. The patient expressed a negative body image and a profound sense of shame. He frequently anticipated judgmental looks and mockery regarding his altered physical appearance. This state of psychological distress, lasting for about fifteen days, had a

considerable impact on his mental and physical well-being, leading to a reluctance to work, restricted social, familial, and professional activities (work absenteeism).

The patient's discourse also revealed delusional depressive themes, including vital disgust, self-devaluation, self-depreciation, a sense of incurability, and verbalization of a desire to die due to a perceived bleak future. Additionally, the patient did not exhibit perceptual disturbances or symbolic function impairments, but some character traits were noted, such as inherent shyness and internalization of feelings. Instinctual functions were significantly disturbed, manifesting as sleep-onset insomnia associated with fears of suicidal tendencies, reduced food intake, and practically nonexistent sexual activity.

Two clinical severity assessment scales were administered to the patient:

- Beck Depression Inventory (BDI), indicating severe major depression.
- Suicidal Intent Scale, which yielded a positive result.

The diagnostic hypothesis leans toward a severe major depressive episode induced by a general immuno-inflammatory medical condition (psoriasis), as per the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5) criteria for depression [15].

Table n°1 : diagnostic criteria for depression according to DSM-5

Reminder of DSM-5 diagnostic criteria A and B for depression
A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure. Note: Do not include symptoms that are clearly attributable to another medical condition. **(1)** Depressed most of the day, nearly every day as indicated by subjective report (e.g., feels sad, empty, hopeless) or observation made by others (e.g., appears tearful) **(2)** Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by subjective account or observation) **(3)** Significant weight loss when not dieting or weight gain (e.g., change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day **(4)** Insomnia or hypersomnia nearly every day **(5)** Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down) **(6)** Fatigue or loss of energy nearly every day **(7)** Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick). **(8)** Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others) **(9)** Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide **B. The symptoms cause clinically significant distress** or impairment in social, occupational, or other important areas of functioning.

A multidisciplinary approach involving both a psychiatrist and a dermatologist was deemed necessary for this clinical scenario. In addition to dermatological treatment, the patient received an antidepressant from the selective serotonin reuptake inhibitor family, specifically escitalopram® at a dosage of 40 mg per day, combined with supportive psychotherapy and individual and family psychoeducation. Psychoeducation focused on enhancing awareness and understanding of the disease's course, emphasizing the importance of therapeutic adherence and regular follow-ups.

Cognitive-behavioral therapy was initiated with the patient, targeting cognitive restructuring and self-esteem work. Various relaxation activities were proposed, including sports and swimming to reinforce mentalization capacities that were compromised in the patient. The ultimate goal was to build self-confidence and personal well-being.

Psychoeducation emerged as an alternative approach that reconciled the chronic dermatological condition with the psychological state of the affected individual.

The collaborative care of the dermatologist and psychiatrist resulted in clinical, biological, and psychological remission for the patient. He became compliant with treatments and attended dermatology and psychiatry consultations regularly.

III. Discussion

Psoriasis manifests as a systemic and chronic inflammatory skin eruption, presenting as thick red plaques with scaling. It involves excessive renewal and accumulation of epidermal cells, leading to local inflammation. In our clinical case, the lesions were disseminated in the form of plaques over significant areas of the body. This physical impact resulted in a heavy emotional burden for our patient, manifested by:

- Anxiety and anger
- Low self-esteem
- Negative body image
- Feelings of shame and persecution
- Social withdrawal and isolation
- Impaired judgment due to the exhaustion of mental resources, negatively affecting the credibility and judgment of our patient in the eyes of others.

Severe depressive decompensation with suicidal ideation was the outcome of these factors. It's worth noting that depression can reach the level of "melancholia" in approximately 10% of cases, with suicidal thoughts associated between 2.5% and 7.2%, depending on the affected body surface area [12].

The psychosocial impact of psoriasis is significant, affecting not only the patient's mental well-being but also their social interactions and overall quality of life. The association between psoriasis and depression is well-established, and the intricate interplay between the physical manifestations of the disease and the subsequent emotional distress underscores the importance of a holistic and multidisciplinary approach to patient care. In this case, the collaboration between dermatology and psychiatry played a crucial role in achieving clinical, biological, and psychological remission for the patient. This underscores the importance of addressing both the physical and mental aspects of psoriasis to provide comprehensive and effective care.

Why this association between psoriasis and depression? Three explanatory models:

The first model suggests that the depressive episode may be caused by a deterioration in the quality of life. Indeed, psoriasis has a significant impact on:

- Physical and psychological impairment due to pruritic lesions and pain.
- Sleep disturbances.
- Stigmatization.
- Affective, sexual, social, and professional life.
- Daily life, with the constraints of local care.
- Mental well-being, as there is a decrease in mental defense capabilities to cope with the demands of psoriatic disease.

This creates a double vicious circle between depression and psoriasis, partly is driven by pathophysiological mechanisms and partly by the impairment of quality of life. It is important to underline that the quality of life is more affected by anxiety and depressive disorders than by the severity of psoriasis [2, 13-14]. We deduce that the handicap of psoriatic patients is more related to social concerns and their beliefs regarding the severity, chronicity, or visibility (manifest dermatoses) of the disease. This aligns precisely with our clinical case.

The second model, of a psychoanalytic nature, refers to various concepts such as narcissistic injury and the skin-ego. Narcissism is characterized by a positive self-image and internal security. The presence of a chronic dermatosis weakens the narcissistic self. It is deduced that when the skin is altered by psoriasis, it is an attack on the self [16]. Ultimately, patients with psoriasis are somewhat more frequently alexithymic (having difficulty expressing their emotions, which may be due to depression). Delphine Vust reports the presence of certain character traits, such as introversion, suppression of emotions, anger, and the lack of a father figure, in some conditions, including psoriasis and alopecia [17]. This aligns with the personality profile of our patient.

The third model proposes a biological link between depression and psoriasis, operating reciprocally [18]. During depression, blood levels of neuropeptides such as substance P increase, and this increase is even more pronounced in stressful events. Substance P plays a significant role in psoriasis as it promotes the proliferation of keratinocytes, skin inflammation, and activation of lymphocytes—three predominant factors in psoriasis. Similarly, serotonin levels decrease during depression, with a corresponding decrease in the cutaneous expression of the 5-HT1AR receptor and an increase in the expression of 5-HT2AR, having inverse effects. It's worth noting that during psoriasis, cytokine levels such as TNF-alpha, interferon-alpha, or interleukins 1 beta and 2 are increased. All these cytokines are known to induce depressive symptoms by indirectly acting on the brain to inhibit serotonin synthesis or increase cortisol and releasing hormone production, consequently increasing stress [19].

According to the World Health Organization (WHO), stress occurs when an individual's personal resources and coping strategies are overwhelmed by the demands placed on them. Stress is a clearly identified trigger for psoriasis flares [11-19]. The release of neurohormones and neurotransmitters can amplify immune mechanisms, and through the activation of cutaneous nerve endings, significantly amplify the inflammatory reaction [11]. Left untreated, depression and anxiety increase sensitivity to stress [10]. This reinforces the multiple interactions between depression, stress, and psoriasis.

Psoriasis associated with depression is a sign of psychological distress, increasing the risk of alcohol or benzodiazepine dependence [20]. This psoriasis-depression association has multiple consequences:

- Aggravation of psoriasis.
- Aggravation of itching.
- Worsening of impaired quality of life.
- Poor adherence to treatment.
- Frequent changes of doctors.
- Frequent hospitalizations.

Therefore, it is crucial to detect the necessary psychological disorders in psoriasis management. A psoriatic and depressed patient often struggles to adhere to proposed treatments and tends to change dermatologists frequently. They seek a miraculous treatment and empathetic listening that takes into account their life situation, socio-affective environment, and suffering. Selective serotonin reuptake inhibitors are well-tolerated and effective medications. To accompany the use of antidepressants, intensive psychotherapy will be implemented to guide the patient in the current context of their somatic and mental condition and work on self-esteem and improve depressive thoughts through cognitive restructuring. This mirrors the case of our patient.

The management of psoriasis-depression requires a specialized multidisciplinary approach involving a dermatologist and a psychiatrist [21], as it was the case for our patient. Despite the extent of the lesions, the patient has managed to overcome this serious illness by benefiting from the care provided by the dermatologist and psychiatrist. The patient is now in remission, looking forward to the future, and has fully accepted their self-image.

Figure 1: scaly scalp
Figure 2: scaly scalp
Figure 3: Erythematosquamous patch extended trunk
Figure 4: Ostracean erythematosquamous plaque of arm and forearm
Figure 5: erythematosquamous plaque of the back of the but
Figure 6: Nummular erythematosquamous lesions of the back

Figure 1

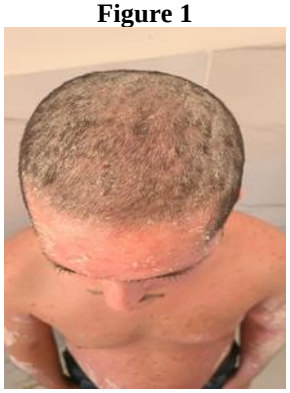


Figure 2

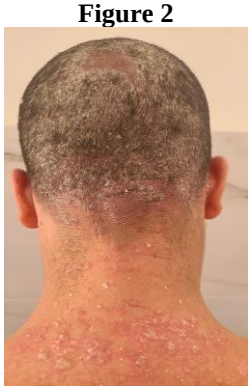


Figure 3

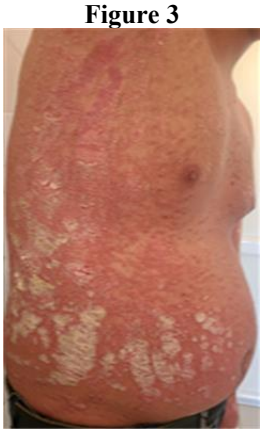


Figure 4

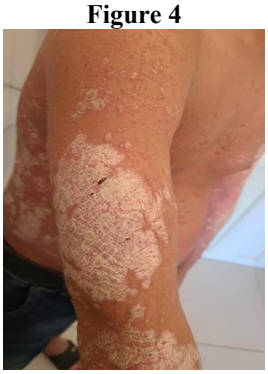
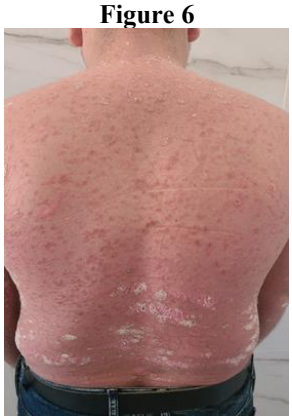


Figure 5

Figure 6



Conflict of Interest

The authors declare no conflicts of interest.

Authors' Contributions
All authors contributed to the completion of this work and have read and approved the final version of the manuscript.

IV. Conclusion

It is common to observe depressive disorders, regardless of their intensity, in individuals suffering from extensive and prominently located psoriasis. The dermatologist plays a key role in the management of such patients. Therefore, it is crucial to screen for these mental health issues and implement a multidisciplinary approach to reduce the risk of recurrence and improve the quality of life.

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