

## Neurotic excoriation: A case report and literature review



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### ABSTRACT

**Background:** On average, one-third of patients seeking treatment for skin problems have associated psychological stress or psychiatric disease. Most psychodermatologic patients visit a dermatologist instead of a psychiatrist. It is important to recognize the signs and symptoms immediately, make a prompt diagnosis and do a comprehensive treatment that involves multi-disciplinary approach, including dermatology, psychiatry and other discipline if necessary.

**Case Presentation:** A 40-year-old female, visited the Dermatology and Venereology (DV) outpatient clinic of Dr. Cipto Mangunkusumo Hospital with a chief complaints of wound on her right ear since 2 weeks ago. The patient was also diagnosed with Chiari malformation type 1 and had undergone surgery twice. The patient confessed of having a habit of intentionally skin picking until they were chafed and bled when she was stressed. The patient was diagnosed as neurotic excoriations, treated with potent topical corticosteroid and consulted to the psychiatric department.

**Discussion:** Neurotic excoriations is classified as primary psychiatric skin disorders. Symptoms usually occurred when the patient was in the depression state. At first the patient only followed the dermatologist treatment and had a poor compliance with psychiatric management. Therefore the patients keep manipulating the lesions and the outcome was not satisfactory because the underlying disease has not been well treated. After the dermatologist convinced her to see the psychiatrist regularly, accompanied by a good compliance in applying the corticosteroid cream, the result was satisfactory.

**Conclusion:** The psychocutaneous disease need a comprehensive and multi-disciplinary approach. Dermato-venereologists should work together with the psychiatrist.

**Keywords:** neurotic excoriations, psychocutaneous disease, psychodermatologic.

**Cite This Article:** Gunardi, K.Y., Yusharyahya, S.N., Sitohang, I.B.S. 2022. Neurotic excoriation: A case report and literature review. *Bali Medical Journal* 11(1): 451-454. DOI: 10.15562/bmj.v11i1.3195

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Received: 2022-02-10  
Accepted: 2022-04-21  
Published: 2022-04-30

### INTRODUCTION

Disorders that involves several aspects relating to the skin and mind is termed as a psychodermatologic condition.<sup>1</sup> There is a high prevalence of psychodermatologic condition found in patients diagnosed with psychiatric disorder in the practice of dermatology. It is recommended that every third patient admitted in a dermatology clinic should be assessed for potential psychological disorder. Study in 2017 conducted in India, has reported a high prevalence of depression (36.3%,  $n = 146$ ) & anxiety (18.4%,  $n = 74$ ) among dermatology out-patients.<sup>2</sup> It is reported that 2% incidence of neurotic excoriations among dermatology clinic patients, and a 9% prevalence among inpatients with pruritus, with a higher prevalence among females in most studies. The prevalence of

this disorder among psychiatric patients is not known. In the studies, the mean age at onset of cutaneous symptoms is in the range of 30 to 40 years; however, some have reported a peak incidence in the 20s.<sup>3</sup>

Psychodermatology disorder classification could provide a guide for appropriate treatment for each patient, including dermatology, psychiatry, and other disciplines as needed. The new classification of psychodermatology primary psychiatric skin disorders are; (1) psychophysiologic skin disorders, (2) primary psychiatric skin disorders, (3) secondary psychiatric disorders, and (4) cutaneous sensory disorders.<sup>4</sup> Psychophysiologic skin disorders, such as psoriasis, atopic dermatitis, and acne, are primary skin illnesses that can be triggered by psychosocial stress. Psychiatric illnesses

such as anxiety and depression have been linked to or exacerbated by skin conditions. Primary psychiatric skin disorders are psychiatric conditions that result in self-inflicted physical changes on the skin. Anxiety, depression, obsessive-compulsive disorder (OCD), and psychosis, among other psychiatric issues, lead to destructive manipulation of the skin, hair, or nails, which is typically a manifestation of extremely dysregulated emotions. Cutaneous sensory disorders are conditions in which a patient experiences a variety of aberrant skin sensations, such as itching, burning, stinging, biting, and crawling, without having a diagnosable dermatologic, neurologic, medical, or psychiatric diagnosis. Formication, cutaneous dysesthesia, and "central" pruritus are a few of examples.<sup>4</sup>

Neurotic excoriations are self-inflicted cutaneous lesions caused by a patient's uncontrolled urge to pick, rub, or scrape the skin excessively. Previously the patients may have had normal skin or already had lesions or skin disorders that were induced or exacerbated by mental stress or bad interpersonal relationships. Patients may freely admit that their lesions are self-inflicted. Prurigo nodularis, or a scar from a prior incision, is one of the lesions. It is more noticeable when the patient feeling stressed. The aim of this paper is to describe a case of neurotic excoriations in dermatology and venereology out patient clinic of Dr. Cipto Mangunkusumo Hospital.

**CASE PRESENTATION**

A 40-year-old female, widowed, presented to the DV outpatient clinic of Dr. Cipto Mangunkusumo General (RSCM) Hospital with chief complaint of wound on her right ear in the past 2 weeks prior to admission. She also complained of hyperpigmented macules on her both lower arms which appeared since 1 year ago. In 2016 the patient went to a private hospital in Bekasi and was referred to RSCM hospital to do further skin examination and decompression brain surgery by neurosurgeon but at that time she refused to go to RSCM hospital and opted to go to the traditional herbal medicine instead.

The patient went to RSCM hospital to have surgery for her brain malformation on June 2019 and referred to the department of DV for wounds on her left ear. She was diagnosed as dermatitis artefacta and received topical treatment; petroleum jelly and fluocinolone acetonide 0.025% cream twice daily. On follow up after 2 weeks, the lesion was not getting better. The patient then referred to psychiatric department and was diagnosed of having a moderate depression with narcissistic personality traits. She was given anti-depressant medication and supportive psychotherapy. The reason for the manipulation, the patient said it was because she felt itchy and disturbed with the visible skin lesion. The complaints mainly appeared when the patient was stressed, felt hopeless and useless because she was out of job and divorced with her husband. She was



**Figure 1-2.** On patient's right auricle, erythematous plaque, irregular, diffuse, with brownish to black crusted on top of some lesions



**Figure 3-4.** On her bilateral lower arms, hyperpigmented to slight erythematous plaque, with a size of miliar to lenticular, discrete border, circumscribed, some erosion on the top of the lesion.

worried about the future of her children and her economical condition. The habit had started since her husband was caught cheating with other woman and when the patient was diagnosed with Chiari malformation. Patient explained the itch sensation mainly appeared when she has psychological stress and starting to scratch heavily therefore developing the skin lesion.

From history-taking and psychiatric consultation, the patient was diagnosed to have a neurotic excoriations. She did not routinely visit both the DV or the psychiatric clinic for evaluation during 2019 – 2020 because she was focused on follow up the Chiari Malformation type 1 disorder and also due to the Corona Virus Disease pandemic therefore it is difficult to go to hospital. She came to



**Figure 5-6.** Both of patient's hand clawing hand, anonychia digiti II-V sinistra and digiti V dextra

the DV outpatient clinic RSCM on 2021, with a new complain of wound on her right ear. From the physical examination (Figure 1-6), dermatological status on right auricle was erythematous plaque, irregular, diffuse, with brownish to black crusted on top of some lesions. On her bilateral lower arms, hyperpigmentation to slight erythematous plaque, with a size of miliar to lenticular, discrete border, circumscribed, some erosion on the top of the lesion. On manus bilateral clawing hands, anonychia digiti II-V sinistra and digiti V dextra. We did the gram staining examination from ear erosions, the result was leucocyte 10-12/ field of view, coccus gram positive 10-12/field of view and fungal element is not found.

The diagnosis of neurotic excoriations and post inflammatory hyperpigmentation was made and treated with emollient and potent topical corticosteroid. We consulted her to the psychiatric department and revealed that she has moderate depression episode with somatic symptoms. The patient was put on antidepressant and supportive psychotherapy. On follow up two weeks later, her skin lesions was improved significantly and her habits of manipulating the lesions were subsided.

## DISCUSSION

Neurotic excoriations also known as psychogenic excoriations, acne excoriée, pathological or compulsive skin picking, dermatotillomania, and body-focused repetitive behaviors are the disorder that is mainly characterized by excessive scratching or picking of the skin in the absence of an identified primary

dermatosis, leading to secondary skin lesions and significant psychosocial distress.<sup>5</sup> Excessive scratching, gouging, or squeezing of normal skin or skin with mild surface imperfections is a symptom of the disease. Excoriation may also occur in response to an itch or other skin sensation or to remove a lesion on the skin (e.g., acne excoriée). This disease is not yet recognized as a symptom of a distinct *DSM-IV* disorder, however The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (*DSM-5*) lists skin picking disorders as related to obsessive compulsive disorder (OCD).

It is most frequently seen in middle-aged females as seen in our patient.<sup>6</sup> The method of skin manipulation is various, ranging from simply scratching to deliberate self-injurious behavior, resulting in a similarly highly variable presentation of lesions. Most patients use fingernails to excoriate the skin, but the teeth and instruments (e.g., tweezers, nail files, pins or knives) also may be used. Excoriations are typically found in bodily areas that are easily reachable, and most patients excoriate multiple sites.<sup>7</sup> Neurotic excoriations patients may freely admit that the lesions are self-inflicted. The deliberate and compulsive aspect of neurotic excoriation distinguishes it from dermatitis artefacta. Before making this diagnosis, the patient should be investigated for all cutaneous and systemic causes of pruritus.<sup>8</sup> We reported a case of 40 year old woman who visited our outpatient clinic with wounds on her right ear and both of lower arms due to her habit of skin picking since 2 years ago. According to patient's statement, the

excessive scratching and skin picking habit was done using her hands only (without any additional tools). Her skin lesion was demonstrated on figure 1-6. The habit was started when she had family problem and has psychological distress because she had been diagnosed with Chiari malformation disease. Although the neurotic excoriation does not have correlation with the Chiari malformation, but she had to come to hospital often and she admitted that she feel exhausted physically and mentally without any support from family and relatives.

## Clinical features

The clinical assessment of neurotic excoriations involves a thorough history to screen for psychiatric disease and a full dermatologic exam with focus particularly on the face and arms.<sup>9</sup> Neurotic excoriations cause self-inflicted ulcers, abscesses, or scars that will become disfiguring. There also may be atrophic, hyperpigmented or hypopigmented scars and lichenification, characteristics of older, healing lesions. The skin lesions are distributed in accessible areas of the body such as the face, arms, legs, and upper back. The clinical feature is the classic "butterfly sign," in which there are characteristic areas of sparing in the unreachable areas of the interscapular area, may be present.<sup>9</sup> Study has shown that the upper extremities and face were among the most affected regions, along with the trunk and lower extremities. This theory supporting the fact that our patient's chief complain was wound on her right ear and both of her lower arms. Back then several years ago, she has also complained the wound on her left side on her cheek area. These area was indeed the accessible area of the body. Questionnaire-based instruments such as the Skin Picking Severity Scale (SPS) and Skin Picking Impact Scale (SPS) can also be helpful to quantify disease severity.<sup>4</sup>

## Etiopathogenesis

Although neurotic excoriation has a long history, the underlying psychopathology may not be neurosis, but rather another mental condition such as depression, anxiety, OCD, or even psychosis.<sup>4</sup> In patients with neurotic excoriations, psychiatric comorbidity, such as mood

and anxiety disorders, is widespread, and skin-picking activity is a manifestation of the underlying psychopathology.<sup>10</sup> Stress or anxiety, or they may occur as a result of an unconscious tendency may act as triggers of their skin picking behaviour. Our patient admitted that complaints mainly appeared during times when the patient was stressed, felt hopeless and useless because she did not working anymore and divorced with her husband. At that time her insight was poor and she did not get the proper treatment and took the traditional or herbal medicine instead. Her habit of skin-picking during stressed has been continued for years.

Other important triggers are dermatological disorder, such as mild to moderate acne, keratosis pilaris, itching, and even tiny textural changes on the skin surface, all of which produce significant distress and subsequent skin manipulation. There is a significant disparity between the severity of the dermatologic manifestation and the level of suffering in these situations, therefore it is crucial to manage both the skin condition and the psychological impact.<sup>4</sup>

**Prognosis and Management**

The main focus of treatment for psychodermatologic conditions is to enhance overall patient functional status and reducing emotional distress through an empathetic approach to the patient, maintaining a strong therapeutic alliance, and a collaborative team approach between dermatologists, psychiatrists, and

psychologists.<sup>11</sup>

When choosing treatment plan, it is essential to note that the etiology of psychodermatologic disorders can be complex and result from various core factors. Internal factors is to consider include distinct personality traits, psychologic distress, coping skills, cognitive distortions, and personal attitudes and beliefs. In order to successfully manage stress or emotionally exacerbated cutaneous conditions, pharmacologic and nonpharmacologic dermatologic treatment should both be considered in parallel with stress-management approaches. If there is underlying pruritus, skin lesions in neurotic excoriations can be addressed with topical medication, such as topical corticosteroids or antipruritic medication. Secondary infections should be evaluated for and treated with topical or oral antibiotics if necessary.<sup>4</sup> If referral to a psychiatrist is possible, patients may benefit from psychotherapy.

According to the underlying psychopathology, pharmacologic treatments include antidepressants, anti-anxiety medications, antipsychotics, and topical medication for skin lesions. Non-pharmacologic treatments are mainly cognitive behavioral therapy, relaxation training, assertive communication, and supportive group and personalized psychotherapy.<sup>12-15</sup> We conducted a review of the literature and found six cases of neurotic excoriations summarized in **Table 1.**<sup>12-14,16-18</sup>

As stated by Wong et al that psychocutaneous diseases can be found in patients with history of lesions that never heal.<sup>3</sup> Wounds of this patient never heal for years because of repeated acts of manipulation by the patients. A supporting factor is the locations of lesions which are easily reached by the patient. Patient with skin picking often stated complaint of itch and they were triggered by psychological stressors. Repeated excoriations may trigger a cycle of itch-scratch and results in a thickened lesion, often in the form of scar tissue and post-inflammatory hyperpigmentation in which patient feel more disturbed due to cosmetic aspect. As dermatologists, we must first evaluate the cause of itch in patients and exclude the possibility of internal or systemic diseases such as malignancy (most often lymphoma), disorders of liver and renal functions, HIV infection, and psychiatric diseases, especially depression and anxiety disorders and also evaluate the skin manifestation. For the psychological underlying cause commonly reported have the association with underlying obsessive-compulsive disorder, depressive disorders, and anxiety disorders. Moreover the behavior has also been associated with trigger from social factors such as financial loss, and marital hardships.<sup>8</sup> In addition, we have excluded the possible cause of pruritus due to systemic disease. She has psychological stressor that contribute to her habit in skin-picking habit. Moreover this patient at first reluctant to come to a psychiatrist. After being convinced,

**Table 1. Reported cases of neurotic excoriations**<sup>12-14,16-18</sup>

Study	Age	Gender	Treatment	Outcome
Brkiü et al, 2020	43	F	Occlusive topical corticosteroid combined with anti depressant	Healed lesions (not stated in the report for the precise time of healing time)
Lusiana et al, 2020	61	M	Topical antibiotic and modern dressing, and emollient	After 6 months, patient showed significant improved
Kelkar et al, 2015	12	F	Fluoxetine 10mg, Behaviour therapy, Hands wrapped in cloth so she could not pick at skin.	Showed improvement outcome after 15 days
Ribeiro et al, 2015	44	F	Anti-psychotic (haloperidol 2 mg/day), Anti-depressant (SSRI 100 mg/day)	After 5 months, skin picking episodes reduced and behavioural improvement were noticed
Aranda et. al, 2019	31	F	Sertraline 50mg in the morning (maximal dose is 100mg/day during hospitalisation), trazodone (50mg at night-time) and cognitive-behavioural psychotherapeutic intervention: Habit reversal therapy or training (HRT)	After 10 weeks showed successful treatment
Poulos et. al, 2012	53	F	Fluoxetine oral and corticosteroid oral (prednisone 60 mg daily) for her bullous pemphigoid	Reduced frequency of scratching after 6 months of follow up

her first visit She did not routinely take psychiatric medications because she claimed she does not have psychiatric disorder, she feel drowsy all the time and also lack of family support/ involvement. These underlying reasons contribute to patient's poor prognosis several years ago.

For neurotic-excoriations skin especially skin picking, the main focus of treatment is to stop the itch-scratch cycle which is the primary cause of the disorder. The patient's nails must be kept short and must try to avoid scratching. Treatment of choice of are emollient, potent topical steroids, and non-histaminergic. It is important to work in a multidisciplinary team to give a comprehensive treatment. Supportive psychotherapy, Cognitive Behavioral Therapy, and habit reversal programs along with anti-depressants help all patients.<sup>6</sup>

Initially our patient solely followed the dermatologist's instruction and refused to go to psychiatric outpatient clinic. As a result, the patient continue to manipulate the lesions, and showed unsatisfactory results due to the untreated underlying psychological condition. After convincing the patient, we refered the patient to psychiatric outpatient clinic. She was put on antidepressant, and supportive psychotherapy. The skin lesions treated with emollient, and topical antibiotic and wet dressing for her secondary bacterial infection. On follow up 2 weeks later, her neurotic excoriations appeared less frequently, and her habits of picking her own skin were subsided because her psychological condition was well-controlled.

This manuscript has not been published elsewhere and is not currently being considered by any other journals. In addition, we confirm that the manuscript has been read and approved for submission by all the named authors.

## ETHICS IN PUBLICATION

The patient has given the consent for images or other clinical information relating to her case to be reported in a medical publication. (Patient consent/ photograph publication consent form have attached)

## CONFLICT OF INTEREST

The Authors declare that there is no conflict of interest.

## FUNDING

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors

## AUTHORS CONTRIBUTION

All authors of this paper have substantial contributions in conceiving the manuscript: Gunardi KY in conceptualization, methodology, formal analysis, data curation, software, validation, investigation, and writing (drafting, review, and editing). Yusharyahya SN in conceptualization, methodology, formal analysis, data curation, validation, investigation, and writing (drafting, review, and editing). Sitohang IB in formal analysis, data curation, validation, and writing (review and editing). Lastly, all the authors agreed to publish this article and accepted responsibilities as authors. All authors have the same affiliation.

## CONCLUSION

Neurotic excoriation is a primary psychodermatology disease which have the main etiology of the skin condition is the psychiatric condition of patient. Our case was a woman with marital and finance problem diagnosed with neurotic excoriation. The patient has been treated for several years however the outcome was not satisfactory because the underlying disease has not been well treated. The patient had a poor insight and compliance to therapy. After collaborative treatment from dermatologist and psychiatrist a significant improvement was showed.

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