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LETTER TO EDITOR

Alcohol Swab Test in Dermatitis Neglecta With Allodynia, Disuse Limb Atrophy

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Dear Editor,

A 13-year-old adolescent male was brought to our outpatient department by his parents with complaints of heaped-up, yellow to brown, crusted lesions over his right lower limb for four months. The patient was asymptomatic until four months ago when he sustained a burn on his right lower limb due to a firecracker. The firecracker was a kinetic one, and it accidentally entered the sleeve of his trousers on the right side, causing extensive burns on the right lower limb. The patient was managed conservatively for burns, leading to the healing of the burn sites. However, there was slowly progressive crusting on the burn sites, leading to heaped-up crusts. On further probing, the parents revealed that the patient complained of constant pain in the right lower limb exacerbated by moving the limb or even touching it. He did not walk for the last four months due to the pain and had to be carried by his parents or drawn in a wheelchair. He had stopped going out to play, interact with friends, and go to school for the past four months. Due to pain on touching, he resisted bathing and any attempts to clean the affected limb to remove the crusts.

On clinical examination, the patient was anxious, irritable, and uncooperative and did not allow us to touch his right lower limb. Dermatological examination revealed significant thinning of the right lower limb with atrophy of the thigh as well as leg muscles compared to the left, suggestive of disuse atrophy [Figure 1a]. There was patchy, dirty-looking, heaped-up crusting and diffuse hypertrichosis on the background of dark discolouration and patchy post-burn depigmentation [Figure 1b, 1c]. An alcohol swab test was done in an effort to rub the lesions off the skin, which was positive, as demonstrated by removal of dirt and hair [Figure 1d]. The patient was diagnosed as a case of dermatitis neglecta with allodynia. As the patient was uncooperative and refused to get treated by manual removal of the crusts, he was referred to a psychiatrist.

Dermatitis neglecta (DN) is a psychocutaneous disorder and was first described by Poskitt *et al.* in 1995.[1] It occurs due to wilful and/or subconscious self-neglect, which is the complete reverse of dermatitis artefacta, where the disease or skin lesions are the result of the patient's own actions.

DN may occur in areas of hyperesthesia like trigeminal neuralgia.[2] Our patient had allodynia post-burns. Severe pain prevented the patient and caregivers from washing or cleaning the skin, resulting in DN. A close differential diagnosis is terra firma-forme dermatosis (TFFD).[3] TFFD patients typically have normal washing habits, while dermatitis neglecta affects patients with insufficient hygiene in specific areas. TFFD lesions are dirty brown plaques that resemble dirt and lack the 'cornflake-like' scale that is evident in dermatitis neglecta (this patient). On wiping the

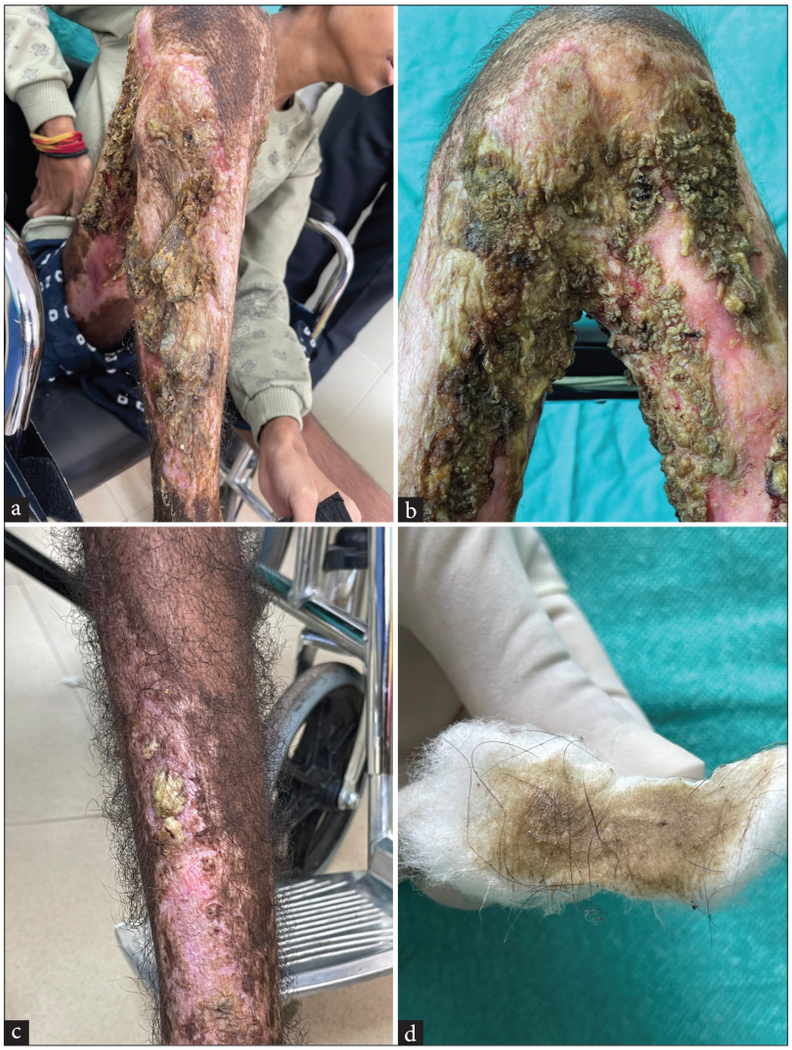

Figure 1: (a) There is significant thinning of the right lower limb suggestive of disuse atrophy, (b) Patchy, dirty-looking, heaped crusting on the leg, (c) Diffuse hypertrichosis on the background of patchy post-burn depigmentation, (d) Alcohol swab test is positive, as seen by the removal of dirt and hair.

affected area with an alcohol swab, both DN and TFFD are removed and help rule out other mimics such as acanthosis nigricans, ichthyoses, pityriasis versicolour, and confluent and reticulated papillomatosis. The alcohol swab test also helps prevent unnecessary laboratory investigations and skin biopsy. In addition, it also offers a prompt therapeutic cure for the malady. Acanthosis nigricans is usually seen in patients with metabolic syndrome, obesity, and diabetes and cannot be removed by alcohol swabs or vigorous cleaning with water and/or soap but with long-term application of keratolytic and skin-lightening agents.[4] Pityriasis versicolour is caused by *Malassezia furfur*. Wood's lamp examination helps diagnose tinea versicolour by its yellow-green fluorescence, in contrast to TFFD, which shows no change.[5] Other differential diagnoses include confluent and reticulated papillomatosis, extensive seborrhoeic keratoses, and epidermal nevi. Even if they resemble DN, they cannot be removed by rubbing alcohol. Patients may benefit from intervention by a psychiatrist, as the patient may lack insight into the pathogenesis of the disease, as seen in our case. Cognitive behaviour therapy is indicated in such patients. Our case was unique since DN was triggered after burns and was associated with hypertrichosis, which may have been present because of reduced shedding. In normal individuals, the shedding of telogen hair is partly mediated by exogenous factors like shearing forces on skin and hair. In addition,

our case also had severe disuse atrophy of the affected limb, which is rarely seen with DN. The patient was referred to a psychiatrist for further management. The case is presented for the virtue of being interesting as well as rare.

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