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DERMATOLOGIC THERAPY WILEY

LETTER

Multiple ulcerations and devastating scars of skin popping on thighs in a middle-aged woman

Dear Editor,

Skin popping is a route of drug administration into the subcutaneous or intradermal tissue which was usually reported in illicit drug users.[1,2] Different from those intravenous or intramuscular injections, drugs diffuse slowly from the deposited region into the capillary networks and enters into the systemic circulation.[3] Drug abusers use this method to provide a long-acting and slow drug absorption which also decreases the risk of overdosing. Patients who find it difficult to apply drugs intravenously can also choose this method.

A 42-year-old female patient presented to our outpatient clinic with a 2-year history of relapsing ulcerations on her lower extremity. She states that her lesions were located on sites where she had injected herself diclofenac sodium for headache. In her anamnesis, she mentioned that she has taken the injections whenever she gets angry with her husband. Dermatological examination revealed multiple, 1 to 2 cm, ulcerations and hyperpigmented, depressed scars on bilateral extensor surfaces of femoral skin and multiple deep, atrophic, and devastating scars on lower extremity and thighs (Figure 1). Histologically, separation at the dermoepidermal junction, dense inflammatory infiltration in dermis, and thrombus in vascular lumen were detected (Figure 2). The magnetic resonance imaging of the affected sites was consistent with solely skin involvement. She was primarily diagnosed with skin popping-related skin ulcers. Her laboratory workup was normal for serum opioid levels and vasculitis markers. She was referred to the psychiatry department for drug abuse-related psychiatric disorders. In the psychiatric examination, she was diagnosed with major depressive disorder, and venlafaxine capsule 75 mg/d and cognitive behavioral therapy were initiated.

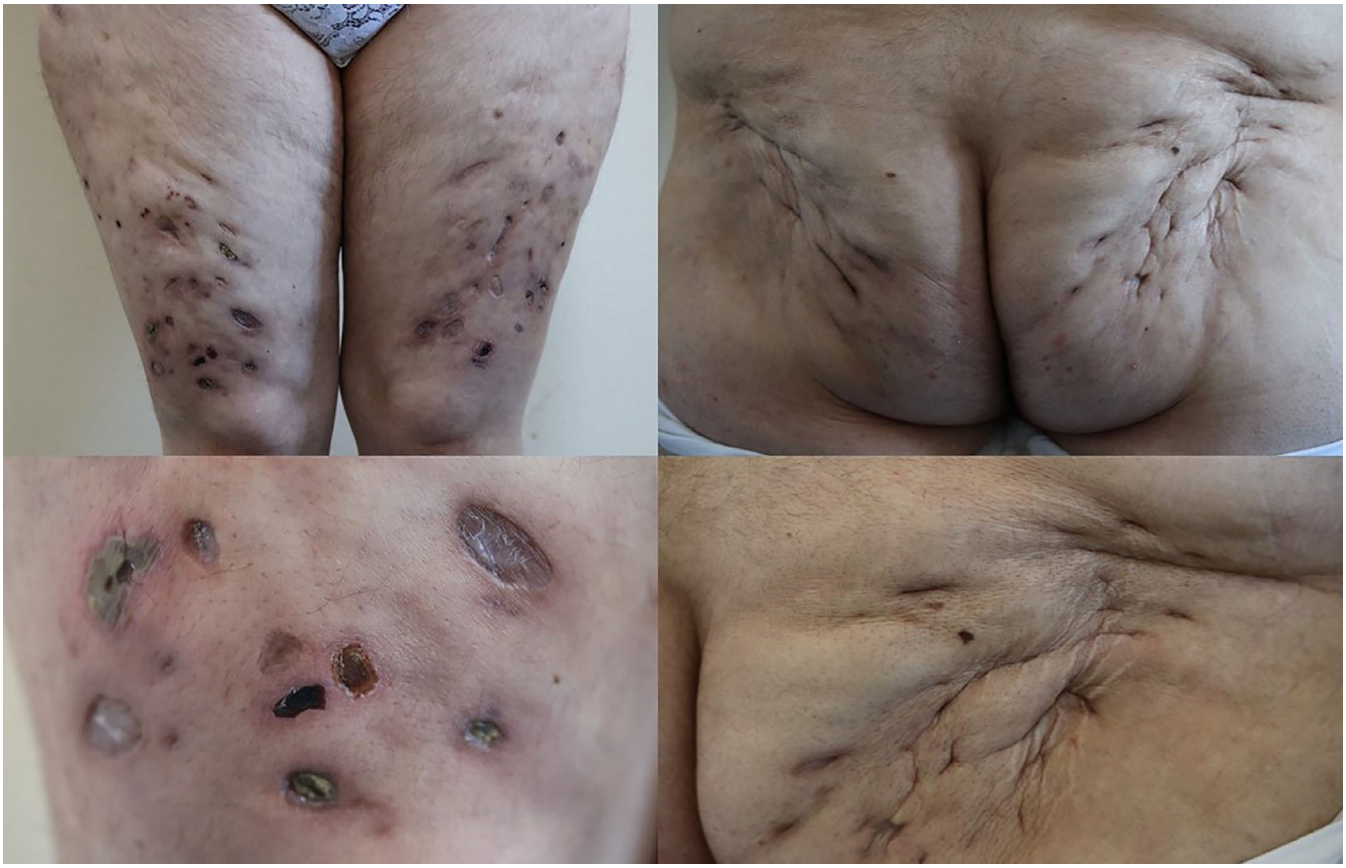

FIGURE 1 Multiple, 1-2 cm, ulcerations and hyperpigmented, depressed scars on bilateral extensor surfaces of femoral skin and multiple deep, atrophic, and devastating scars on lower extremity and thighs

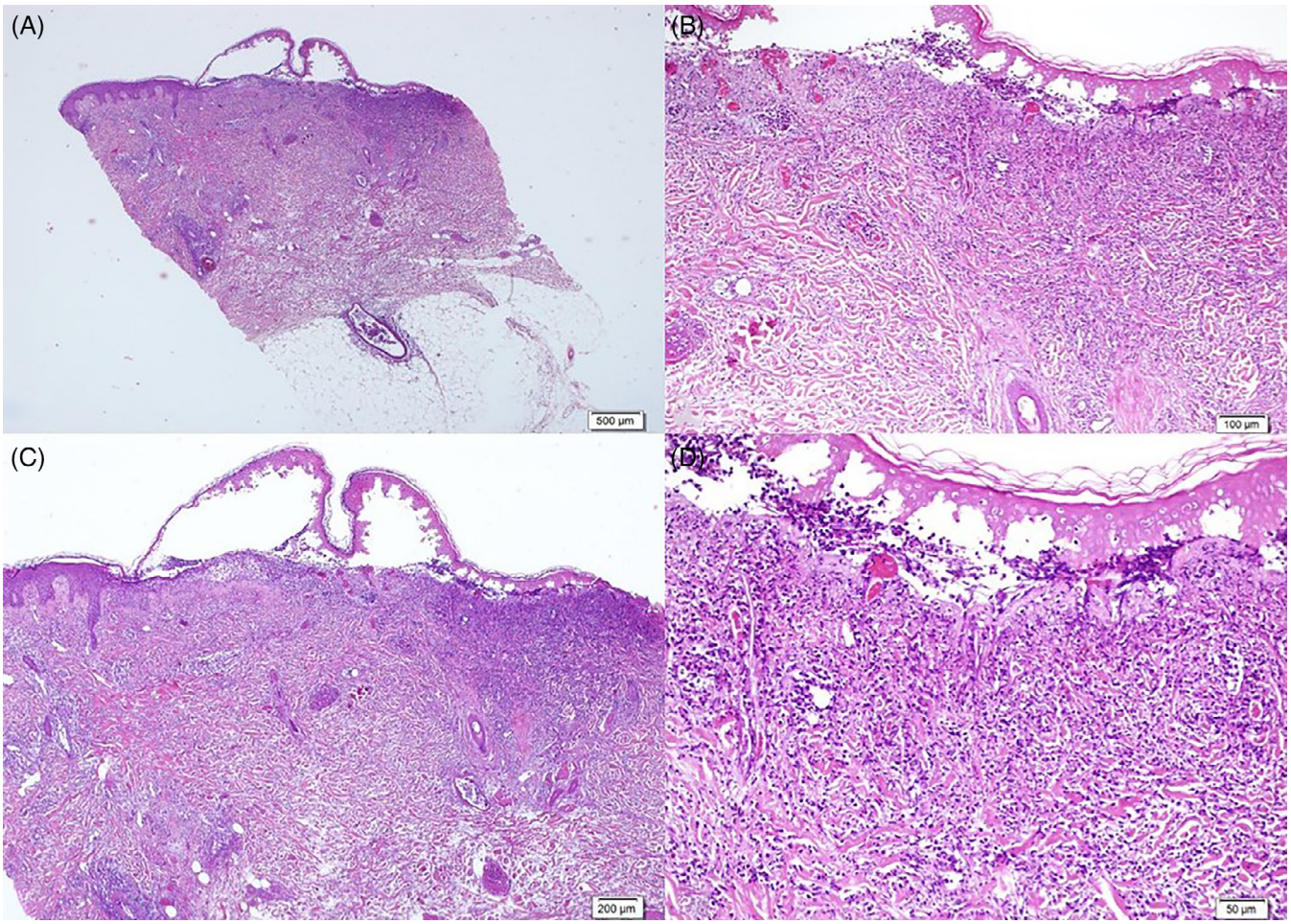

FIGURE 2 Separation at the dermoepidermal junction, dense inflammatory infiltration, and thrombus in vascular lumen in dermis (hematoxylin and eosin, ×2, ×4, ×10, ×20)

Topical creams, including fusidic acid, and *Triticum vulgare* ethylene glycol aminophenyl ether were offered for skin lesions.

Drug abuse is an important and complex psychocutaneous disorder, which is manifested by compulsive substance use despite its harmful outcome. In the literature, it is also known as addiction and misuse in which some changes in the brain's wiring occur that may cause people to have an intense desire for the drug and it is difficult for them to stop using it. Also, symptoms of major depression or schizophrenia may be underlying in these patients.[4]

Skin popping is an underdiagnosed skin manifestation of drug abuse that may be easily misdiagnosed by clinicians especially for those who are not trained to recognize the clinical manifestations of drug abuse. It may represent various acute and chronic, cutaneous, and extracutaneous complications. Bacterial infections are the most common acute cutaneous complications of skin popping and clinical presentation may vary from subcutaneous abscesses, leg ulcers, and cellulitis to life-threatening conditions such as osteomyelitis, necrotizing fasciitis, wound botulism, and sepsis/myonecrosis syndrome.[5-7] The impaired skin barrier allows easy inoculation of microorganisms and irritants into the skin that result in the formation of superficial or deep suppurative infections.

Chronic cutaneous complications of skin popping may change from scar formation, hyperpigmentation, cutaneous foreign body granulomas, and amyloidosis to necrosis of the digits due to the administration of vasoconstrictive agents such as cocaine.[7,8] Devastating scars on thighs and depressed atrophic scars were the most prominent complications in our patient. We believe that in our patient skin ulcers may be related to the vasoconstrictive effect of nonsteroid anti-inflammatory drugs including diclofenac sodium.[9]

Patient history is the major factor in the diagnosis of skin popping and histopathological examination is usually not performed in these patients. Especially in cases who presented with multiple scars and multiple and/or giant ulcers with irregular borders, a histopathological examination should be performed. Histologically, skin popping is usually characterized by nonspecific ulcer formation, but in the long term in some cases, foreign body granulomas and cutaneous amyloidosis have been reported.[8] In our patient, the dermoepidermal separation may be related to blunt trauma to the skin during popping.

In conclusion, we want to remind that drug abuse may be associated with a wide variety of skin and psychiatric disorders. Psychocutaneous conditions are difficult to diagnose and a challenge to treat. Psychiatry consultation and promoting family consultation is a must do in cases such

as our patient for the best management. Clinicians should keep this entity in mind to provide early treatment and to prevent acute and chronic cutaneous and/or extracutaneous complications.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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