

palms and soles but involving the mucosa, various possibilities can be considered: (i) Mucosal involvement could be included as a manifestation of disseminated superficial porokeratosis; (ii) A new type of porokeratosis could be established (disseminated superficial porokeratosis with mucosal involvement); (iii) This may be an unusual form of porokeratosis plantaris, palmaris et disseminata without initial involvement of palms and soles (7, 8).

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Mechanic's Hand: A Clinical Diagnostic Aid in Dermatomyositis

Sir,

Dermatomyositis is an autoimmune inflammatory disorder of the skin and muscle, characterized by certain cutaneous features such as Gottron's papules, heliotrope erythema and poikilodermatous rash. We report here a patient with dermatomyositis with a rarely described cutaneous feature, "mechanic's hand", which may serve as a useful diagnostic aid.

CASE REPORT

A 42-year-old male presented with the chief complaints of fever, diffuse erythema with hyperpigmentation on the face and trunk, and oral ulcers for the past 3 months. The lesions on his back showed the characteristic "shawl sign" (Fig. 1). On the dorsal surface of the distal and proximal interphalangeal joints of both hands were scaly, violaceous macules, papules and plaques. He also had scaly, non-pruritic keratotic papules on the ulnar aspect of the thumb, radial aspect of the other fingers and palms of both hands, i.e. mechanic's hands (Fig. 2), and no history of drug intake, photosensitivity, joint pain, muscle weakness or weight loss. There were no neurological, respiratory or gastrointestinal complaints prior to the onset of symptoms.

The systemic examination was within normal limits. A clinical suspicion and the working diagnosis were dermatomyositis. Systemic lupus erythematosus had to be ruled out. Routine investigations, i.e. haemogram, serum bilirubin, renal function tests, blood sugar, urinalysis, examination of stool, chest X-ray and electrocardiogram, were within normal limits. During admission he gradually developed proximal muscle weakness, and his muscle enzymes were creatine phosphokinase (CPK) 1971 IU and lactate dehydrogenase (LDH) 395 IU. Antinuclear antibodies were present in a speckled pattern, serum glutamic-oxaloacetic transaminase (SGOT) 57 IU and serum glutamate pyruvate transaminase (SGPT) 110 IU. The electromyogram was suggestive of myopathy. Muscle biopsy showed non-specific features. Ultrasonography of the abdomen and pelvis was normal. Per rectal examination and examination of the genitalia were normal. Histology of a plaque from the back showed epidermal atrophy, basal

cell degeneration with perivascular mononuclear infiltrate and myxoid change in the upper dermis. Direct immunofluorescence showed immunoglobulin G and C3 at the basement membrane. Histology of a papule from the finger showed hyperkeratosis, parakeratosis, acanthosis, and perivascular chronic inflammation and myxoid change.

Internal malignancy was ruled out by a detailed history, clinical examination and ultrasonogram of the abdomen and pelvis. The above findings confirmed the diagnosis of dermatomyositis and the patient was treated with dexamethasone pulse therapy in the form of intravenous dexamethasone 100 mg on 3 consecutive days every month. He was simultaneously started on a daily dosage of 40 mg prednisolone and azathioprine 150 mg orally. After 2 months of treatment, there was a significant improvement in the myopathy and skin lesions. The keratotic papules and plaques flattened, and the erythema completely subsided. The enzyme levels returned to almost normal levels: CPK 254.4 IU and LDH 24.9 IU.

DISCUSSION

Dermatomyositis is a disorder mainly of skin, muscle and blood vessels characterized by erythematous and oedematous changes in the skin, with associated muscle weakness and inflammation. The pathognomonic cutaneous sign of dermatomyositis is the presence of Gottron's papules, found in 70–80% of patients, and Gottron's sign. The characteristic signs include: (i) heliotrope rash (30–60%); (ii) periungual telangiectasia; (iii) violaceous erythema on the dorsal aspects of the hands and fingers, extensor aspects of the forearms and upper arms, deltoids, posterior shoulders and neck (shawl sign, 22%), and V area of the anterior neck and upper chest (V sign, 36%); and (iv) mechanic's hand: bilateral, symmetric confluent hyperkeratosis with the appearance of that produced by manual labour, distributed along the ulnar aspect of the thumb and radial aspect of the fingers, also prominent on the index and middle fingers, with occasional extension to the plantar surface. It may present as a roughening and cracking

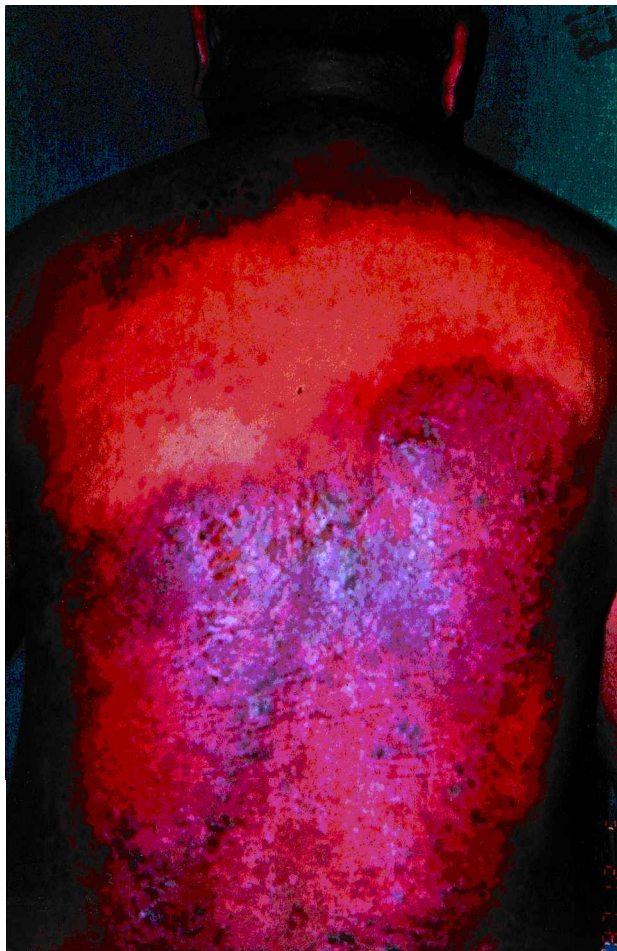


Fig. 1. Shawl sign on the back.

of the skin over the lateral and plantar aspects of the fingers and is reported in up to 33% of patients with dermatomyositis (1, 2). The distinctive discrete keratotic papules scattered over the palms in this patient have rarely been described. The histopathological changes in the hand lesions were similar to those seen in the trunk lesions, including myxoid change. Mechanic's hand is also described in 71% of patients with antisynthetase syndrome with anti-Jo-1 antibodies (1). In addition to myopathy, these patients may have interstitial



Fig. 2. Mechanic's hands.

lung disease (50–90%), inflammatory polyarthritis (75%), sclerodactyly (72%), Raynaud's syndrome (62%) and fever (87%). Our patient did not have the above-mentioned clinical features and the test for antisynthetase antibodies was not carried out owing to the non-availability of this facility.

We have written this brief report to familiarize other physicians with mechanic's hand and its association with dermatomyositis. The awareness of this condition as a manifestation of underlying myositis would also help in the evaluation of patients with early undifferentiated connective tissue disease.

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