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Onychomadesis and Pyogenic Granulomas After Postoperative Upper-Limb Immobilization[☆]



Onicomadesis y granulomas piogénicos tras inmovilización posquirúrgica de la extremidad superior

Numerous reports of nail disorders resulting from surgery can be found, particularly when prolonged limb immobilization is involved. We report the case of a patient with onychomadesis and pyogenic granulomas after immobilization of an arm with a plaster cast.

The only finding of note in the medical history of this 35-year-old man was allergy to penicillin and its derivatives. He attended the dermatology outpatient clinic because of a nail lesion that had first presented 2 months earlier. The physical examination revealed erythematous nodules with a vascular appearance in the proximal nail folds of the second and fourth fingers of the left hand, and complete proximal detachment from the nail plate on the second to fifth fingers of the same hand (Fig. 1). No contralateral lesions were present. Fever, pain, increased sweating, paresthesia, and other associated symptoms were absent. He had not had any previous infectious diseases or started taking new drugs. The patient had undergone surgery for distal detachment of the biceps brachii tendon and had had a plaster cast from halfway up the arm to the metacarpal joint. The lesions appeared approximately 2 weeks after removal of the plaster cast. The lesions resolved after 3 months without treatment. The patient was diagnosed with pyogenic-granuloma-associated onychomadesis after postoperative immobilization of his arm.

A range of nail disorders have been reported after surgery, particularly when the limb has been immobilized. In most cases, lesions can be considered a form of reflex sympathetic dystrophy, and can range from leukonychia, trachyonychia, Beau lines, edema, and watch-crystal nails.¹

Onychomadesis is the complete loss of the nail plate due to detachment at the proximal zone. It is usually the result of trauma, fever, infections, drugs, surgery, or peripheral ischemia.

Pyogenic granuloma is a benign eruptive hemangioma. When it appears in the nail apparatus, it is usually caused by mild penetrative lesions, friction, immobilization, or drugs such as antiretrovirals, cyclosporin, and chemotherapy.

The association of onychomadesis and pyogenic granuloma after limb immobilization with a plaster cast after surgery was reported in a series of 9 patients by Tosti et al.² in 2001. No other reports have been published in the literature to date. The authors believed that the nail disorders were caused by mild damage to the peripheral nerve after immobilization. All patients were men between 15 and 42 years old with a bone fracture requiring plaster-cast immobilization for 1 to 3 months. The lesions appeared between 7 and 30 days after removing the cast. Similar changes have been reported in patients with reflex sympathetic dystrophy.^{3,4} This condition is also accompanied by other clinical manifestations such as pain, vascular changes, excessive sweating, edema, and functional limitation.⁵ Atrophy and even skin ulcers may also be seen.⁶ These findings



Figure 1 Pyogenic granulomas in the proximal nail fold of the second and fourth finger of the right hand and detachment of the nails of the second to fifth fingers.

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were not reported in any of the patients reported in the literature or in our patient, and so that condition was ruled out. All cases resolved spontaneously without sequelae.

If postoperative pyogenic granulomas and onychomadesis appear suddenly without any other clinical manifestations after extended immobilization, we should explain to the patient that these benign lesions will resolve spontaneously. It is important to rule out disorders that form part of reflex sympathetic dystrophy syndrome, which may be associated with substantial functional impairment and permanent sequelae.

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