

Extensive keloids over lesions of air-borne contact dermatitis: An unusual manifestation

Sir,

A 36-year-old man, farmer by occupation, sought dermatology consultation for intensely pruritic, reddish, thickened areas of skin over abdomen and flexures of extremities for the past three months. He was a diagnosed case of air borne contact dermatitis and had history of itchy, oozy, reddish papules and plaques on face and back in addition to sites mentioned above with relapses and remissions for the past 10 years. Clinic records revealed patch test positivity to parthenium (+) according to the International Contact Dermatitis Research Group. One year back he had been treated in our clinic with tapering doses of prednisolone and azathioprine, which he took for four months. After the disease went into remission, he lost to follow-up. He sought consultation again after itching reappeared and the present lesions developed. On cutaneous examination, he had multiple erythematous, keloids in bizarre distribution over chest, abdomen, cubital fossae, popliteal fossae and right ear lobe [Figure 1]. Back was spared. There was neither history of trauma except intense pruritus in these areas nor of burns prior to development of keloids. These keloids were not present one year ago as found in his clinic records. He didn't have keloids earlier and none in his family had similar problem. Patient showed symptomatic improvement with antihistamines, topical clobetasol and emollients.

Keloids develop as a result of an overgrowth of dense fibrous tissue after skin injury. When an imbalance occurs between the anabolic and catabolic phases of the healing process, more collagen is produced than is degraded, and the scar grows in all directions resulting in keloid formation. For months to years they can continue to grow causing symptoms of pain and itching.^[1] Most of the patients present with few lesions, however, those developing spontaneous keloids or after acne or chickenpox have multiple lesions. Unusual cases of massive keloids have been reported following severe burn injury. Genetic factors are thought to play a role in pathogenesis of keloids as keloids occur more frequently among Blacks, Hispanics and Asians, and less commonly in Caucasians. It has also been found to occur in association with Ehler



Figure 1: Extensive keloids in bizarre distribution over chest, abdomen and cubital fossae

Danlos syndrome, Dubowitz syndrome and Rubinstein Taybi syndrome. Keloids develop subsequent to injury or inflammation of skin. In many cases, patients fail to recall an inciting event. These spontaneous keloids are postulated to occur in response to some unrecognized or forgotten inflammatory process. Keloidal fibroblasts overexpress growth factors like vascular endothelial growth factor (VEGF), transforming growth factor- β_1 (TGF- β_1), transforming growth factor- β_2 (TGF- β_2) and platelet derived growth factor- α (PDGF- α) receptor, which may be responsible for pathological scarring.^[2,3] Keloidal fibroblasts, in addition, have lower rates of apoptosis related to downregulation of apoptosis-related genes resulting in overgrowth of fibrous tissue.^[4,5] In the presented case, keloids developed secondary to intense pruritus of air borne contact dermatitis. The genesis of keloids in our patient is obvious as non-approachable sites of back were completely spared and any preceding history of burns or any other trauma was lacking. Thus management of pruritus is essential in all patients with genetic susceptibility to develop keloids.

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