Pseudo-knuckle pads: an unusual cutaneous sign of obsessive-compulsive disorder in an adolescent patient

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Knuckle pads are discrete benign cutaneous lesions overlying the extensor surfaces of the fingers and hand joints and are unrelated to trauma, whereas pseudo-knuckle pads may be considered as a form of callosity that appears after repeated trauma. This type of knuckle pad has been described in children with obsessive behavior as "chewing pads" and in adults as occupational disorder. Cases of pachydermodactyly, benign fibromatosis of the fingers, have been described as the unusual forms of knuckle pads that usually affect young adult males. We believe that pseudo-knuckle pads, chewing pads or pachydermodactyly are terms which have been used to decribe the same clinical situation reported in different patients. Here we describe a 12-year-old male patient with pseudo-knuckle pads along the metacarpophalangeal joints developed secondary to repeated trauma reflecting obsessive-compulsive disorder characterized by a tic-like habit. He received fluvaksamine 25 mg/day. The lesions started to disappear after three months of therapy. The recognition of pseudo-knuckle pads by dermatologists and pediatricians is very important in adolescent patients because these lesions may be clues for diagnosis of serious psychiatric problems. The collaboration of a dermatologist or pediatrician with a psychiatrist is essential in the follow-up of these patients.

Key words: callosities, pseudo-knuckle pads, obsessive-compulsive behavior.

Pseudo-knuckle pads, an unusual form of callosity, appear overlying the finger joints in response the repeated trauma[1]. Here we describe a 12-year-old male patient with pseudo-knuckle pads along the metacarpophalangeal joints developed secondary to repeated trauma reflecting obsessive-compulsive disorder characterized by a tic-like habit.

Case Report

A 12-year-old male student was admitted with a one-year history of asymptomatic thickening of the hands. There was no family history. Physical examination revealed diffuse cutaneous thickening and hyperpigmentation along the metacarpophalangeal joints (Fig. 1). Interestingly, it has been noted that the patient repeatedly rubbed his hands during his physical examination. It was learned that he had repeated this movement approximately 100 times daily for one year.

Fig. 1. Photograph illustrating diffuse cutaneous thickening and hyperpigmentation along the metacarpophalangeal joints.

Histological examination revealed marked epidermal hyperkeratosis with acanthosis and moderate papillomatosis showing similar histopathological features with a simple callosity. The roentgenogram of his hands revealed no abnormality.

We recommended 20% urea cream preparation for the patient and referred him to a pediatric psychiatrist. He received fluvaksamine 25 mg/day with the diagnosis of obsessive-compulsive disorder. The patient stopped rubbing his hands and the lesions started to disappear after three months of therapy.

Discussion

Callosities may develop on any area of skin secondary to repetitive trauma, pressure or friction[2]. The medical terminology of different callosities is still confusing.

Knuckle pads are discrete benign cutaneous lesions overlying the extensor surfaces of the fingers and hand joints unrelated to trauma. The lesions are usually skin-colored and freely movable. Occasionally they may demonstrate a hereditary pattern[1,2]. Pseudo-knuckle pads may be considered as a form of callosity that appears after repeated trauma. This type of knuckle pad has been described in children with obsessive behavior, as 'chewing pads' and in adults as occupational disorder[1,2].

Cases of pachydermodactyly, benign fibromatosis of the fingers, have been described in several publications as the unusual forms of knuckle pads that usually affect young adult males[3-13]. The male predominance has been explained by the effect of hormonal triggering in puberty[3]. It has been suggested that repeated rubbing of the fingers or mechanical injury to the joints may contribute to this condition[7,10]. We think that pseudo-knuckle pads, chewing pads or pachydermodactyly are terms which have been used to describe the same clinical situation reported in different patients.

Our patient had a tic-like habit characterized by the repetition of the same movement approximately 100 times daily. Similarly, Lautencschlager et al.[3] described another adolescent male patient diagnosed as pachydermodactyly reflecting obsessive-compulsive behavior.

The lesions of our patient disappeared after he stopped rubbing his hands with fluvaksamine treatment. We think that callosities of the hands were the consequence of the repeated mechanical injury secondary to the ritualistic behavior in our patient. The histological examination revealed predominantly epidermal changes characterized by marked hyperkeratosis and acanthosis. Dermal thickening was not prominent in our patient, whereas pachydermodactyly usually shows marked dermal thickening with extension of collagen fibers into subcutaneous tissue. We think that the lesions of our patient must be considered as pseudo-knuckle pads as a result of repeated mechanical trauma reflecting obsessive-compulsive behavior.

In conclusion, we think that pachydermodactyly and pseudo-knuckle pads or chewing pads reflect the same clinical entity described in different patients. We preferred the term "pseudo-knuckle pads" in our patient because of the presence of repeated trauma. The absence of the prominent dermal changes might exclude pachydermodactyly. The recognition of pseudo-knuckle pads by dermatologists and pediatricians is very important in adolescent patients because these lesions may be clues for diagnosis of serious psychiatric problems. The collaboration of a dermatologist or pediatrician with a psychiatrist is essential in the follow-up of these patients.

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