

Case Report

Infantile acropustulosis: a case report

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ABSTRACT

Acropustulosis is a benign cutaneous disease. It is characterized by recurrent crops of pruriginous vesicles, papules and pustules affecting the acral areas. It is self-resolving. Its etiology is unknown but it can be associated with scabies. Typically begins between 2 to 24 months of life, but can also occur in children. We report a case of infantile acropustulosis in a 11-year-old boy which started at the age of 3 years.

Keywords: Infants, Acral, Recurrent pustules, Scabies

INTRODUCTION

Infantile acropustulosis was described simultaneously by Kahn and Rywlin and, Jarratt and Ramsdell, in 1979.¹ It is characterized by recurrent eruptions of erythematous papules that progress to vesicles and pustules of 1 to 4 mm, localized mainly on palms and soles. It is accompanied by intense pruritus. The dorsal aspect of hands and feet are most commonly affected, whereas limbs, trunk, face and scalp are less frequently affected. Outbreaks occur every 2 to 3 weeks and each episode lasts for 3 to 14 days. Episodes become less frequent and intervals between them become longer as the disease progresses. It typically begins between 2 and 24 months of life, however, cases in recently born infants and children up to 9 years old have been reported. The attacks decrease gradually, usually within few years of onset, but in the summer months in particular, flares can be severe and the symptoms are difficult to treat.

CASE REPORT

A 11-year-old boy presented with painful and itchy pus filled skin lesions over right hand since 1 week. The child used to have recurrent episodes of similar lesions since 3

years of age involving the same hand. Lesions used to subside on treatment and recur subsequently. On examination, multiple papulovesicles and pustules were present over the dorsal aspect of fingers and palmar aspect of ring and middle finger of right hand (Figure 1). Few crusted papules with scaling were seen on the dorsum of right thumb and tip of right ring finger (Figure 2).



Figure 1: Multiple papulo-vesicles and pustules present over the palmar aspect of ring and middle finger. Few pustules present over dorsum of right thumb.



Figure 2: Multiple papulo-vesicles with crusting and scaling present over dorsum of right middle and ring finger.

Punch biopsy from lesion on right thumb was performed. On histopathological examination, epidermis showed hyperkeratosis, acanthosis, spongiosis, club shaped elongation of rete ridges. Focal areas showed subcorneal vesicle filled with neutrophilic debris and few areas showed ulceration covered by neutrophilic exudate (Figure 3). Dermis contained dense inflammatory infiltrate of neutrophils, eosinophils and lymphocytes.

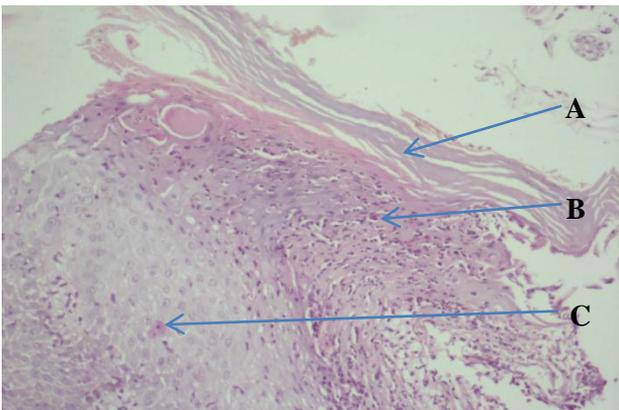


Figure 3: Epidermis showed hyperkeratosis, acanthosis, spongiosis. Focal areas show subcorneal vesicle filled with neutrophilic debris. (A= hyperkeratosis; B=focal area of subcorneal pustule; C=acanthosis and spongiosis).

DISCUSSION

IA is a benign cutaneous disorder and its exact incidence is not known.² IA was first described in 1979 as a pruritic vesiculopustular eruption on the palms and soles.³ It was considered a male predominance, but nowadays, larger series of cases tend to show an equal distribution between both genders.² It is seen in all races equally.² It usually begins between the first 2 to 24 months of life, although there have been cases reporting onsets by age of 9. Spontaneous resolution is usually observed around 3 years of age.² Some authors have suggested a relationship between infantile acropustulosis and scabies and concluded that possibly IA represents a cyclic

hypersensitivity cutaneous reaction against antigens or antigenic components of *Sarcoptes scabiei* infestation.² However in our patient, there were no signs and symptoms of scabies. Also, history of scabies when he was younger could not be elicited.

On histopathology, epidermal pustules with eosinophils within the pustules and without epidermal proliferation are seen.⁴ These pustules are located in upper epidermis and extending into the stratum corneum. While in the papillary dermis there is a permeation of a perivascular lymphohistiocytic infiltrate with some neutrophils and eosinophils.¹

The differential diagnosis include other vesicular and pustular diseases of childhood such as erythema toxicum neonatorum, transient neonatal pustular melanosis, impetigo, candidiasis, herpes simplex, langerhans cell histiocytosis, congenital syphilis, pustular psoriasis and pompholyx.²

Despite being a benign and self-limited disease, each episode may be associated with irritability, sleep disturbances, excoriations and secondary infections, so it is essential to opt for an effective symptomatic treatment.²

Antihistamines are useful in the treatment for their sedative effects.² There are also recommendations for the use of oral antibiotics and oral glucocorticoids. Topical glucocorticoids of medium and high potency are very useful in the treatment of IA. Dapsone can also be used.² Some studies have reported the use of Maxacalcitol.³ It was found to be effective in improving the symptoms and increased the interval between relapses. It is an active form of vitamin D3 that suppresses the production of cytokines, such as interleukin (IL)-1 α , IL-6 and IL-8, from keratinocytes, and suppresses Th1 or Th17 cell activation.³

Whenever an infant presents with recurrent crops of vesicles and pustules on extremities, in addition to ruling out pyoderma, a thorough search for scabies should be made and treated accordingly. Although IA usually starts in infancy, it can be seen even in older children, as in our case. This fact has been substantiated by other reports also. Hence we are reporting this case for its prolonged course seen in our patient.

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Ethical approval: Not required

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