REVIEW ARTICLE

Infantile pustular acrodermatitis: Report of 6 cases from our files and very brief review of the literature

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ABSTRACT

Infantile pustular acrodermatitis (API) or infantile acropustulosis is a relatively rarely observed pathology in dermatology and pediatrics. It is a process that is common in children under two years of age, presenting with papules, pustules and vesicles located in acral areas, such as hands and feet. We present six cases, all of them in young children who presented this type of lesions and a brief review of the picture is made.

INTRODUCTION

API is a disease that was described in 1979 by authors Kahn and Rywlin, who reported two cases in a boy and a girl, whose parents told them that the symptoms had started practically at birth with an almost identical evolution.[1] However, these same authors state that other dermatologists had previously presented similar cases without being able to identify a disease as such and without results in the established treatments. They also indicate that in 1977 and 1978, Jarratt reported nine cases with a range of onset between 2 to 10 months. The patients were followed until spontaneous remission, which occurred at 18 to 20 months of age.

Clinically it is characterized by the early appearance of recurrent outbreaks of erythematous papules that rapidly evolve into vesicles and pustules, with an approximate size of 1 to 4 mm. The preferential location is palms and soles, but there may be involvement of the dorsum of hands and feet and with a lower frequency, face, scalp, trunk and extremities. Outbreaks last approximately 7 to 14 days with spontaneous remission and subsequent relapses. As the evolution progresses, they are less frequent and usually the disease tends to disappear after the second or third year.[2] Although most cases have been reported in black patients, it can appear in any race and sex, being its incidence unknown and its final evolution, as already indicated, favorable.

CASE NO.1

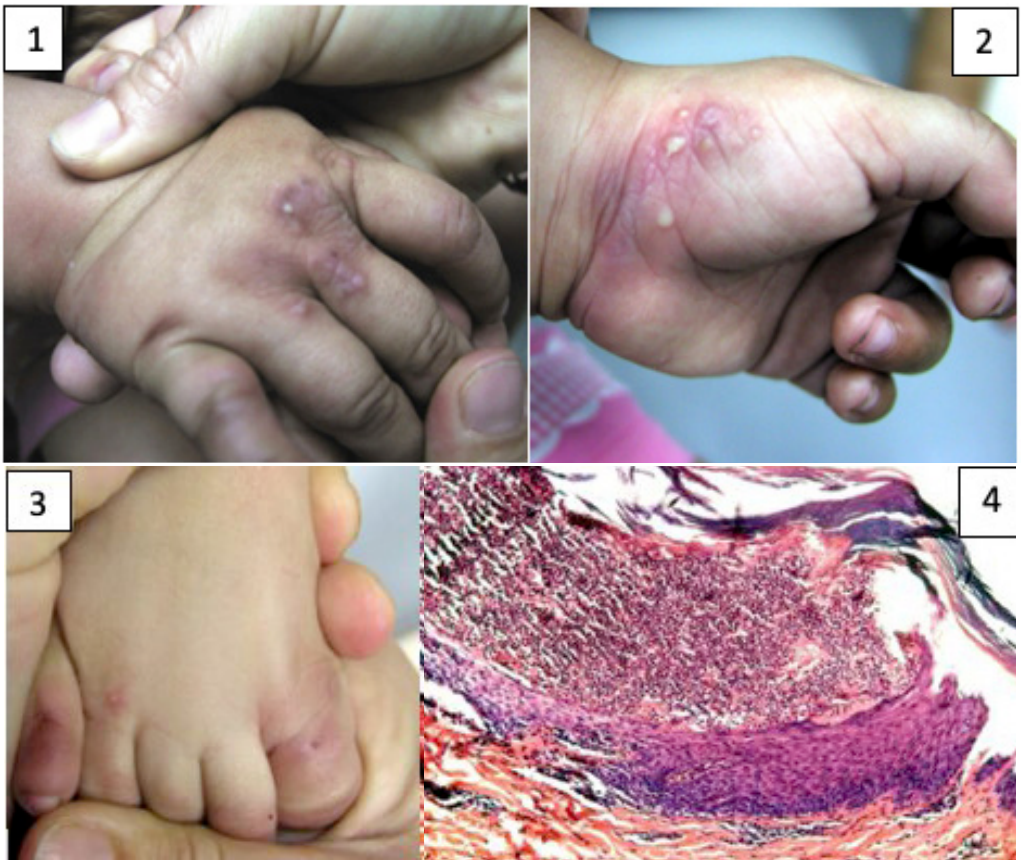
Female patient, one year and seven months old, whose mother reported that the process began one year earlier with papules, vesicles and pustules located on the hands, feet and knees, with approximately one year of return and accompanied by intense pruritus.

A culture of the pustules was performed and was negative.

Histopathologic study reported: thickened skin with subcorneal and intraepidermal pustule formation, loaded with neutrophilic polymorphonuclear cells. Adjacent epidermis with granulosa reinforcement and crust formation. Thickening of the stratum Malpighi and mild prolongation of papillae with exocytosis of lymphocytes and neutrophils. Dermis with moderate superficial perivascular lymphocyte infiltrate.

DIAGNOSIS

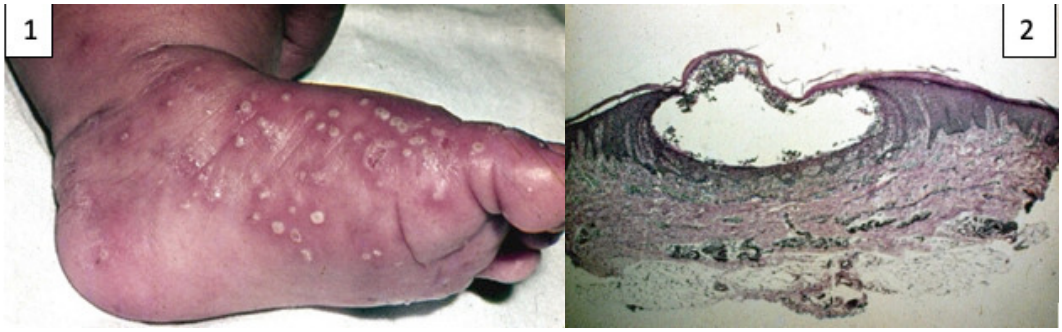
SUBCORNEAL AND INTRAEPIDERMAL PUSTULAR DERMATITIS, COMPATIBLE WITH INFANTILE PUSTULAR ACRODERMATITIS PUSTULOSA.



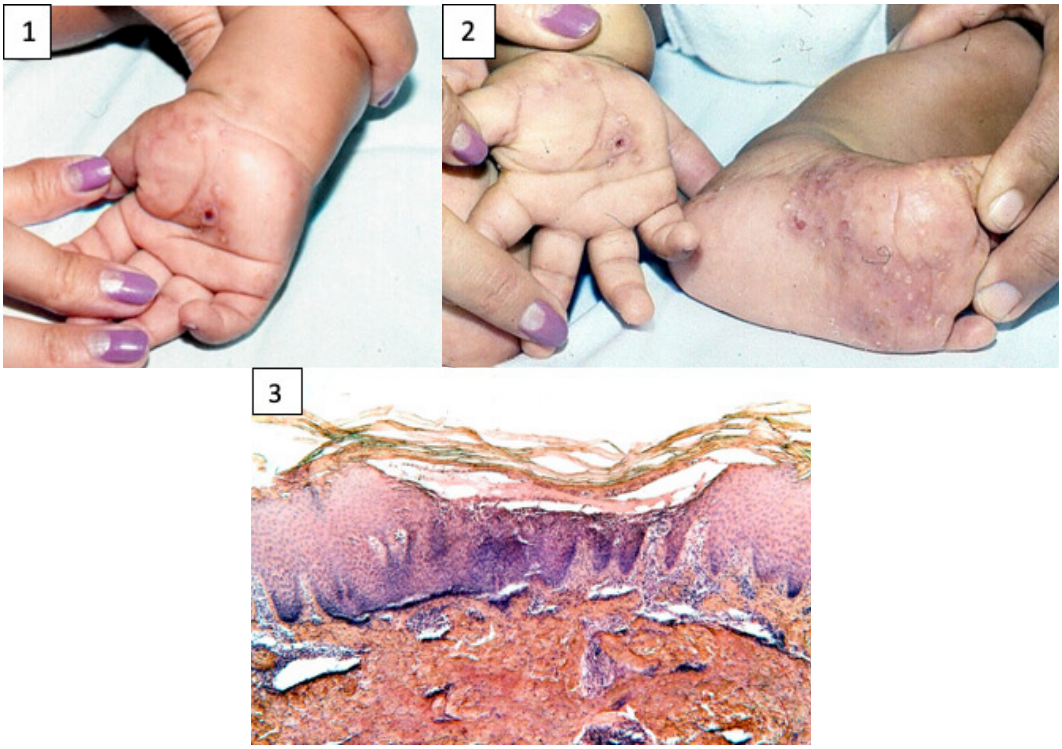
Case No.1. Presence of vesicular papules and pustules on erythematous base located on hands and feet (Photos 1-2 -3). Histopathology reports findings compatible with the disease (Photo 4).

CASES NOS. 2 TO 6

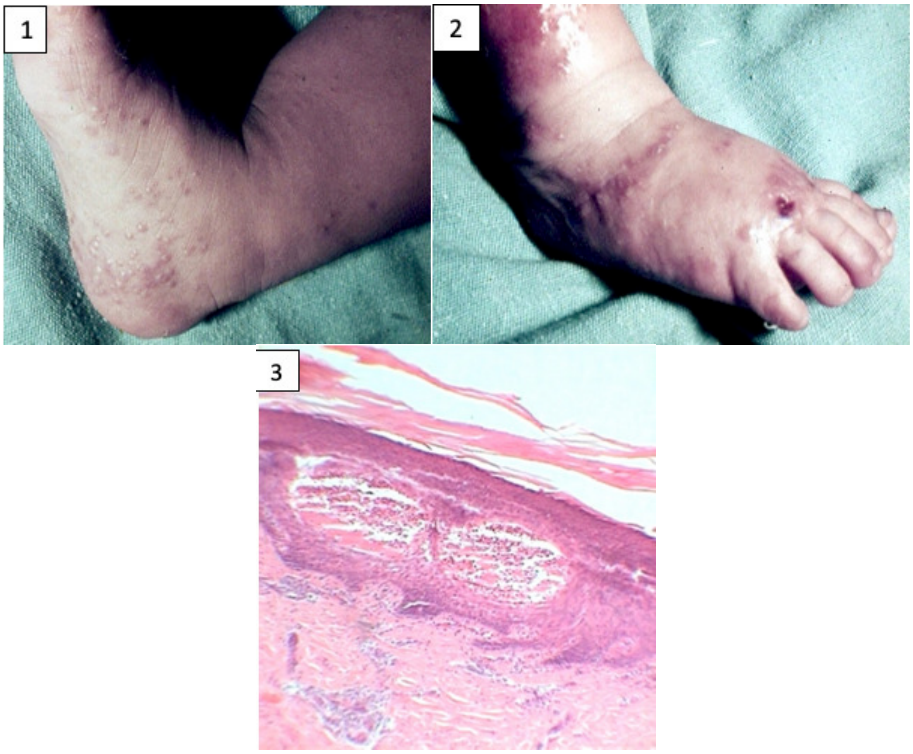
Since all the cases had very similar characteristics, we decided to unify them in order to make the article more agile. All the children presented similar characteristics to the previous case, i.e., very early onset, between 2 and 6 months of age, presence of pustular and vesicular lesions on a background of erythema. In all cases there was persistent moderate to severe pruritus that responded moderately to topical and systemic antipruritics. The biopsies as can be seen in the corresponding photos, showed the same pattern with subcorneal and intraepidermal pustules. In almost all cases the bacteriological culture was negative and in the three or four children who were followed up, the disease gradually decreased until its disappearance between two and three years of age. In case No. 4, there was persistence of pruritus until a little over three years of age. There was no need to administer dapsone in these patients.



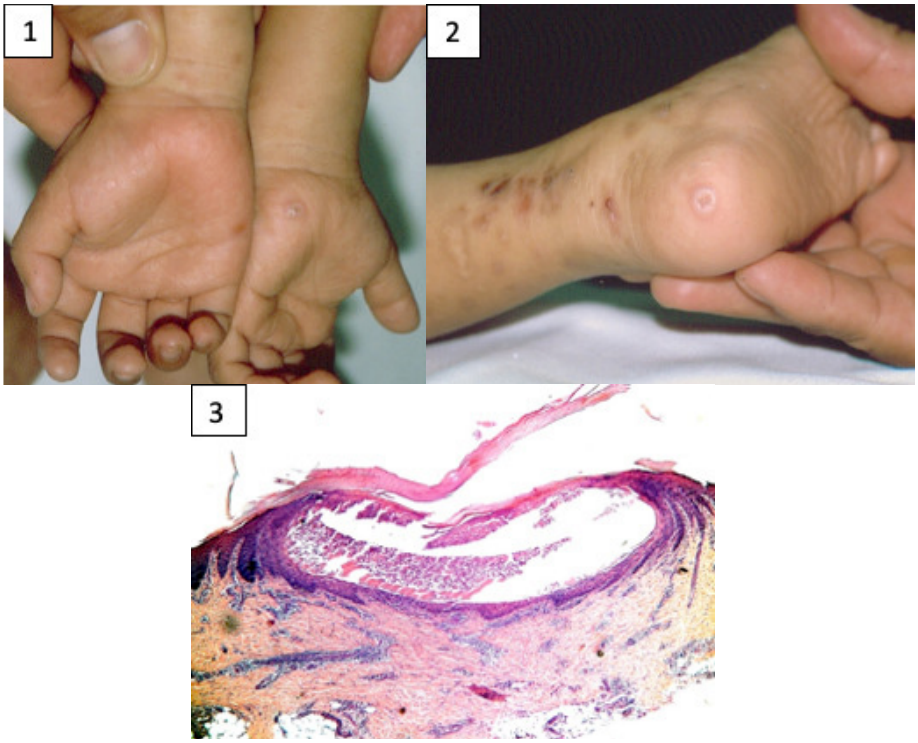
Case No.2. Pustular lesions on feet (Photo 1). In the biopsy (Photo 2) presence of intraepidermal subcorneal pustule.



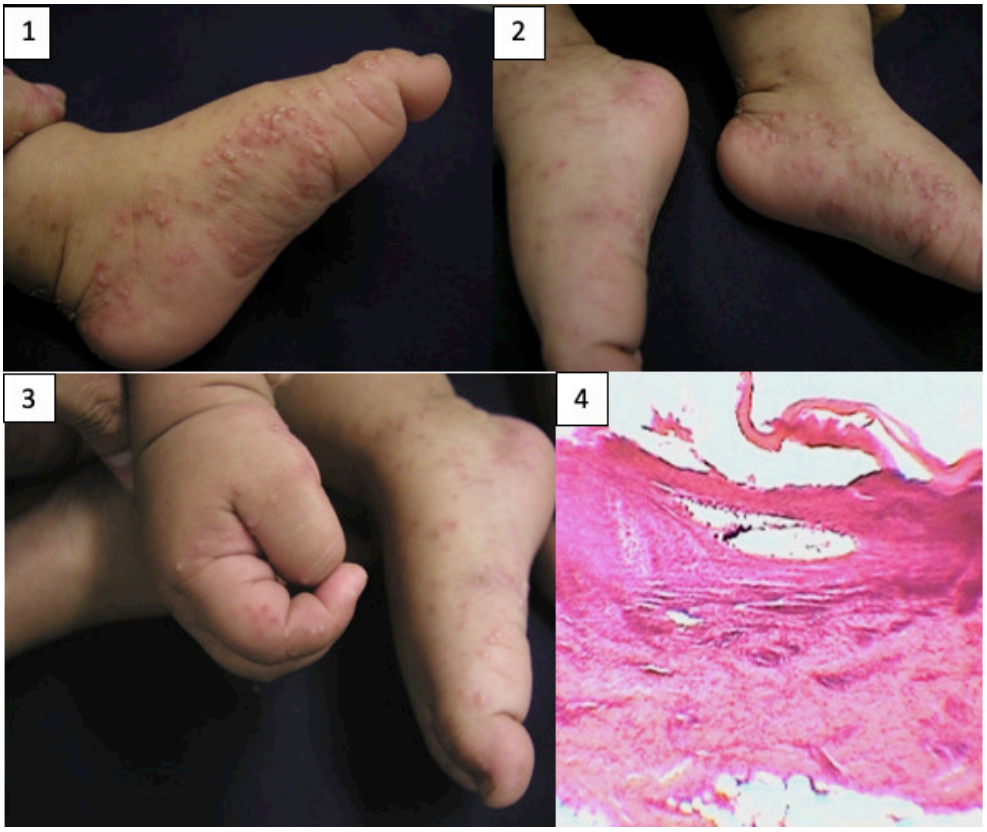
Case No.3. Similar clinical (Photo 1-2) and histopathological (Photo 3) characteristics.



Case No.4. Vesicles and pustules on soles, invading the dorsum of the feet and proximal part of the leg (Photo 1-2). In this patient the evolution of pruritus was more prolonged. Histopathology (Photo 3) confirmed the diagnosis.



Case No.5. The clinical (Photos 1-2) and histopathological (Photo 3) characteristics, as well as the evolutionary ones, are almost identical to the previous cases. A blister is observed on the heel (Photo 2).



Case No.-6 Multiple papules and pustules invading soles and lateral aspect of feet as well as palms and lateral aspect of hands (Photos 1-2-3). Clinic and histopathology (Photo 4.) similar to the previous cases.

DISCUSSION

API is a benign, relapsing, vesicular-pustular, self-limited, self-limiting rash, localized especially on the acral areas of infants and with a generally chronic course. The cause of the disease remains obscure, however, several studies describe this picture after a scabiotic infection and it is thought that it may be an allergic reaction to the scabies mite.

IPA can be present from birth or begin at any time up to two or three years of age, although there are rare reports of onset up to 9 years of age, with recurrences being very frequent while their intensity decreases in each outbreak as time goes by, until they finally disappear without leaving sequelae.[3]

Usually the picture is characterized by the existence of a more or less intense pruritus of local location, which is associated with the presence of papular-pustular lesions that end in crusts in a few days. Each outbreak lasts approximately 7 to 14 days with regression and recurrence every two to four weeks. Although the predominant location is acral, it can affect the dorsum of hands and feet, extremities, trunk, face and scalp. The disease has been associated with atopic dermatitis in a non-negligible percentage of cases.

The diagnosis is purely clinical; however, histopathology may be necessary when there are justifiable doubts.[4]

Despite being a benign condition, recurrent episodes may be accompanied by irritability, sleep disorders, excoriations and secondary infections.[5]

Histopathology shows the presence of unilocular, subcorneal or intraepidermal pustules containing neutrophils or eosinophils and polymorphonuclear

cells. In the dermis there may be a sparse perivascular lymphohistiocytic infiltrate with some neutrophils and eosinophils.[6]

DIFFERENTIAL DIAGNOSIS

The differential diagnosis is made with other diseases of the neonatal period such as: erythema toxicum neonatorum, transient neonatal pustular melanosis, epidermolysis bullosa, Langerhans cell histiocytosis. The main differential diagnosis is scabies, especially when superinfected, dyshidrotic eczema, impetigo and subcorneal pustular dermatosis.[6-7]

TREATMENT

Various treatments have been advocated over time with varying results and acceptance. Among them are topical corticosteroids, oral antihistamines, oral erythromycin and oral dapsone, however, given the benign nature of the condition, in many occasions this type of therapy is unnecessary.[8] Dapsone was considered for some time as the treatment of choice for severe cases that warrant it, more for its anti-inflammatory action than for its antimicrobial action,[5] but due to its side effects it has been used only in very necessary cases.

CONCLUSIONS

It is an infrequently observed condition and bibliographic reports on the subject are equally scarce. Its special clinical and evolutive characteristics allow to differentiate it from other similar conditions in the same age range. The process has a benign evolution with spontaneous resolution, usually not requiring further treatment. Soothing lotions, topical steroids, antihistamines, which due to their sedative action can be useful, and antibiotics in case of superinfection. Five of these cases were seen spaced over 20 years in our center and one of them was seen in another country. The small number of patients that we have observed in this period of time, speaks of the rarity of their observation, so we thought it was interesting to report them.

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