Editorial

Acropustulosis of infancy

The term Infantile acropustulosis was described simultaneously by Kahn and Rywlin and, Jarratt and Ramsdell, in 1979.[1] In the classic scenario infantile acropustulosis occurs in infants aged between 2-12 months although children as old as 9 years have been reported to have infantile acropustulosis.[2] Onset is usually in the first 3 + months of life but lesions may sometimes be present at birth. In the early days it was thought to be a disease prevalent more in boys but larger series of cases tend to show an equal distribution between both genders.[1]

Infantile acropustulosis is a self-limited, pruritic, vesicopustular eruption of the palms and the soles .There are recurrent crops of pruritic erythematous macules or papules that progress into vesicles and ultimately pustules.[4] The exact cause of acropustulosis is still not clear but sometimes it precedes or follows scabies infestation. The child may have an allergic reaction to the antigen released by burrowing mite that gets into their skin and causes scabies.[5] Although Acropustulosis may occur without preceding history of scabies as well.

It has been postulated that eosinophilic pustular folliculitis and infantile acropustulosis may be different manifestations of the same disease 6. Culture results for bacteria and viruses are found negative, and negative immunofluorescence results suggest that infantile acropustulosis is not an antibody-mediated autoimmune process. In some cases, association with atopic dermatitis has been noted but the correlation is still unclear.

Most recently recognized cause of infantile pustulosis is a deficiency of interleukin 1 receptor antagonist (DIRA), a recessive syndrome is caused by a loss of function mutation resulting in unopposed action of interleukin 1 and life-threatening systemic inflammation.[7] For infants presenting with a pustular vesicular dermatitis, several differential diagnoses come into consideration and the entities may be separated into infectious and noninfectious categories. Noninfectious etiologies include erythema toxicum neonatorum, acne neonatorum, transient neonatal pustular melanosis, eosinophilic pustular folliculitis, mastocytosis, malaria neonatorum, acne neonatorum, and incontinentia pigmenti. Infectious processes to be considered include scabies, bacterial sepsis, impetigo, staphylococcal scalded skin syndrome, cutaneous candidiasis, herpes simplex infection, syphilis, and varicella infection.[8]

The diagnosis of infantile acropustulosis mainly based upon the clinical manifestation, usually no laboratory studies are needed. A complete blood cell count often shows eosinophilia. Cultures and smears are sterile and help to rule out an infectious etiology. They show predominance of eosinophils and later neutrophils.

Histologically A unilocular, subcorneal, or intraepidermal pustule containing polymorphonuclear neutrophils or eosinophils in the upper epidermis and extending into the stratum corneum is characteristic in infantile acropustulosis. Papillary dermal edema and a mild perivascular, mostly lymphocytic, infiltrate in the dermis may be present. Direct immunofluorescence results are negative.[9, 10]

Acropustulosis of infancy is usually unresponsive to therapy; fortunately it is self-limited. But treatment to relieve the pruritus is necessary. High-potency topical steroids (classes 1 and 2) are used to control pruritus. Topical or oral antibiotics should not be given unless the lesions become secondarily infected with bacteria. Oral sedating antihistamines helps reducing itching and aid in sleep for irritable and extremely uncomfortable children. Clinical response to a therapeutic trial of dapsone has been suggested to help differentiate between a scabetic and nonscabetic cause of the eruption.[11] Some studies have reported the use of Maxacalcitol.[12]

Prognosis of infantile acropustulosis is good. Generally, the bouts of pruritic vesicopustules gradually decrease in severity with successive outbreaks and resolve by age 2-3 years, with absolute resolution by age 9 years.

Infantile acropustulosis is a fairly common condition in Bangladesh. Recurrence of the lesions are frustrating for the parents who get much concerned about it till they are counseled accordingly regarding the nature of the disease. Fortunately the disease is self-limiting and the child gets cured within a period of time.

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