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Case of Bullous Impetigo Progressing to Staphylococcal Scalded Skin Syndrome: Case Report

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Abstract: ***Staphylococcus aureus can cause many exfoliative skin conditions. This includes conditions like Bullous Impetigo which is localized to Staphylococcal Scalded Skin Syndrome which a lifethreatening condition is causing blistering of upper layer of skin. Certain exfoliative toxins are released that blister the superficial epidermis by hydrolyzing human desmoglein 1. Bullous impetigo, the toxin produces blisters locally at the site of infection, whereas in cases of the scalded - skin syndrome, it circulates throughout the body, causing blisters at sites distant from the infection. The disease especially affects infants and small children. SSSS is usually preceded by sore throat or conjunctivitis.***

Keywords: Bullous Impetigo, Staphylococcal Scalded Skin Syndrome

1. Introduction

Staphylococcal skin infections are one of the most common skin diseases in children. Staphylococcal Skin Infections can manifest either aslocalized bullous impetigo or generalized cutaneous involvement with systemic illness. It is caused by exfoliative toxin released by staphylococcus. Diagnosis is either done clinicallyor can be confirmed by a skin biopsy specimen. Prompt diagnosis and therapy with proper antibiotics and supportive treatment has led to a decrease in the mortality rate [1]. Here is caseon bullous impetigo developing into staphylococcal scalded skin syndrome in immunocompetent infant.

2. Case Report

A 10 month - old infant presented with a Flaccid bullae over central face axillae, groin, neck, inguinal areas, and back. The lesion started as a small macule with shiny crust and fissures in perioral and periorbital skin4 days back, which turned into a bulla and enlarged over the next 2 days and was associated with fever. There was no history of burns or trauma. On examination, a large erosive, erythematous area with a thin, shiny crust and fissures in perioral, periorbital, perianal and postauricular, skin detachment involving > 50% of the total body surface area was seen. Bullous impetigo, staphylococcal scalded skin syndrome (SSSS) and toxic epidermal necrolysis were considered as possible diagnoses. Swab/tissue cultures were performed; the results yielded amoxicillin - susceptible Staphylococcus aureus. Punch biopsy was performed, that revealed acantholysis at the upper spinous and granular layer with polymorphous infiltrates at the upper dermis. These findings were suggestive of bullous impetigo developing into staphylococcal scalded skin syndrome. Intravenous amoxicillin + clavunalic acid (50mg/kg per day) and local supportive care resulted in quick improvement with complete re - epithelialization in 12 days.

3. Discussion

Staphylococcus aureus is often responsible for late septic infections, more rarely of toxic ones, occurring in neonatal period [2, 3]. Although bullous impetigo and SSSS are considered as a spectrum of disease caused by staphylococcus aureus induced exfoliative toxins, they have distinct differences [2, 3]. In bullous impetigo, the exfoliative toxins are restricted to the area of infection, and bacteria can be cultured from the blister contents. In staphylococcal scalded skin syndrome the exfoliative toxins are spread hematogenously from a localized source causing widespread epidermal damage at distant sites [4, 5]. The lesions of bullous impetigo are commonly seen on the face, trunk and extremities which are vesicles to begin with and later becoming pus - filled, followed by rupture and crusting. The lesional bacterial culture reveals S. aureus. Nikolsky's sign, a disruption of normal skin caused by mechanical stress, is negative. In SSSS The diagnosis is mainly clinical, based on the findings of tender erythroderma, bullae, and desquamation with a scalded appearance especially in friction zones, periorificial scabs/crusting, positive Nikolsky sign, and absence of mucosal involvement [4, 5]. The diagnosis can be confirmed by culturing S. aureus from any suspected primary focus of infection, but A skin biopsy is usually not necessary, but if performed, may show superficial intraepidermal separation along the granular cell layer [6, 7]. In our patient, bullous impetigo was characterized by isolation of S. aureus and by histological findings. However, there was no case of extensive bullous impetigo followed by SSSS in neonates, as far as we know. Once SSSS is diagnosed, the treatment consists of supportive care and eradication of the primary infection with anti - staphylococcal antibiotics administered by vein for a minimum of seven days [8]. Bullous impetigo and staphylococcal scalded skin syndrome have a different prognosis.

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4. Conclusion

In conclusion, clinicians should be aware, although not frequent, that bullous impetigo may progress to SSSS which differs in mortality and close observation is required whenever suspicious.

References

[1] Menon NS. Staphylococcal scalded skin syndrome case series with review of literature. IAIM.2015; 2: 214 - 19.
[2] Amagai M, Matsuyoshi N, Wang ZH, Andl C, Stanley JR. Toxin in bullous impetigo and staphylococcal scalded - skin syndrome targets desmoglein 1. Nat Med.2000 Nov; 6 (11): 1275 - 77. [**PMID**: 11062541]
[3] Plano LR, Adkins B, Woischnik M, Ewing R, Collins CM. Toxin levels in serum correlate with the development of staphylococcal scalded skin syndrome in a murine model. Infect Immun.2001 Aug; 69 (8): 5193 - 97. [**PMID:** 11447206]
[4] Mockenhaupt M, Idzko M, Grosber M, Schöpf E, Norgauer J. Epidemiology of staphylococcal scalded skin syndrome in Germany. J Invest Dermatol.2005 Apr; 124 (4): 700 - 3. [**PMID**: 15816826]
[5] Hubiche T, Bes M, Roudiere L, Langlaude F, Etienne J, Del Giudice P. Mild staphylococcal scalded skin syndrome: an underdiagnosed clinical disorder. Br J Dermatol.2012 Jan; 166 (1): 213 - 15. [**PMID**: 21729032]
[6] Lasek - Duriez A, Léauté - Labrèze C, la Société franc¸aise de dermatopédiatrie. Signescutanés des sévices à enfants (à l'exclusion des sévicessexuels). Ann Dermatol Venereol.2009 Oct; 136 (11): 838 - 44.
[7] Courjon J, Hubiche T, Phan A, Tristan A, Bès M, Vandenesch F, Etienne J, Del Giudice P, Gillet Y. Skin findings of Staphylococcus aureus toxin - mediated infection in relation to toxin encoding genes. Pediatr Infect Dis J.2013 Jul; 32 (7): 727 - 30. [**PMID**: 23446443]
[8] Lamand V, Dauwalder O, Tristan A, Casalegno JS, Meugnier H, Bes M, Dumitrescu O, Croze M, Vandenesch F, Etienne J, Lina G. Epidemiological data of staphylococcal scalded skin syndrome in France from 1997 to 2007 and microbiological characteristics of Staphylococcus aureus associated strains. Clin Microbiol Infect.2012 Dec; 18 (12): E514 - 21. [**PMID**: 23078129]

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