Case Report

An extensive exfoliative dermatitis: a rare complication

Santosh Shimpiger*, Nakul Pathak, Nilima Narkhede, Sushma Save

Department of Pediatrics, TMNC and BYL Ch. Hospital Mumbai-8, Maharashtra, India

Received: 26 February 2020

Accepted: 30 March 2020

*Correspondence:

Dr. Santosh Shimpiger,

E-mail: shimpisantosh92@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Staphylococcal scalded skin syndrome (SSSS) is an extensive exfoliative dermatitis that occurs primarily in newborns and in previously healthy children. It is a rare complication of Staphylococcal infection. Author report a case of 1 year old male child with Staphylococcal Scalded Skin Syndrome diagnosed clinically and microbiological reports confirmed the diagnosis. The child responded to appropriate antibiotic therapy and was discharged after 14 days of antibiotics.

Keywords: Antibiotic, Culture, Infant, Necrolysis, Staphylococcal

INTRODUCTION

Staphylococcal Scalded Skin Syndrome [SSSS] also known as Ritter disease and Staphylococcal epidermal necrolysis. It encompasses a spectrum of superficial blistering skin disorders caused by exfoliative toxins or epidermolytic toxins (ETs) of some strains of *Staphylococcus aureus*. The incidence is between 0.09 and 0.56 cases/ million.¹ SSSS predominantly affects neonates of 3-15 days of age, children less than 5 years of life, and adults with various co-morbidities.² Mortality in children with Staphylococcal Scalded Skin Syndrome is 4%.³

CASE REPORT

A 1-year old male child with a history of head injury 4 days back presented with complaints of fever and ear discharge. On examination child had pallor, generalized edema, discharging sinus from scalp (Figure 1), skin involvement in the form of scaling of skin and multiple excoriations all over the body with desquamating rash over the perineal and perianal region (Figure 2). Systemic examination showed no abnormality. Clinical diagnosis of Staphylococcal Scalded Skin Syndrome was made.

Complete Blood Count showed leukocytosis (22,000 cells/ mm³), predominantly neutrophilic (78% neutrophils) with microcytic, hypochromic anemia (Hb-6.2 gm/dl).

Figure 1: Ulceration and discharging sinus over scalp.

Figure 2: Scaling lesions over the perineal region.

Treatment with Injection Vancomycin (60mg/kg/day in three divided doses) and Inj Meropenem (120mg/kg/day in 3 divided doses) was initiated and intravenous fluids were added in view of poor oral intake. Pus from the scalp lesion sent for culture grew Methicillin resistant *Staphylococcus aureus* sensitive to Gentamycin, Vancomycin and Linezolid. Treatment with Vancomycin was continued for 14 days. Blood culture showed no growth. Lesions subsided with the antibiotic therapy and the child was discharged.

DISCUSSION

Staphylococcus aureus is commonly found harmlessly colonizing human skin and mucosa without causing any morbidity.⁴ Colonization begins soon after birth. Sometimes, it breaks through the skin causing infection. Staphylococcal Scalded Skin Syndrome is a rare complication of staphylococcal infection with clinical features varying from superficial localized blisters to generalized exfoliation.⁵ Though known to occur in neonatal period, Staphylococcal scalded skin syndrome can also occur in infancy and early childhood.

Neonates and children are at a higher risk for SSSS due to their undeveloped immune system to produce antibodies against the epidermolytic toxins [ETs] and their inadequate renal capacity to excrete the pathogenic toxins. Similarly, immunocompromised adults or adults with renal diseases show a higher incidence of Staphylococcal Scalded Skin Syndrome.

The clinical features of Staphylococcal Scalded Skin Syndrome comprise a prodromal phase in which there may be fever and irritability. This is followed by the appearance of erythematous patches over the body, on which large superficial fragile blisters develop. When

these blisters rupture, the skin appears reddish and scalded.^{2,6} All of these clinical features were observed in our patient. The diagnosis of SSSS is reached clinically and with the help of culture reports, as we did in our case. However, if in doubt, diagnosis can be confirmed via skin biopsy, which shows intraepidermal cleavage without necrosis.¹ Also, phage typing the *Staphylococcus aureus* is found to be useful, as almost 80% of the strains of *Staphylococcus aureus* causing SSSS belong to phage group II.² Other sparingly used diagnostic tools are techniques measuring the titers of the ETs and isolating their gene sequences.⁵ Staphylococcal Scalded Skin Syndrome has to be identified early in course of the disease and timely intervention has to be instituted. Appropriate antibiotic therapy if not initiated in time can lead to hypothermia, dehydration, secondary infections and life-threatening complications like sepsis, shock and death. High index of suspicion and early intervention will reduce mortality and morbidity.

ACKNOWLEDGEMENTS

Authors would like to thank Dr. Ramesh Barmal, Dean, Topiwala National Medical College, Mumbai, Maharashtra, for permitting the author to publish this article.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

REFERENCES

1. Handler MZ, Schwartz RA. Staphylococcal scalded skin syndrome: diagnosis and management in children and adults. J Eur Acad Dermatol Venereol. 2014;28:1418-23.
2. Ladhani S, Evans RW. Staphylococcal scalded skin syndrome. Arch Dis Child. 1998;78:85-8.
3. Lamanna O, Bongiorno D, Bertoncello L, Grandesso S, Mazzucato S, Pozzan GB, et al. Rapid containment of nosocomial transmission of a rare community-acquired methicillin-resistant *Staphylococcus aureus* (CA-MRSA) clone, responsible for the staphylococcal scalded skin syndrome (SSSS). Ital J Pediatr. 2017;43:5.
4. Jalaludeen A, Thomas N, Mohammad S. Case report on the efficacy of linezolid in staphylococcal scalded skin syndrome (ssss) in paediatrics. EJPMR. 2018;5:287-8.
5. Ladhani S. Recent developments in staphylococcal scalded skin syndrome. Clin Microbiol Infect. 2001;7:301-7.
6. Patel GK, Finlay AY. Staphylococcal scalded skin syndrome: diagnosis and management. Am J Clin Dermatol. 2003;4:165-75.

Cite this article as: Shimpiger S, Pathak N, Narkhede N, Save S. An extensive exfoliative dermatitis: a rare complication. Int J Contemp Pediatr 2020;7:1169-70.