

Staphylococcal Scalded Skin Syndrome –A Case ReportDr.Sathyavathy. K¹, Dr. Kiran Madhusudhan. B², Dr. Chithralekha Saikumar³.¹Post Graduate, ²Professor, ³Professor and HOD ,

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Abstract: Staphylococcal scalded skin syndrome is caused by *staphylococcus aureus*. An exfoliative toxin A being responsible for the causes of the disease. This disease usually affects neonates and generally responds rapidly to antibiotic therapy. In this study a 2 years old male child showed rapidly progressing skin blistering and exfoliation, with signs and symptoms characteristic of Staphylococcal scalded skin syndrome. After administration of antibiotic treatment, complete recovery was seen. Prompt diagnosis and immediate treatment reduce the mortality rate to <5%.

Keywords: *staphylococcus aureus*, exfoliative toxin, staphylococcal scalded skin syndrome

INTRODUCTION:

Exfoliative (epidermolytic) toxin also known as ET or “Exfoliatin” is responsible for staphylococcal scalded skin syndrome caused by gram positive organism staphylococcus aureus. It is also called as Reiter’s disease. Many strains of staphylococcus aureus release exotoxins. Epidermolytic toxins a virulence factor of staphylococcus aureus exists in three different forms ETA, ETB AND ETD. The strains with ETA causes Bullous impetigo. ETB causes staphylococcal scalded skin syndrome.

ET enzymes is responsible for cleavage of peptide bond in Desmoglein 1, a desmosomal cadherin type cell-cell adhesion molecule which is present in the superficial layer of skin that leads to separation of dermis beneath the cell layer[2,3]. Though neonates and children below 5 years are prone for this infections, due to lack of immunity[1], immunocompromised patients with malignancy, patients on immunosuppressant therapy and renal disease are at high risk to develop SSSS. Mothers with low immunity and lack of transplacental ET-A antibodies during pregnancy contributes to SSSS.

CASE REPORT:

A 2 year old male child was brought to casualty with complaints of peeling of skin over right shoulder for past 3 day associated with high grade fever, malaise, irritability and poor intake.

Clinical history:

Complaints of fever since 4 days, continuous and high grade in nature.

H/o Peeling of skin since 4 days associated with itching over shoulder.

No H/o Cough, Running nose, Redness of eyes.

No h/o Peeling in other parts of the body.

No h/o Dysuria.

Past history:

Birth history- Preterm baby born by institutional vaginal delivery at 30 weeks of gestation.

h/o premature rupture of membranes.

No other birth complications.

Normal developmental milestone and was immunized as per the schedule.

GENERAL EXAMINATION:

Child was irritable, less active, febrile.

No dehydration.

Temp- 103°f.

Heart rate- 94/min

Respiratory rate-38/min

All peripheral pulses felt.

Systemic Examination – Normal.

LOCAL EXAMINATION:

Wrinkling of skin with large fluid filled blisters over right shoulder(fig.1)

A moist red and tender area was exposed on peeling of the skin.

Nikolsky’s sign- positive(gentle stroke results in exfoliation)

Painful and tender on touch.

Nose ,Throat and Oral mucosa are not involved.



Fig.1:staphylococcal scalded skin syndrome of right shoulder with fluid filled blisters.

Management:

Child was admitted in a tertiary care hospital for further treatment.
Plenty of oral fluids were given.
Started on intravenous fluids- Ringer lactate solution 20ml/kg with maintenance therapy
Mupirocin ointment applied over the exfoliated skin.
Paracetamol as Antipyretics.
Routine investigation were done :
Blood culture and sensitivity.
Swab culture from blisters were done.
Chest x-ray and Ultrasonography is done to rule out any secondary infection leading to pneumonia, empyema etc. As denuded skin serves as a main portal entry for microorganisms.

Antibiotics:

IV injection- Ampicillin and Cloxacillin combination 50mg/kg/dose every 6th hourly for seven days.
Baby was discharged on seventh day and changed to oral antibiotics.

Result:

Parents were advised to give coconut oil bath.
Intake of Plenty of oral fluids suggested.
On follow up child was doing better with healed and clear skin.

DISCUSSION:

Clinical presentation of SSSS generally are high grade fever, malaise, lethargy, irritable, fluid filled blisters ,peeling of skin ,itching, with positive Nikolsky's sign. Signs of peeling of skin and crusting is noticed around the mouth, neck, groin and gluteal region. The differential diagnosis are, Toxic Epidermal Necrolysis(TEN), Bullous impetigo and Bullous Erythema Multiform, herpetic lesions and neonatal pemphigus. SSSS in patients after severe burns have been mentioned and stresses the importance of aseptic precautions and infection control in such patients[5].

CONCLUSION:

The exact pathogenic factor in this child is lack of immunity as it was a preterm baby with low antibody

level compared to a full term babies. Though SSSS can occasionally lead to serious complications like pneumonia dehydration septic arthritis and hypothermia, In the above case, child responded well with the treatment given with no complications. Neonates are susceptible for developing SSSS [4].The prompt diagnosis and immediate treatment reduce the mortality rate to <5%. Proper hygiene and clean handling of neonates will reduce the risk factors to desirable extents.

REFERENCES:

1. Ladhani S. Recent developments in Staphylococcal Scalded Skin Syndrome. Clin Microbiol Infect., 2001;7: 301-7.
2. Amagai M, T. Yamaguchi, Y. Hanakawa, K. Nishifuji, M. Sugai, J. Stanley. Staphylococcal exfoliative toxin B specifically cleaves desmoglein 1. Invest. Dermatol. 2002; 118
3. Yamasaki O, Yamasaki T, Sugai M, Chapuis F, Vandenesch F, Etienne Clinical manifestations of staphylococcal scalded-skin syndrome depend on serotypes of exfoliative toxins. Microbiol., 2005; 43:1890-1893
4. Patel GK, Finlay AY. Staphylococcus scalded skin syndrome: Diagnosis and management. Am J Clin Dermatol., 2003; 4(3): 165-75.
5. Farroha A, Frew Q, Jabir S,Dziewulski p. Staphylococcal scalded skin syndrome due to burn wound infection. Ann Burns Fire Disasters, 2012;25(3):140-2