SHORT COMMUNICATION

A RARE AND SEVERE THREAT TO PEDIATRIC PATIENTS: *STAPHYLOCOCCAL* SCALDED SKIN SYNDROME (SSSS)

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Staphylococcal scalded skin syndrome (SSSS) is a generalized skin eruption disease in which the outer covering of skin become degenerated. Toxins responsible for SSSS are exfoliatin exotoxins A and B, which are released from *Staphylococcus aureus* as a result of it detachment of desmoglein within the epidermal layer takes place (Kim *et al.,* 2018). The disease rigorousness varies from being a localized skin lesion (bullous impetigo) to a more severe generalized condition, in which cutaneous erythema followed by plentiful detaching of the epidermal layer of the skin (Jeyakumari *et al.,* 2009) *Staphylococcus* scalded skin syndrome is more commonly observed in infants and children. It can also happen in adults but its rare appearance is usually associated with kidney failure, malignancy or immunosuppression (Kim *et al.,* 2018). In the present report two cases of *Staphylococcal* scalded skin syndrome are described among neonates admitted at "The Children Hospital and Institute of Child Health (CHICH), Lahore, Punjab, Pakistan". The newborn developed SSSS at the age of 3 months and 26 days. The weight of the infants was 3200 and 2000 grams respectively. The main focus of this case study is to study the symptoms, diagnostic approach and possible treatment of SSSS.

Two neonates with generalized SSSS were admitted at the "Department of Padiatric Dermatology, CHICH, Lahore, Punjab, Pakistan" from Lahore and Kasur in April 2019. Their medical histories and other relevant laboratory results are summarized below.

Case # 1.

A 3 months-old newborn (female) belong from the city of Pakistan was brought to the Department of Padiatric Dermatology, CHICH Lahore, having 3200 gram weight with generalized SSSS over the face, head, hands and ears. The signs and symptoms includes: fever, redness of skin surface (erythematous rashes), a small pocket of body fluid within the upper layers of the skin (blistering), fluid loss and nikolsky's sign in which the top layers of the skin slip away from the lower layers when rubbed as mention in Table 1.

Skin swab was collected from the infected area. *S. aureus* was isolated on MSA agar. The isolate was identified on the basis of morphological and biochemical characteristics (catalase, coagulase, DNAse test) (Holt and Bergey, 1994). Antibiotic susceptibility profile of *S. aureus* isolate against eight different antibiotics (Oxacillin, Erythromycin, Ampicillin, Tetracycline, Chloramphenicol, Rifampin, Gentamicin, Neomycin) as given in Table 2 was evaluated by agar disk diffusion method on Mueller-Hinton agar plates, as recommended by Clinical and Laboratory Standards Institute (CLSI) (Wayne, 2010). Antibiotics susceptibility profile has been given in Table 2.

Case # 2.

A 26 day-old newborn (male) belong from the city of Pakistan was brought to the Department of Padiatric Dermatology, CHICH Lahore, having 2000 gram weight with generalized SSSS over the foot, legs, abdomen and hands. The signs and symptoms observed in case 2 were the same as observed in case 1 but except the baby have consistent diarrhea and others enteric issues (weakness) (Table 1).

Skin swab was collected from infected area. *S. aureus* was isolated on MSA agar. The isolate was identified on the basis morphological and biochemical characteristics (catalase, coagulase, DNAse test) (Holt and Bergey, 1994). Antibiotic susceptibility profile of *S. aureus* isolate against eight different antibiotics (Oxacillin, Erythromycin, Ampicillin, Tetracycline, Chloramphenicol, Rifampin, Gentamicin, Neomycin) as given in Table 2, was evaluated by agar disk diffusion method on Mueller-Hinton agar plates, as recommended by Clinical and Laboratory Standards Institute (CLSI) (Wayne, 2010).

Table 1. Summary of sign and symptoms of pediatric patients.

	Sign and Symptoms						
Cases	Fever	Erythematous rashes	Blistering	Chills	Weakness	Fluid loss	Nikolsky's sign
Case 1	+ve	+ve	+ve	-ve	-ve	+ve	+ve
Case 2	+ve	+ve	+ve	-ve	+ve	+ve	+ve

Table 2. Antibiotics susceptibility profile of *Staphylococcus aureus* isolated from pediatric patients.

	Types of applied antibiotics							
Cases	OX	E	N	AM	TE	C	RA	CN
Case 1	R	R	R	R	R	S	S	I
Case 2	R	I	R	I	S	S	S	R

OX= Oxacillin, E= Erythromycin, AM= Ampicillin, TE= Tetracycline, C= Chloramphenicol, RA= Rifampin, CN= Gentamicin, N= Neomycin, R= Resistant, S= Susceptibility, I= Intermediate

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