

Differential Diagnosis in Pediatric Dermatology

Toxic or viral epidermal necrolysis/Staphylococcal epidermal necrolysis (4S)

Epidermal necrolysis is characterized by large flaccid blisters. The latter are due to hematogenous spread of epidermolytic toxins and thus may affect the entire skin surface. The responsible factors may be multiple, mainly viruses, drugs and *Staphylococcus aureus*. In childhood viruses and *Staphylococcus aureus* are responsible for the most frequent and severe forms. The differential diagnosis is crucial to immediately start antibiotics in the staphylococcal form.

DRUG/VIRUS



Fig. 1: Virus induced epidermal necrolysis. You can see the hemorrhagic involvement of the eye, of the mouth and punctate exanthem.

STAPHYLOCOCCAL



Fig. 2: Epidermal necrolysis due to *Staphylococcus aureus*. You can see large erosions on apparently healthy skin lacking punctate exanthem.

DRUG/VIRUS

Rare.

Inflammation of the upper respiratory tract, flu-like syndrome.

Hemorrhage, possible residual synechia.

Frequent.

FREQUENCY

INITIAL SYMPTOMS

EYE INVOLVEMENT

MOUTH INVOLVEMENT

STAPHYLOCOCCAL

Rare.

Pyoderma, conjunctivitis, vulvovaginitis, other suppurative foci.

Suppuration, when present at the onset.

No.

DRUG/VIRUS



Fig. 3: At the periphery of the large flaccid blister you can see punctate exanthem.

STAPHYLOCOCCAL



Fig. 4: Complete cleavage of the epidermis without any punctate lesions.

DRUG/VIRUS

Blisters arise on an initial punctate exanthem. Residua of the latter can be always seen at the periphery of the confluent lesions.

Dermo-epidermal cleavage.

Hydroelectrolytic and proteic balance, pressure control, symptomatic treatment.

None.

Non effective.

CLINICAL FEATURES

PATHOLOGY

TREATMENT

RESPONSE TO ANTIBIOTICS

CORTICOSTEROIDS

STAPHYLOCOCCAL

Blisters arise on uniformly erythematous or apparently healthy skin.

Intraepidermal cleavage.

Antibiotics, hydroelectrolytic and proteic balance, pressure control.

Excellent, when precocious.

Not indicated.

Drug-induced epidermal necrolysis cannot be differentiated initially from the virus form, also because a virus infection is often responsible for the intake of the causative drug. Both virus- and drug-induced forms are initially characterized by a punctate exanthem. The prognosis of drug-induced epidermal necrolysis is possibly more benign because, when facing an acute exanthem, drugs are immediately suspected and withdrawn.