



TOXIC EPIDERMAL NECROLYSIS

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Toxic epidermal necrolysis (TEN), or Lyell's syndrome, is a more severe form of the erosive skin disease known as **Steven-Johnson syndrome** (SJS). Both diseases are commonly caused by a drug-induced reaction that presents with blistering and sloughing of the epidermis. TEN differs from SJS on the clinical basis of severity, wherein the diagnosis of TEN requires the involvement of 30% or more of total body surface area (BSA). TEN can affect people of any age and is most often caused by medication use. Risk factors for both SJS and TEN include HIV infection, other viral infections, and immunologic diseases.

TEN typically begins with a prodrome of malaise, fever, and other flu-like symptoms a few days prior to the appearance of the characteristic mucocutaneous lesions. Characteristic eruptions, involving mucosal surfaces and skin, develop as poorly-defined rashes that may burn or itch. The mouth and eyes are the most common mucosal surfaces to be affected early in the course of disease. Blistering and sloughing of the epidermis in a sheet-like fashion occurs over a period of days as the rashes begin to coalesce. Affected individuals appear as though they have been severely burned over a significant portion of their body. The epidermal surfaces of the trunk and face tend to be impacted the most, resulting in significant exposure of the dermis to potential harm.

Common complications of TEN include dehydration, malnutrition, vision problems, GI hemorrhage, sepsis, shock, and even death.

The diagnosis of TEN is primarily clinical. Involvement of 30% or more of the total BSA is necessary to make the diagnosis of TEN. Examination of the skin and mucous membranes often provides enough insight into the disease state to begin treatment. If there is any uncertainty (often early in the disease), then a skin **biopsy** may be performed to rule out other possible etiologies.

Management and treatment of patients suspected of having TEN involves a quick, thorough evaluation and supportive therapy. The 'SCORTEN score' is often used to determine the severity and prognosis of the disease and how aggressively to treat the affected individual. In severe cases, quick referral to an intensive care facility or burn unit is required. In most instances, removal of the offending agent (i.e. medication) is the first step in treatment. After the offending agent has been removed, supportive therapy should be initiated. Early interventions include fluids and electrolytes, as well as pain management. Emphasis is placed on prevention of infection by keeping wounds clean and monitoring exposed areas for signs of infection. Prophylactic antibiotic therapy is unnecessary; however, if an organism is cultured treatment should be initiated immediately with the appropriate antimicrobial. Outcomes of TEN vary, with mortality rates ranging from 10-70%.

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