

## Case 13

### Caso 13

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### CASE



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A 34-year-old man was assisted in the Basic Health Unit with odynophagia, conjunctival erythema, general malaise, myalgia, and body temperature of 39 °C, having been treated empirically with dipyrone and amoxicillin. He reported tick bites on the same day. A few hours after the use of prescribed medication, he evolved with violaceous erythematous eruptions, confluent plaques, and serum-hemorrhagic vesicles in the face, trunk, and limbs, with involvement of the oral and penile mucosae. He started a treatment with allopurinol and atenolol two months ago to treat hyperuricemia and hypertension, respectively.

Considering this report and its images, which is the most likely diagnosis?

- paraneoplastic pemphigus;
- toxic shock syndrome;
- stevens-Johnson Syndrome (SJS);
- spotted fever.

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## ANALYSIS OF IMAGES

- **figure 1:** Involvement of the entire length of lips and oral mucosa is observed with formation of crusts of hemorrhagic aspect, seropurulent thick secretion (green arrow), and involvement of nostrils. The skin lesions have erythematous base;
- **figure 2:** The involvement of ocular mucous membrane is observed, especially of eyelid edges, with local edema and erythema (yellow arrows), and seropurulent secretion in the inside corner of eyes (green arrow);
- **figures 3 and 4:** The characteristics of confluent lesions are evident, with the formation of flaccid vesicles (yellow arrows) and the shedding of skin (red arrow).

## DIAGNOSIS

Nonspecific prodromal symptoms and the characteristic of lesions (confluent, violaceous erythema-

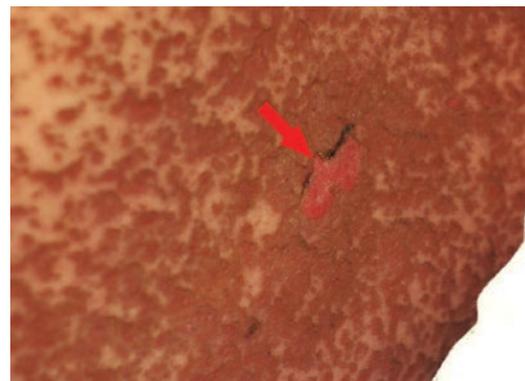
tous, involving mucous membranes, and causing lesions with potential epidermal detachment between 10 and 30% of the body surface) associated with the recent use of allopurinol and amoxicillin strongly suggests the diagnosis of overlapping Stevens-Johnson Syndrome and toxic epidermal necrolysis.

Paraneoplastic pemphigus is a rare and serious condition, which, usually, originates from malignant lymphoproliferative diseases. The oral mucosa and tongue involvement can precede the exanthema. In addition to lichenoid lesions, the formation of vesicles and extensive epidermal detachment can occur, resembling SSJ which, however, sets in suddenly, as opposed to the paraneoplastic pemphigus with slow and dragged evolution.

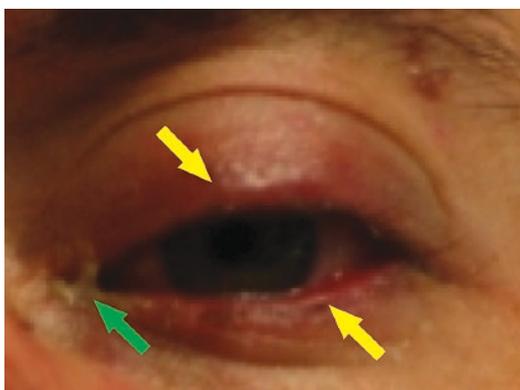
Toxic shock syndrome arises from the spread of toxins of *Staphylococcus aureus* virulent strains and being systemically compromising is its main consequence, with multiple organ dysfunctions. The exanthema is often subtle, as well as the involvement of mucous membranes; epidermal detachment occurs later.



**Figure 1** - Involvement of lips and oral and nostrils mucosae.



**Figure 3** - Epidermis detachment.



**Figure 2** - Involvement of ocular mucosa.



**Figure 4** - Formation of flaccid vesicles.

Spotted fever is a serious disease caused by *Rickettsia rickettsii*, an obligatory intracellular bacterium transmitted by tick bites. The maculopapular exanthema begins between the third and fifth days of its evolution and spread from limbs toward the trunk. The necrosis, when present, is due to microcirculation lesions and the affected areas are fingers, nose, ears, and genitals that are supplied by terminal arteries.

## DISCUSSION OF THE CASE

The SSJ syndrome and toxic epidermal necrolysis (TEN) are variants of the same pathological process with little known etiology that can manifest itself in three ways depending on the body surface area involvement such as:

- the SSJ – involvement of 10%;
- the TEN is more serious and involves more than 30%;
- the overlapping between SSJ and TEN involves between 10 and 30%.

These are rare entities, with estimated incidence of SSJ and TEN of 1.2-6 and 0.4-1.2 cases/million inhabitants, respectively, that emerge of generalized skin and mucous membrane lesions, usually, preceded by prodromic nonspecific symptomatology. The most common triggering factor is exposure to drugs, most commonly: allopurinol, antimicrobials (Penicillins, sulfas, cephalosporins, and, quinolones) and anticonvulsants (lamotrigine, carbamazepine, and phenobarbital). Especially in children, infections caused by the herpes viruses and *Mycoplasma pneumonia* are also considered triggers for SSJ.

The pathophysiological mechanisms of these clinical entities are still unknown. However, there are hypotheses about immunological mechanisms mediated by TCD8+ lymphocytes, natural killer lymphocytes, or deregulation of keratinocyte apoptosis; and metabolics, related to reduced drug metabolizing capacity.

Around one to three weeks after beginning the use of the triggering drug, the prodromic symptomatology arises with fever, myalgia, odynophagia, cough, skin hyperalgesia, photophobia, and conjunctival burning and itching. Hours after exanthema starts with violaceous erythematous and confluent lesions, they evolve to necrosis, with flaccid vesicles formation and epidermis detachment. There is clear involvement of oral, ocular and genital mucosae, with

edema and crusted lesions. The cutaneous involvement may occur in varying degrees, according to the percentage of the body surface area affected, allowing the classification of the disease as pure SSJ, pure TEN, or TEN superimposed on SSJ, as in this report.

The diagnosis is clinical and confirmation is made by biopsy, showing keratinocyte apoptosis and epidermis necrosis, which is highlighted in the dermis. The suspension of possible related drugs, followed by control of homeostasis, analgesia, and infection prevention is the mainstay of treatment. These patients are often treated as major burned due to the loss of the barrier function of the skin. The use of corticosteroids and immunoglobulins to reduce mortality and prevent the progression of lesions is controversial.

## RELEVANT ASPECTS

- SSJ and TEN are variants of the same pathological process, with varied extent and severity of lesions.
- the diagnosis is clinical and based on examination of lesions in the presence of prodromal and recent use of medicines.
- the main drugs related to the emergence of SSJ are allopurinol, antimicrobials, and anticonvulsants.
- the treatment is based on intensive care and monitoring in order to prevent infectious and hydro-electrolyte complications that are potentially serious.

## ACKNOWLEDGEMENTS

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