Volume 7 Issue 2 2021

ISSN 2454-3055

**INTERNATIONAL
JOURNAL OF
ZOOLOGICAL
INVESTIGATIONS**

***Forum for Biological and
Environmental Sciences***

Published by Saran Publications, India

Stevens - Johnson Syndrome: A Short Review

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Received: 9th November, 2021; **Accepted:** 6th December, 2021; **Published online:** 14th December, 2021

<https://doi.org/10.33745/ijzi.2021.v07i02.079>

Abstract: The syndrome of Stevens-Johnson (SJS) and toxic epidermal necrolysis (TEN) are serious, mostly medicated, cutaneous adverse reactions, normally linked to a high degree of morbidity and mortality. Recently, the SJS/TEN management guidance, the Indian guidelines and the United Kingdom directives have been written in details. However, there is no agreement on SJS/TEN management. In this paper, we would like to conceptualise SJS/TEN system in order of Indian schedule. It has been found useful to discontinue all drugs early, take help steps (hydration, electrolytes, and skin care denuded), corticosteroids, and cyclosporine. Oral provocation tests are only available to those receiving full remission that are strictly attentive during hospitalisation. As there is no majority, care on an individual basis should be personalised.

Keywords: Syndrome of Stevens-Johnson, Toxic epidermal necrolysis, Risk factors, AMT

Citation: Ashok K., Babu M., Sumathi K. and Mohan Kumar P.R.: Stevens - Johnson Syndrome: A short review. Intern. J. Zool. Invest. 7 (2): 893-897, 2021.

<https://doi.org/10.33745/ijzi.2021.v07i02.079>

Introduction

SJS is a rare and severe skin and mucovascular condition. It is usually a response to a drug that begins with flu-like symptoms and eventually with a burning rash spreading and blistering. Then the top of the infected skin dies, diminishes and after a few days starts to recover. SJS is normally a hospitalisation medical emergency. Therapy focuses on the removal of the cause, wounds management, pain relief and complication prevention as the skin regrows (Hart and Frerichs, 2015; Nykytiuk *et al.*, 2019). Patient will heal

within weeks to months. TEN is a more serious example of the disease. More than 30% of the surface of the skin and substantial mucous membrane injured. Patient would have to permanently stop this medicine and those similarly associated if the illness is exacerbated by a prescription.

Symptoms:

Early symptoms of SJS can occur one to three days before a rash occurs, including:

- Fatigue
- Dull body and neck
- Fatigue
- Eye irritation

As the disorder progresses, new signs and symptoms include:

- Unexplained widespread discomfort in the skin.
- Blisters on lips, mouth, nose, eyes and genitals, and mucus membranes
- Skin shedding in days following type of blisters.

When to visit a doctor:

SJS needs medical attention immediately. Seek urgent health treatment if you encounter any signs and symptoms. Drug-induced reactions may take place during or up to 2 weeks after the use of the medication (McCormick, 2020).

Causes:

SJS is an unusual and unstable condition. The doctor will not be able to determine the precise cause, but medicine, an illness or both typically cause the disease. Up to two weeks after the patient quit taking medications, he can have an effect. Medicines which can cause SJS are as follow:

- Medicines for the treatment of epilepsy and psychiatric disorder, such as allopurinol (anticonvulsants and antipsychotics) (Schooneveldt *et al.*, 2016).
- Sulphonamides antibacterial (including sulfasalazine)
- Nevirapine (Viramune, Viramune XR)
- Pain relievers, for example acetaminophen, ibuprofen (Advil, Motrin IB, others) and sodium naproxen (Aleve)
- Pneumonia and HIV contain infections which can lead to Stevens-syndrome. Johnson's

Risk factors:

Factors that increase the risk of developing SJS include:

- **An HIV infection is an increasing concern for the SJS.** For individuals with HIV, the prevalence is about 100 times the overall incidence of SJS (Goldie, 2012).
- **Immune system that is compromised.** An organ transplantation, HIV/AIDS and autoimmune diseases may damage the immune system.
- People who are at risk for SJS, particularly for blood cancer.
- **Hereditary Factors.** Any genetic changes is likely to have SJS, especially if you already take medicines for epilepsy, gout or mental illness (Fernandez and Doña, 2018).

Complications:

The complications of SJS are:

- **Dehydration:** Areas where the skin has thrown away lose liquid. And mouth and throat sores can make the ingestion of fluid challenging and cause dehydration (Wang *et al.*, 2019).
- **Sepsis:** Sepsis happens as bacteria invade the bloodstream and spread throughout the body. Sepsis is a life-threatening disease which is quickly advancing and can cause shock and organ failure (Catt *et al.*, 2016).
- **Eye problems:** SJS rash can lead to irritation of the skin, and dry eye. In extreme circumstances, vision deficiency and, rarely, blindness may occur (Foster, 2017).
- **Lung:** Lung disorder may cause acute breathing failure (Harr and French, 2010).
- **Permanent skin damage:** After SJS the skin grows black, it may have an irregular bump and coloration. Scars may develop. Durable skin issues may cause hair to fall and would

not let the fingernails or toenails develop naturally (Creamer *et al.*, 2016).

Prevention:

- **Before taking such medications, consider genetic tests.** The U.S. Food and Drug Administration advises that gene variant HLA-B*1502 be screened before beginning the above mentioned medicines by people of Asia and South Asia descent (Jha *et al.*, 2018).
- **Stop the drug that caused this syndrome.** If the doctor say that SJS was caused by a pharmaceutical substance, stop this medicinal product or others. This is essential to avoid a recurrence which is normally more serious and fatal than the first episode (Auyeung and Lee, 2018).

Treatment:

A patient diagnosed of SJS/TEN should promptly be taken to the hospital because it could endanger their lives (Iyer *et al.*, 2019). The nature of the condition can be easily assessed whether the diagnosis is confirmed so as to determine the best place of care. SJS/TEN persons will better be handled in an intensive care unit, a burn unit or a dermatological unit (Velasco-Tirado *et al.*, 2018). Several reports indicate that for those who visit quickly to a burn care facility or intensive care unit, there is a higher chance of survival. A team of physicians with expertise in handling the disease should better handle the treatment. Care is directed at signs and complications (supportive care). It is assumed that patient having SJS/TEN caused by drugs must quit the drug as soon as possible (Safiri and Ashrafi-Asgarabad, 2018).

The treatment of skin effects is generally equivalent to severe burns, which include treating wound, regulation of pain, fluids and electrolytes, dietary assistance, the maintenance of temperature, and detection or treatment of secondary infections (Oakley and Krishnamurthy, 2020). Eye implication requires urgent care to minimise the risk of permanent injury to the eye and vision. Eye inflammation will escalate in only

a few days, meaning that regular eye assessments and intensive therapy are required (Wolf and Marinović, 2018). Treatments can include one of several techniques, whether alone or together, depending on the degree of the eye involvement, including:

- Saline rinses of eye and eyelid cleaning.
- Lubrification of eye drops or ointments free of preservatives several times a day (including for those with no apparent eye involvement).
- Topical corticosteroid eye drugs and broad-spectrum antibiotics.
- AMT to help to avoid vision deprivation and complications of the mucous membranes.
- In addition to complementary medications, physicians have studied numerous therapies, among them systematic corticosteroids, IVIG, cyclosporine, plasma and TNF. Neither has been extensively tested in controlled trials excluding thalidomide (which was shown to be harmful). Cyclosporin can delay the progression of the disease (Tangamornsuksan and Lohitnavy, 2018).

Prognosis:

There are various long-term prospects and chances for survival from person to person. The skin is usually repelled in 2-3 weeks, although it can take weeks to months, depending on symptoms' severity. Feelings of crippling tiredness can remain for months (Richard *et al.*, 2018). There will also be depression. Long-term skin and affected mucosal complications may have significant implications for the quality of life (Ortonne, 2018). If re-exposure of a drug occurs which is known to have initially caused the disease, SJS/TEN can recur. However, repeated episodes have also been recorded due to numerous drugs or illnesses. There is no known general probability that recurrences will occur, but in infection-related SJS/TEN children it seems greater (Plachouri *et al.*, 2019).

In some people, SJS/TEN is fatal. The average

mortality rate (death) for SJD is about 25%, about 10% for SJD and about 30% for TEN. The leading causes of mortality include septicemia, sudden breathing disturbance and multiple organ failure (Lerma *et al.*, 2018).

If SJS is present, be sure:

- Know what the reaction has triggered. Know the name and the name of closely associated medicines if the illness was exacerbated by the medicines.
- Inform the medical professionals. Tell the doctors about the experience of SJS. Tell them which one if the response was triggered by a drug.
- Carry bracelet or collar with medical records. Please provide your condition with details on what caused the bracelet or collar to be entered on medical information.

The results of SJS patients rely on their skin intervention in degree and magnitude. The lesions typically cure in 12-16 weeks in those with a minor eruption. Mild skin effects may occur, but no functional loss normally happens except in the case of the eyes and other mucous membranes. In the case of more than 20% of involving skin area, the mortality rates are 1-27%. Concurrent bacterial infections are present, and mortality rates may be increased. Advanced age, leukopenia, malignancy, renal impairment, hyperglycaemia and more than 10 per cent BSA presence are factors that adversely influence the outcome (Kumar *et al.*, 2018).

SJS survivors may experience inverted eyelids, sicca-like syndrome, vision deprivation and neovascularization of the cornea; but the inter-professional approach can achieve improved results. SJS is a serious disease of the skin that may occur as a result of certain drugs or diseases (Schneider and Cohen, 2017; Zhang *et al.* 2020). Medical care is required immediately to those with SJS. Doctors that treat patients with SJS will take precautions to guarantee that their skin is not tainted. They will also end the syndrome-

responsible drug to protect the disease from deterioration or cure the disorder-causing infection. Despite the numerous recovery choices, SJS will lead to death. People with more serious SJS have higher death rates. The risk of death also runs greater for older adults and individuals with other underlying conditions.

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