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ijirset@gmail.com

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Stevens-Johnson Syndrome: Causes, Symptoms, Diagnosis and Treatment

Dr. Ann Resson, Dr. Asna K, Dr. Arjun Suresh, Dr. Anush John Saju, Dr. Usha Hegde

Intern, JSSDC&H, JSS AHER, Mysuru, India

Intern, JSSDC&H, JSS AHER, Mysuru, India

Intern, JSSDC&H, JSS AHER, Mysuru, India

Intern, JSSDC&H, JSS AHER, Mysuru, India

Professor & Head, Dept. of Oral Pathology & Microbiology, JSSDC&H, JSS AHER, Mysuru, India

ABSTRACT: This article provides a detailed exploration of Stevens-Johnson Syndrome (SJS), encompassing its historical origins, causes, pathophysiology, symptoms, diagnosis, treatment, and prognosis. Commencing with the historical context of Stevens and Johnson's pioneering work in 1922, the urgency of medical attention for the condition's severe morbidity and mortality rates is emphasized. Causes, including medications like antibiotics and viral infections, are meticulously detailed, broadening the understanding of SJS aetiology. The complex interplay of genetic and immunological factors in the pathophysiology is outlined, contributing to a nuanced discussion on individual susceptibility. Symptom onset, mucous membrane involvement, and potential complications are highlighted, underscoring the need for early recognition. The diagnostic process, treatment modalities, and prognosis are discussed, emphasizing the importance of prompt intervention. This comprehensive article serves as a valuable resource, fostering awareness among healthcare professionals and the public while suggesting future research directions into genetic and immunological mechanisms for enhanced prevention and treatment strategies.

KEYWORDS: Multiple organs; Drug induced; Viral infection; Cytotoxic T cells; Blisters

I. INTRODUCTION

Stevens-Johnson Syndrome (SJS) is a rare but severe and potentially life-threatening condition that affects the skin and mucous membrane.¹ First described by Albert Mason Stevens and Frank Chambliss Johnson in 1922,² this syndrome is characterized by the development of painful blisters, extensive skin detachment, and involvement of multiple organs.^{1,3,4} Despite its rarity, SJS requires urgent medical attention due to its high morbidity and mortality rates.⁵ This article aims to explore the causes, symptoms, diagnosis, and treatment of Stevens-Johnson Syndrome, shedding light on the importance of early detection and intervention.

Causes

SJS is often triggered by an adverse reaction to medications, with some drugs being more commonly associated with the syndrome than others. Medications such as antibiotics (e.g., sulphonamides, penicillin), anticonvulsants (e.g., phenytoin, carbamazepine), and nonsteroidal anti-inflammatory drugs (NSAIDs) have been implicated in the development of SJS. Viral infections, particularly Herpes and Mycoplasma pneumoniae, have also been identified as potential triggers.^{3,4}

Pathophysiology

The exact pathophysiology of SJS is not fully understood, but it is believed to involve a complex interplay of genetic and immunological factors. The formation of cytotoxic T cells, activation of immune complexes, and release of inflammatory mediators contribute to the widespread cell death and tissue damage seen in SJS. Genetic predisposition may play a role in an individual's susceptibility to developing SJS after exposure to specific medications or infections.^{1,3,4}

Symptoms

The onset of SJS is often abrupt and can be mistaken for other common illnesses.^{3,4} Early symptoms include fever, sore throat, and a general feeling of malaise. Within a few days, a painful rash develops, progressing to blisters that may

affect the skin and mucous membranes of the eyes, mouth, nose, and genitalia. These blisters can lead to extensive skin detachment, exposing underlying tissue. The involvement of mucous membranes can result in severe complications, such as difficulty in swallowing, breathing, and impairment of vision.^{3,4,5}

Diagnosis

Diagnosing SJS requires a thorough medical history, including a detailed account of recent medication use and potential exposure to triggering factors. Clinical examination and skin biopsy may be performed to confirm the diagnosis. Laboratory tests, such as complete blood count and liver function tests, help assess the severity of the syndrome and guide treatment decisions.^{3,4}

Treatment

Management of Stevens-Johnson Syndrome involves the immediate withdrawal of the suspected triggering medication and supportive care. Hospitalization is often necessary, with close monitoring of vital signs and fluid balance. Pain management, wound care, and prevention of secondary infections are essential aspects of treatment. In severe cases, patients may require care in a specialized burn unit.^{3,4,5}

Prognosis

The prognosis of SJS varies, with mortality rates ranging from 5% to 15%. Early diagnosis and prompt intervention significantly improve outcomes.^{3,4} Long-term complications, such as scarring, vision impairment, and psychological distress, may persist even in survivors. Close follow-up with healthcare providers is crucial for ongoing management and monitoring of potential complications.^{3,4,5}

II. CONCLUSION

Stevens-Johnson Syndrome remains a rare but serious condition that demands swift recognition and intervention. Increased awareness among healthcare professionals and the general public about the potential triggers and symptoms of SJS can contribute to early diagnosis and improved outcomes. Research into the genetic and immunological mechanisms underlying this syndrome may pave the way for more targeted prevention and treatment strategies in the future.

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