

Banana Leaf for Management of Toxic Epidermal Necrolysis

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Abstract

Introduction: Toxic Epidermal Necrolysis (TEN) and Steven Johnson Syndrome (SJS) are severe mucocutaneous reactions. Managing these conditions is challenging, especially in resource-limited settings. This case report introduces a cost-effective treatment approach in a developing country context.

Case Report: A patient in India with TEN/SJS, likely due to homeopathic medication, was treated using autoclaved banana leaves. This innovative method provided pain relief and accelerated wound healing, demonstrating its potential as an alternative treatment.

Conclusion: Utilizing banana leaves for TEN/SJS highlights a novel, economical approach suitable for developing countries. This case underscores the need for further research into such alternatives, especially in regions where standard medical resources are limited or too expensive.

Keywords: Dermatological Emergency; Toxic Epidermal Necrolysis; Steven-Johnson Syndrome; Banana leaf.

Key Messages: This case report discusses the innovative use of banana leaves for managing Toxic Epidermal Necrolysis (TEN) and Steven-Johnson Syndrome (SJS), highlighting its affordability and potential benefits in patient care, especially in developing countries with limited access to conventional treatments.

INTRODUCTION

Toxic Epidermal Necrolysis (TEN) and Steven Johnson Syndrome (SJS) are adverse drug

reactions which are associated with a high morbidity and mortality. These reactions occur in response to certain drugs like Phenobarbital, Phenytoin, Carbamazepine, Lamotrigine, NSAIDs, Allopurinol, Fluconazole and other drugs. HLA-B*1502 allele is associated with Carbamazepine induced SJS /TEN and HLA-B*5701 with patients on Abacavir. SJS is characterized by the involvement of <10% Body surface area, TEN has >30% involvement and an involvement of 10-30% body surface area is called SJS-TEN overlap. Along with a full thickness skin lesion, involvement of oral, Genito-urinary, ocular and respiratory mucosa is seen in all patients. Steroids, IVIG's and cyclosporine are the mainstay in the treatment of this condition.

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CASE REPORT

A 40 year old male presented to Emergency with complaints of blisters and skin lesion all over the body since 15 days. The patient noticed hoarseness in his voice a few weeks ago for which he visited a local practitioner, where he was prescribed homeopathic medications. Upon taking those medications he developed skin lesions which first appeared over his chest and then proceeded to face, trunks, upper limb, lower limbs, genital and back. He also complaint of fever, arthralgia, malaise and sore throat. Mucosal involvement of genitals and oral cavity was present. The patient was

vitaly stable and admitted to the ICU in a sterile isolation room. A central line was placed and the patient was started on broad spectrum antibiotics. Within a few hours we noticed that the blisters and denuded skin peeled off as the patient changed positions on the bed. Two banana leaves were arranged and thoroughly washed with soap water and autoclaved. The patient was shifted on the banana leaf carefully. (Fig. 1) Denuded skin care was covered using paraffin wax and the patient was prescribed oral dexamethasone. On day 14 the patient was shifted out of isolation and on day 26 he was discharged on full recovery. A follow up few months later revealed that the patient had succumbed to carcinoma of Larynx.



Fig. 1: The patient being placed on the banana leaf.

DISCUSSION

In India homeopathic medications are highly attributed to have a role in the development of TEN/SJS. For the patient presenting in Emergency, it is important to adequately hydrate, maintain an ambient body temperature and provide a sterile environment to prevent the onset of sepsis. Paraffin

gauze is the most commonly used product to cover the denuded skin. Porcine xenograft, human allograft and biomembrane are used in western countries. These products are not widely available and are expensive. In India the practice of using banana leaves is widely prevalent in hospitals and was first reported in medical literature in 1994 and a Randomized controlled trial was planned but it did not materialize.¹ While autoclaved banana leaves

continue to be used widely for placing the patient over it, we aim to bring this knowledge to a broader audience in particular to physicians practicing in developing countries. The proposed properties of pain reduction, increased comfort and early wound healing by use of banana leaves are debatable however it is much cheaper than the use of paraffin wax. Thus, it is very affordable for patients in developing countries who suffer from TEN/SJS. Hypothermia is also present in patients with Toxic Epidermal Necrolysis however hypovolemia is to be treated first. Sepsis and Multiorgan failure are delayed complications of Toxic Epidermal Necrolysis often leading to death.²

While SCORTEN scoring is done on day 1 for prognostication, it has been suggested that serial analysis of SCORTEN provides a better picture on mortality than if done just on day 1. Early shifting of patients to a burns ward has been associated with a better outcome.³

CONCLUSION

The case report underscores the potential of using banana leaves as a practical, cost-effective alternative for managing TEN/SJS, particularly in developing countries. While the benefits of banana

leaves, such as pain reduction, increased comfort, and early wound healing are debatable, their affordability makes them a valuable option in low-resource settings. This approach could significantly impact patient care, offering a viable solution for countries where expensive treatments are not readily available. However, the effectiveness and safety of this method need further evaluation through controlled trials and medical research.

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