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Comprehensive Medical Nutrition Therapy in Allopurinol Induced Stevens Johnson Syndrome

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Abstract

Background: Stevens–Johnson Syndrome (SJS) is an immune mediated mucocutaneous syndrome that causes epidermal necrosis, detachment of less than 10% of the total body surface area, mucosal erosions, and systemic symptoms such as fever and malaise. Allopurinol is a commonly used medication that lowers uric acid production which is essential for gout treatment and prevention. Although many patients tolerate allopurinol therapy without severe complications. SJS induced by allopurinol is strongly linked with the presence of HLA-B*58:01 in the Asian population. We present the case of a 49-year old female with history of long standing Gout, in addition to hypertension and hypothyroidism who was successfully managed with comprehensive medical and structured nutritional intervention.

Case Report: The patient was bought in for emergency care with a widespread rash that initially appeared on the scalp and progressively spread across the entire body over a period of four days. The patient presented with significant oral mucosal inflammation, including lip involvement, resulting in drooling due to difficulty in fully closing the mouth. Severe blisters and lesions in and around the oral cavity caused marked pain, leading to an ability to chew or swallow. Examination revealed erythematous rashes with bullae over the face and plantar areas, along with eroded blisters on the neck. With epidermal detachment over 10% with SCORTEN score 5, The patient had been experiencing fever with chills for five days. Additionally, there was a history of five episodes of vomiting one day prior to hospital admission, which led to dehydration.

On admission, her weight was 64kgs (BMI 26 kg/m^2), with pre-existing comorbidities including gout, hypertension and hypothyroidism. Medical management consisted of IV antibiotics, steroids, anticoagulants alongside nutritional support to address fluid, electrolyte, and calorie-protein imbalances. Nutrition intervention was initiated with carefully monitored enteral nutrition via nasogastric bolus feeding at 100ml every 2nd hourly from day 1 of admission for 10 days, using a high protein polymeric formula providing 1800k.cals and 81g of protein, on day 11 oral feeding with clear liquids was gradually reintroduced and progressed to full liquids, including both kitchen-prepared feeds and high protein polymeric formula alternatively throughout the day for 2 days. As her tolerance improved, she was transitioned to a semi-soft, high calorie, high calorie high protein diet supplemented with polymeric formula for an additional 7 days during her hospital stay. The patient's sudden intolerance to eggs in any form, which caused itching after consumption, was one of the challenges encountered during the intervention. To ensure her nutritional requirements are met, her diet was substituted with other high-protein food sources, eliminating eggs entirely. Her intake gradually improved from approximately

1100kcals and 50g of protein to 1585k.cals and 70g of protein by the time of discharge, which was still at a deficit of approximately 260kcals of her requirement.

At discharge her weight had decreased to 61kgs reflecting a 3kgs loss over 15 days, she was prescribed a tailored soft, high calorie, high protein, low purine antioxidant rich diet plan supplementing with high protein polymeric formula which will provide 1850k.cals and 85g of protein (IBW *1.5g/day). The plan included foods rich in Vitamin – C and A as well as zinc to meet the increased metabolic demands, promote wound healing, support tissue repair, aid collagen synthesis and further support recovery while mitigating inflammation.

Frequent post discharge monitoring after 40 days, revealed improved Haemoglobin to 11g/dl which dropped down to 8.4g/dl on 6th day hospitalization and CRP reduced to 10mg/L from 100mg/L at admission. Bodyweight improved to 63kgs, with calorie intake ranging from 900 – 1760kcals/day and Protein intake from 25 – 75 g/day with 75% dietary compliance.

Conclusion: This case highlights the critical role of structured and closely monitored nutritional intervention with comprehensive medical management in the successful recovery of a patient with allopurinol- induced Steven Johnson Syndrome. Early beginning of enteral feeding, progressive diet progression, personalized high calorie, high protein planning and persistent post-discharge monitoring all helped to enhance inflammatory indicators, hematological recovery, and weight restoration. The case highlights the significance of multidisciplinary care, with nutrition assistance functioning as a significant component in improving clinical outcomes, encouraging wound healing, and supporting overall recovery in patients with severe mucocutaneous diseases

Keywords: Steven Johnson syndrome, Allopurinol, Gout, Epidermal detachment, Erythematous rashes