Complex Management of Lower Extremity Cellulitis Complicated by Stevens-Johnson Syndrome in an Elderly Patient : A Detailed Case Report

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INTRODUCTION

Lower extremity cellulitis is a potentially serious infection that can lead to severe systemic complications, especially in patients with multiple comorbidities. This case is further complicated by the development of Stevens-Johnson Syndrome (SJS), a rare but severe skin reaction. SJS is known for its rapid onset and progression, often triggered by medications or infections. It affects approximately 1-2 individuals per million annually, highlighting its rarity. Mortality rates for SJS can be as high as 15%, with increased risk in older adults. Early recognition and withdrawal of the offending agent are crucial in the management of SJS. The treatment primarily involves supportive care, with the use of corticosteroids and intravenous immunoglobulin (IVIG) being controversial yet potentially beneficial in some cases.

CASE PRESENTATION

A 74-year-old male with a past medical history of hypertension, hyperlipidemia, lymphedema, and venous stasis ulcer admitted with ulceration and significant swelling of the right lower extremity. Treatment began with a vancomycin infusion. Renal function declined and he developed hypotension with a rise in lactic acid levels from 3 to 6.6 mmol/L, indicating systemic inflammation. Elevated CPK and myoglobin levels were noted, and an abdominal ultrasound revealed gallbladder dilatation with wall thickening. Blood cultures were positive for Staph epidermidis. Diagnoses included septic shock, cellulitis, UTI, potential cholecystitis or cholangitis, acute kidney injury, and hyperkalemia. Treatment in the ICU consisted of vasopressors, Solu-Cortef, IV fluids, and broad-spectrum antibiotics (vancomycin, Zosyn, and clindamycin). Despite these measures, the patient required continuous renal replacement therapy (CRRT) for acute kidney injury.
A trans-thoracic echocardiogram showed atrial fibrillation and reduced left ventricular function. The development of blisters led to a suspicion of Stevens-Johnson Syndrome (SJS), confirmed by biopsy. All antibiotics were stopped, and steroid therapy was initiated. The patient developed severe metabolic acidosis and respiratory failure, requiring mechanical ventilation. Persistent hypotension necessitated multiple vasopressors. After a second asystole and unsuccessful resuscitation efforts, he was pronounced deceased.

CASE PRESENTATION

LEARNING POINTS

1. Clinicians should maintain a high index of suspicion for SJS in patients presenting with worsening skin conditions and systemic symptoms, especially when new medications have been recently introduced.

2. Early consultation with dermatology and critical care teams is recommended in suspected cases.

3. Further research into the management of severe skin reactions like SJS in complex patient populations is needed to improve patient outcomes.

DISCUSSION

This case is significant for its rapid progression from a common infection to severe systemic involvement and suspected SJS. The challenges in managing cellulitis in a patient with obesity and lymphedema were compounded by the development of systemic inflammatory response and potential drug reaction.
Treatment of SJS typically involves ceasing the offending agent and initiating supportive care, including fluid management and wound care. The use of intravenous immunoglobulin (IVIG) has been debated, with some studies suggesting it can reduce mortality in SJS. Corticosteroids remain controversial, with some advocating their use in the early stages while others caution against them due to the potential worsening of infections.
In this patient's case, the suspected SJS added complexity to the management, necessitating a multidisciplinary approach involving critical care, dermatology, and infectious diseases specialists.

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