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Case Report

Case Report on Amoxiclav induced Steven Johnson's Syndrome with Medium Vessela Vasculitis

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ABSTRACT

Stevens-Johnson Syndrome (SJS) is a rare and serious medical emergency that affects the skin and mucous membranes. It is typically caused by an adverse reaction to medication or infection, resulting in an immune system response that causes inflammation and destruction of skin cells occur at any age. We present the case study of 46-year-old female patient who develop an erythematous maculopapular lesion on 3rd day of using antibiotic (amoxiclav). Diagnosis of SJS is typically based on clinical presentation and a skin biopsy. In this cases, blood tests and cultures have been done to rule out infection as the cause of symptoms. Symptoms of SJS can include fever, cough, sore throat, and a painful rash that can blister and peel. In severe cases, SJS can cause damage to internal organs and be life-threatening. Treatment typically involves discontinuing the offending medication and providing supportive care, such as pain relief and wound care. Prevention of SJS involves avoiding known triggers and carefully monitoring medication use.

Keywords: Erythematous, SJS, Amoxiclav.

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INTRODUCTION

Stevens-Johnson Syndrome (SJS) is a rare but potentially life-threatening immune mediated condition that affects the skin and mucous membranes. It is typically caused by an adverse reaction to medication or infection, leading to an immune system response that causes inflammation and destruction of skin cells. The toxic epidermal necrolysis is a severe form of SJS is characterized by keratinocyte necrosis and perivascular lymphocyte infiltration affecting 10%-30% of body surface area with epidermal detachment, fever, and malaise.[1,2] Extrapulmonary manifestation in skin and mucosa due to this bacterium occurs in 25% of cases.[3]

Although SJS is a rare condition, it can be particularly devastating for those who are affected by it. It requires prompt recognition and treatment to minimize the risk of serious complications. Prevention is also an important consideration, as avoiding known triggers and carefully monitoring medication use can help reduce the risk of developing SJS. Infectious origin of SJS is suspected if infectious symptoms precede the onset of skin or mucosal lesion and serological diagnosis for suspected organism is positive.[4] Overall, SJS is a serious condition that requires ongoing research, education, and awareness to ensure that affected individuals receive the best possible care and outcomes.

Overall, the purpose of the article is to provide accurate and reliable information that can help individuals understand SJS and make informed decisions regarding their health and help the health care provider to update the knowledge on SJS.

CASE PRESENTATION

A 46-year-old female patient was admitted in the Department of Emergency in GSL General Hospital and Medical College, Rajahmundry with chief complaint of red colored lesions over bilateral upper and lower limb for 3 days and fluid filled lesion bilaterally on lower limbs and few over upper limbs for 3 days. History of Present illness shows that patient was apparently alright 6 days back after that she develop tonsilitis for which she took Tab Amoxiclave (antibiotic) and Tab Zerodolsp (NSAID). Patient develop erythematous maculopapular lesion on 3rd day of using medication and after which she stopped all the medication. Few lesions on the leg develop a vesical, the next day the vesicle and bulla increase in both number and size over the lower limb below the knee associated with severe burning and swelling. Patient went to dermatologist where she was given a terbinafine and steroid injection then she presented to our hospital.

Around 30% of body surface was affected over lower and upper limb and trunk part History of Past illness shows that patient has history of shortness of breath, fever, diarrhea and the patient used to have these similar complaints uniformly. She has hypertension

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from past 1 year and under medication on Tab Olmesartan and have hypothyroidism from past 20 years and taking Tab Thyroxine 25mcg. Also, she has the history of Asthma. The patient has done hysterectomy on May 2020 where she was given some antibiotics but no reactions was seen at that time.

The vital signs are normal in this case. On examination it was found that multiple targetoid lesion over B/L UL and LL, below umbilicus with central hyperpigmentation and peripheral erytherma. Lesion over L/L are bigger. Vesicle and Bulla of size ranging from 0.5 x 1 cm to 4 x 4 cm present over B/L Lower limbs below the knee. B/L L/L and U/L are oedematous. Pallor is present. On Systemic Examination abdomen shape was distended no tenderness, no palpable mass, no free fluid, bowel sound normal, genitals were normal. CVS sound S_1 S_2 heard. Patient is conscious and well oriented to time place and person. All Motor System and Sensory System were normal.

Drug induced SJS TEN Overlap and MEDIUM VESSELA VASCULITIS was suspected and treatment started with,

Inj. Dexamethasone	1cc IV BD
Inj. Pantop	40mg IV OD
Tab.Clinidipine	10mg PO BD
Tab. Clarithromycoin	500mg PO BD
Tab. Allegra	180mg PO OD
Calamine Lotion	BD over Body lesion

On 1st day of hospital admission and send a blood for lab investigation and other culture test.

- Lab investigation show patient has,
- Hb level 13.0%,
- RBC level 4.5 millions/cumm,
- WBC level 23900 cells/cumm,
- Neutrophil was 83%,
- Lymphocytes was 11%,
- Platelets was 2.98 lakhs/cumm,
- Total Protein 8.0 g/dL,
- Albumin 4.0 g/dL,
- Blood Urea 63 mg/dL,
- Serum Creatinine 3.1 mg/dL,
- T3 1.2 nmol/L,
- T4 139.7 nmol/L,
- ASO titre positive,
- FBS was 209,
- PPBS 219 mg/dL and
- C/S test show she is resistant to Erythromycin,

Results of a skin biopsy were consistent with Stevens-Johnson syndrome. It was assumed to be caused by amoxiclav.

The Ultra Sonography (USG) of Abdomen shows that there was segmental circumferential large bowel wall thickening (Infective Etiology), Moderate Hepatomegaly with Grade II Fatty Liver and Mild Ascites.

Then the drug therapy was change with,

Inj. Linezolid	600mg IV BD (1-0-1)
Inj. Dexa	1cc IVBD (1-0-1)
Inj. Pantop	40mg IV OD (1-0-0)
Tab. Clinidipine	10mg PO BD (1-0-1)
Tab. Telma – H	(40/12.5) PO OD (1-0-0)
Tab. Bilashine	20mg PO BD (1-0-1P)
Inj. Ondem	8mg IV SOS
Glymed Lotion	E/A BD on Lesion (1-0-1)
Inj. Insulin	SC TID (Acc to Sliding Scale)
Syp. Potklor	5ml PO BD (1-0-1)
Bact Ointment	Transdermal BD over Lesion (1-0-1)
Tab. Zincovit	PO OD (0-1-0)

OUTCOME

The patient showed improvement with adherence to the treatment regimen and no reported side effects. The levels of Hb, total protein, and albumin increased, while the levels of WBCs slowly get decreased and TB, CB, ALP, BU, creatinine, SGOT, and SGPT remained within normal range. Skin lesion blister get decrease and symptoms get subside during next 1 week with minimum scar on the limbs.

DISCUSSION

The case study presented highlights the importance of prompt recognition and management of Stevens-Johnson Syndrome (SJS), a rare but potentially life-threatening condition. About 30–50% cutaneous drug reaction cases are Stevens-Johnson Syndrome (SJS), and 80% are Toxic Epidermal Necrolysis (TEN).[5]

The diagnosis of SJS is typically based on clinical presentation and a skin biopsy. In this case, blood tests and cultures were done to rule out infection as the cause of symptoms. The patient's medical history was also taken into consideration, including the use of medication for hypertension, hypothyroidism, and asthma, which could have contributed to the development of SJS. ASO titre positive result indicate previous group A streptococcal infection.

Cases of SJS/TEN secondary to the use of azithromycin have been reported earlier.[6,7] In this case, the patient was started on a regimen of various medications, including linezolid, cilnidipine, pregabalin, and topical calamine lotion, which led to a significant improvement in symptoms and skin lesion healing. It is also important to monitor the patient's internal organ function, as SJS can cause damage to internal organs and lead to complications such as sepsis and respiratory failure. SCORTEN scale is a predictor of the mortality rate in SJS/TEN patients and is calculated by factors such as age of the patient, tachycardia, total body surface area involved, increased serum urea, increased serum glucose and increase bicarbonate levels.[8] A score of 5 or more indicates a mortality rate of 90%.[8]

Supportive care is also essential, including wound care, pain relief, and fluid and electrolyte management. In severe cases, patients may require hospitalization and management in an intensive care unit.

In this case, the patient was promptly diagnosed with SJS and treatment was initiated with a combination of medications including systemic steroids, anti-histamines, and antibiotics. The patient's symptoms improved with adherence to the treatment regimen and no reported side effects. It is important to note that the management of SJS is individualized based on the patient's specific needs and the severity of their condition.

Finally, the case highlights the importance of medication safety and preventing adverse drug reactions. Healthcare providers should be vigilant when prescribing medications and should carefully monitor patients for any signs of adverse reactions. Patients should also be educated on the potential risks and side effects of their medications and should report any unusual symptoms to their healthcare provider immediately.

CONCLUSION

This case highlights the importance of recognizing the potential adverse effects of medication use and the need for prompt diagnosis and management of SJS. The timely discontinuation of the offending medication and administration of appropriate treatment and supportive care can significantly improve the patient's outcome and prevent serious complications. Physicians and healthcare providers must also exercise caution and carefully monitor medication use to avoid known triggers of SJS. Continued research, education, and awareness of SJS are crucial to improve the understanding of this rare but potentially life-threatening condition and to ensure the best possible outcomes for affected individuals.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

ABBREVIATIONS

SJS: Steven Johnson Syndrome; **NSAID:** Nonsteroid Anti Inflammatory drug; **B/L:** Bilateral; **UL:** Upper Limb; **LL:** Lower Limb; **PO:** Per oral; **BD:** Twice a day; **OD:** Once a day; **ASO:** Anti Streptolysin O; **FBS:** Fasting Blood Sugar; **PPBS:** Post Prandial Blood Sugar; **C/S:** Culture Sensitivity.

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