POST OPERATIVE STEVEN JOHNSON TYPE REACTION SECONDARY TO PIPERACILLIN

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ABSTRACT

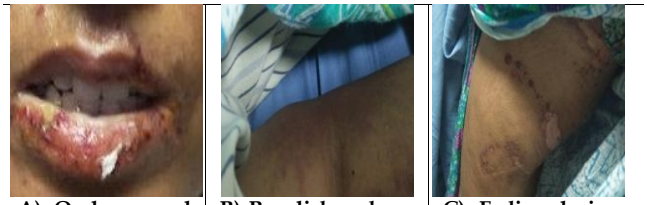
Toxic epidermal necrolysis (TEN) and Stevens–Johnson syndrome (SJS) are lethal cutaneous reactions to medications stirring1–2 per million individuals every year. Erythemaand tendernessincluding blistering of both the skin and mucus membranes are common features. We report a case of Stevens–Johnson syndrome associated to piperacillin- tazobactam treatment, which is a rare phenomenon in postoperative patients.

INTRODUCTION

Stevens–Johnson syndrome (SJS) is an acute mucocutaneous process and it is one of the manifestations of severe form of cutaneous eruptions of the skin and mucosal membrane, characterized by severe stomatitis,extensive mucosal necrosis, purulent conjunctivitis and purpuric macules. Evidently, the etiology is believed to be triggered by a number of potential etiologic agents and generally associated with the use of drugs. Here, is a case of SJS-type reaction secondary to piperacillin in surgical ICU at AFIC/NIHD.

CASE REPORT

A 46 years old female c/o severe aortic stenosis (AS) and severe mitral stenosis (MS) was operated for DVR (mechanical mitral and aortic). At her zero post-operative day she was shifted to surgical ICU and was given first line antibiotics i.e. linezolid, meropenem and vancomycin till post-operative day one. At second post-operative day meropenem and linezolid was stopped and piperacillin/sulbactam 4.5 g IV 6 hourly was initiated and continued till post-operative day six. Patient developed large tense blisters spreading over the body including chest, abdomen and both lower limbs, along with erosion over back of trunk, buttock area and genitalia with the involvement of erythematous rash. At her fifth post-operative day oral mucosal vascular lesions appears over tongue, buccal mucosa with encrusted lips (figure). Piperacillin was then stopped due to suspicion of exacerbation of skin reaction and ceforperazone was stared. At her seventh post-operative day the patient was shifted to



A) Oral mucosal lesions | **B) Purplish rash on upper extremities** | **C) Fading lesions over lower limbs.**

Figure: (a) Oral mucosal lesions, (b) Purplish rash on upper extremities (c) Fading lesions over lower limbs.

HDU and dermatological review was taken. Vanco-mycin was stopped due to concern of SJS. She had been taking all of her other medications (tramadol, captopril, sildenafil, digoxin, warfarin, ranitidine, spiranolactone, trimetaziine, magnesium- sulphate, adrenaline) from the beginning of her post-operative day 0. By history and clinical examination, the patient was diagnosed as a case of SJS involving five percent body surface area. Piperacillin was suspected as the causative agent of the mucosal skin reaction of the patient. The patient was managed aggressively with steroids, anti-histamines, local treatment of lesions with dry sterile dressings.

DISCUSSION

Steven Johnson syndrome (SJS) or Toxic epidermal necrolysis (TEN) is one of the cutaneous adverse drug reactions associated with

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eruptions of the skin and mucous membrane that can be potentially fatal. They are defined by the percentage of skin detachment on the body surface area: SJS refers to removal of epidermal layer when less than 10% of the body surface area is affected, whereas TEN refers to cases in which epidermal detachment accounts for more than 30% of the body surface area[1]. Affirmation involving oral, genital or ocular mucosa increases the suspicion of SJS or TEN which usually accounts in >90% of patients[2].

Although the exact etiology of SJS/TEN is not fully understood, it is believed to be an immune-mediated hypersensitivity reaction in which cytotoxic T lymphocytes play a role in the pathogenesis[3]. In both conditions, there is an event of acute mucocutaneous rash associated with the formation of vesicles and blisters. In extreme cases they are characterized by extensive skin lesions associated with extensive necrosis and detachment of the epidermis and erosion of mucous membranes.

Various medications have been identified as culprit agents triggering SJS and TEN. Short time use of medications such as trimethoprim-sulfa-methoxazole and other sulfonamides, aminopenillins, cephalosporins, quinolones, and chlormezaoneand longterm use of medications such as carbamazepine, phenytoin, pheno-barbital, valproic acid, NSAIDs (oxicamtype), nevirapine, lamotrigine, sertraline, and allopurinol are associated with the syndrome. Medications linked with the long term use, SJS/TEN usually occurs within two months after initiating the treatment[4]. On the other hand, mycoplasma pneumoniae and HSV have also been linked to the occurrence of these diseases without any medication exposure[5]. Some case reports have been publishedon post-operative SJS-TEN secon-dary to piperacillinand tazobactam[6]. Beta-lactam group of antimicrobials are frequently associated with severe cutaneous adverse drug reaction CADRs like SJS and TEN. Although these CADRs are predominantly mild in nature, they can be at times, severe in manifestation.

CONFLICT OF INTEREST

This study has no conflict of interest state by any author.

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