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CASE REPORT

Drug-Induced Stevens Johnson's Syndrome; 4 case Series in Tertiary Hospital in Somalia

Síndrome de Stevens Johnson inducido por fármacos; serie de 4 casos en un hospital terciario de Somalia

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Abstract

Stevens-Johnson syndrome/toxic epidermal necrolysis (SJS/TEN) is a well-known severe cutaneous adverse reaction (SCAR) that belongs to type IV hypersensitivity and is mediated by an immunological effect.

Here, we report 4 cases of SJS presented to a tertiary hospital in Mogadishu, Somalia. Stevens-Johnson syndrome has a significant relationship to various drugs. Stevens-Johnson syndrome is a potential therapeutic complication, especially in Somalia, where antibiotics are used irrationally. Steroids are controversially used as treatment. SJS is more common in Somalia and other parts of Africa because antibiotics are available without a prescription. It's difficult to detect and manage; most patients die before a firm diagnosis is obtained.

Keywords: Stevens Johnson syndrome, Type IV Hypersensitivity, toxic epidermal necrolysis.

Resumen

Una conocida reacción adversa cutánea grave (RAC) de tipo IV, mediada por un impacto inmunitario, es el síndrome de Stevens-Johnson/necrolisis epidérmica tóxica (SJS/TEN).

En este artículo se presentan 4 casos de SJS en un hospital de tercer nivel de Mogadiscio (Somalia). El síndrome de Stevens-Johnson tiene una importante relación con diversos fármacos. El síndrome de Stevens-Johnson es una complicación terapéutica potencial, especialmente en Somalia, donde los antibióticos se utilizan de forma irracional. Los esteroides se utilizan de forma controvertida como tratamiento. El síndrome de Stevens-Johnson es más común en Somalia y otras partes de África porque los antibióticos están disponibles sin receta. Es difícil de detectar y manejar; la mayoría de los pacientes mueren antes de obtener un diagnóstico firme.

Palabras clave: Síndrome Stevens Johnson, hipersensibilidad de tipo IV, necrolisis epidérmica tóxica.

Introduction

Stevens-Johnson syndrome/toxic epidermal necrolysis (SJS/TEN) is a well-known severe cutaneous adverse reaction (SCAR) that belongs to type IV hypersensitivity and is mediated by an immunological effect[1]. It has been determined that this hypersensitivity reaction is a dysregulation of cellular immunity[2] brought on by the production of cytotoxic signals such as granulysin[3], perforin/granzyme B, and Fas/Fas ligand[4], which were triggered by cytotoxic T lymphocytes and natural killer cells. SJS/TEN is a spectrum disorder characterized by widespread epidermal detachment and mucocutaneous involvement[5]. Stevens-Johnson syndrome (SJS), SJS/TEN overlap (SJS-TEN), and toxic epidermal necrolysis (TEN) are represented by different total body surface areas (TBSA) of detached or detachable skin lesions as 10%, 10%-30%, and >30%[6]. SJS, SJS-TEN, and TEN mortality rates were 5-10%, 30%, and 50%, respectively[2-5].

In this case series, we report 4 cases of SJS presented to a tertiary hospital in Mogadishu, Somalia.

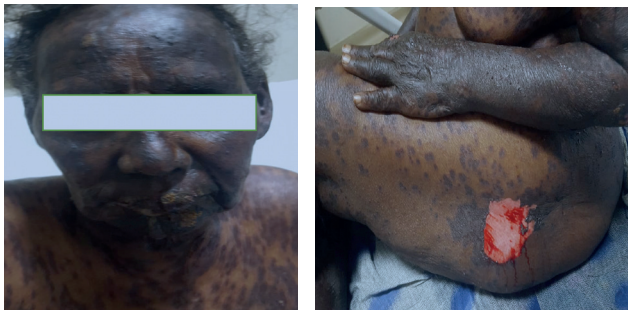
Case Report

We present four cases of Steven John's Syndrome admitted in our ward.

Case 1

71 years of female patient with no history of any chronic disease presented in our emergency department with complain of macular rash extending from the trunk toward the extremities, worsening lip swelling, mouth sores, she gives a history of UTI for which she was treated with Ciprofloxacin for her general practitioner. On examination, she was ill looking old lady with rashes over all her body, the mouth had stomatitis, with ulcers involving lips, tongue, and buccal mucosa and Nikolisky sign was positive.

Figure 1: 71 years old with rashes all over her body, and some ruptured bullous. Consent was taken from the patient to use this photo.

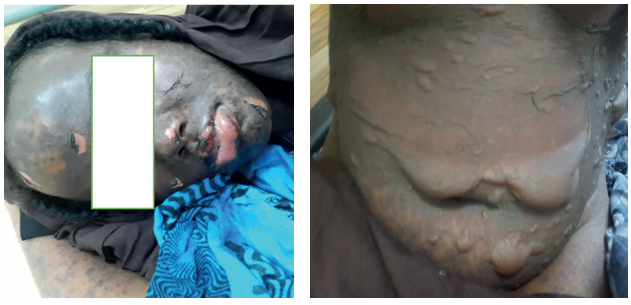


Laboratory investigation showed wbc 6 x1000mm^3 Hg 10.7g/dl Plt 101x1000mm^3, Glucose 147mg/dl Urea 75mg/dl Creatinine 1.59mg/dl Sodium 131mEq/l K 4.76mEq/L CRP 92.5mg/l. She was admitted in the ward, treated with IV fluids, methylprednisolone 90mg for 5 days, daily dressing with normal saline and Bepanthen cream, Oral hygiene care. And patient is discharged after 10 days with good recovery.

Case 2

18 years old female patient presented to our emergency department with complain of bullous formation all over her body for 4 days, initially it started with itching and suddenly the bullous started becomes bigger and rupturing easily. She was treated Co-trimoxazole for tonsillitis few days ago. On examination, tense bullous that contain clear fluids was noted in her torso, and ruptured bullous all over her body. Oral and eye lesions were less pronounced. Nikolisky sign was positive.

Figure 2: 18 years old female, bullous formation and some ruptured bullous on face and lips.

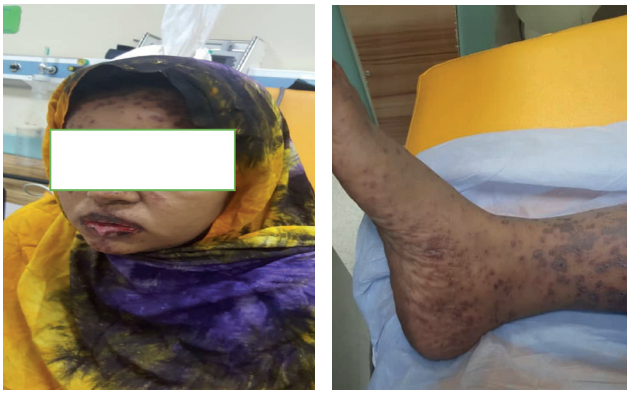


Laboratory research showed wbc 6.15 x1000mm^3 Hg 13.1g/dl Plt 291x1000mm^3, Glucose 112mg/dl Urea 20mg/dl Creatinine 0.58mg/dl Sodium 140mEq/l K 4.25mEq/L CRP 96mg/l.

Case 3

30 years female patient presented to our emergency with rash around her forehead, nose, chest and also lower extremity, and oral ulcers for 5 days. Patient reported she was well before 10 days ago, then she developed generalized body ache, fever, and headache. Then she visited her local doctor and he prescribed Acyclovir tablet, Ciprofloxacin, Artemether injection and Diclofenac tablet. She developed itching and rash after starting these medications. On examination she had hyperpigmented skin, minute blisters around both the eyes and lips, all over the body.

Figure 3: 30 years female presented with rash and oral ulcers.



Laboratory research showed wbc 14.78 x1000mm^3 Hg 9.8g/dl Plt 473x1000mm^3, Glucose 78mg/dl Urea 27mg/dl Creatinine 1.91mg/dl Sodium 144mEq/l K 3.4mEq/L CRP 131.1mg/l.

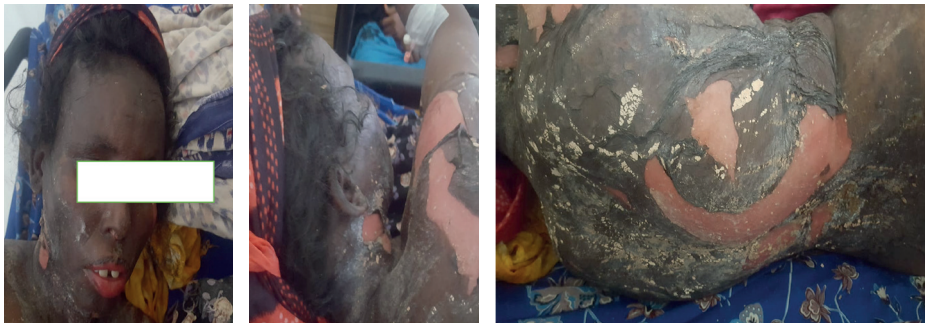
Case 4

40 years old female patient presented to our emergency with widespread erythema, necrosis, and bullous detachment of the epidermis and mucous membranes for 8 days, which she developed her body after 3 days of Ceftriaxone use, which her GP prescribed for urinary tract infection. On examination, she was disoriented, looked dehydrated with sunken eyes, and also had bullous detachment of almost all of her body, Nikolisky sign was positive.

Laboratory investigation showed wbc 1.54 x1000mm^3 Hg 13.3g/dl Plt 546x1000mm^3, Glucose 68mg/dl Urea 73mg/dl Creatinine 1.17mg/dl Sodium 158mEq/l K 4.05mEq/L CRP 295.6mg/l. Ph 6.99 pCO2 44.8 pO2 69 cNa 160 cK4.99 cHCO 7.6

We admitted two of the patients in ICU and the other two in Medical Ward, we used plenty of IV fluids, Steroids 90mg for 5 days, parenteral nutrition, oral hygiene care, dressing with normal saline, and covered with wet sterile gauze, we also used Dexpanthenol cream for open wounds in the evening.

Figure 4: patient presented with severe ruptured bullous all over her body.



One of our two patients admitted in ICU who presented late to the hospital died due to sepsis and multiorgan failure.

We didn't use antibiotics during the patients stay in the hospital and took extra care of the sterilization. After the lesions has improved, we discharged patients with oral steroids and trapped off during their outpatient clinic visits.

Discussion

In this case series, we enrolled 4 cases diagnosed with SJS-TEN overlap, presented to a tertiary hospital in Mogadishu, Somalia. All patients had drug relationship, and major contribution was antibiotics and antivirals. According to Li and Ma, antibiotics and anticonvulsants are the most commonly used single drugs in SJS and traditional Chinese medicines in TEN[7]. Allopurinol, aromatic anticonvulsants, sulfonamide antibiotics, oxicam NSAIDs, and nevirapine have been linked to an increased risk of induced severe cutaneous adverse reaction (SCARs)[5].

SJS begins with a viral-like prodrome lasting one to two weeks, followed by an acute onset of a widespread erythematous, macular rash with blisters or flat typical target lesions on the face, trunk, extremities, oral conjunctiva, and anogenital mucous membranes. The epidermis eventually becomes necrotic and can separate from the dermis, a positive Nikolsky sign[8]. Drugs and infections, most notably trimethoprim-sulfamethoxazole and Mycoplasma, are frequently cited as causes of SJS in both adults and children[8].

In Somalia, a country where there is indiscriminate prescription of antibiotics is available, there is limited reports in the literature for SJS, this, as far as we know, is the only documented case series reported from Somalia.

Conclusion

Stevens-Johnson syndrome is a potentially fatal multiorgan disease with a strong etiologic link to some medications. Physicians must therefore consider Stevens-Johnson syndrome as a potential complication of treatment, especially in a country like Somalia where there is discriminate antibiotic use. Steroids were mostly used as treatment although its controversial yet. SJS is much higher in Somalia and other part of Africa due to availability of Antibiotics without prescription and it's difficult to diagnose and manage, usually patients die before a definite diagnosis is made.

Consent

Written and informed consent was taken from the patient for possible publication of the cases.

Conflicts of interest

The authors declare no conflict of interest.

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