Case Report

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A Rare Case of Stevens-Johnson Syndrome Associated with Anti-Tuberculosis Drugs

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ABSTRACT

Stevens-Johnson syndrome (SJS) is a severe allergic reaction to the skin and mucous membranes that causes skin damage and cracking, is painful, and can be fatal. Patients may experience side effects from anti-TB medication use, including as allergic and non-allergic drug reactions. Antitubercular medicines are a prominent source of toxic epidermal necrolysis (TEN) and SJS in underdeveloped nations such as India and Thailand. The majority of cases appear to be caused by thiacetazone. On 3 September 2022 patient was admitted in ICU Bed no. 8. and patient chief complaint of lesions over whole body since1 month also, chief complaint in swallowing for 15 days. Patient was diagnosed anti-tuberculosis drug induce Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis (SJS/TEN) with sepsis.

Keywords: Stevens-Johnson Syndrome; Toxic Epidermal Necrolysis; Tuberculosis; Anti-Tubercular Treatment; Isoniazid

Abbreviations: SJS: Stevens-Johnson Syndrome; TEN: Toxic Epidermal Necrolysis; TB: Tuberculosis; ATT: Anti-Tubercular Treatment

Introduction

The Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN) have frequently been connected to medication exposure. They have been noted across all people and all throughout the world [1,2]. According to estimate, there are 2 to 7 cases of SJS for every million persons in a given year [3]. Any age can experience this reaction, although women are more likely to experience it and the incidence rises above the fourth decade [4]. According to reports, SJS mortality ranges from 3 to 10%, and TEN mortality ranges from 20 to 40%. SJS is a severe allergic reaction to the skin and mucous membranes that causes skin damage and cracking, is painful, and can be fatal. After identifying a child's condition as being brought on by a medication reaction, a paediatrician made the initial discovery of this disease in 1922. Usually, 8 days after taking a medicine ethambutol, isoniazid, rifampicin, pyrazinamide, streptomycin, and thiacetazone, SJS begins (range 4-30 days) [3-5]. The majority of the assessed incident cases in 2016 (45%) were reported from the WHO-South-East Asia Region. Tuberculosis (TB) is the tenth most deadly disease in the world. India, Indonesia, China, the Philippines, and Pakistan were the top five nations, accounting for 56% of the anticipated cases. The global TB death rate is decreasing at a pace of roughly 3% a year [3]. Patients may experience side effects from anti-TB medication use, including as allergic and non-allergic drug reactions [6]. Skin rash is the second most common adverse event, and drug eruptions brought on by these drugs continue to be a significant treatment barrier [7,8]. Antitubercular medicines were used in 8 (13%) of the 60 instances with thiacetazone alone. In contrast to the Indian report, no additional antitubercular drug-related case was detected in our series. Antitubercular medicines are a prominent source of TEN and SJS in underdeveloped nations such as India and Thailand.

The majority of cases appear to be caused by thiacetazone. Other antitubercular medications are less dangerous to use; however, there have been occasional instances of TEN developing as a result of the use of isoniazid, rifampin, pyrazinamide, streptomycin, and ethambutol [9]. At least one case of SJ caused by thiacetazone is admitted to the dermatology department of the Medical College in Baroda, India, each month. Because of the increasing spread of AIDS in our nation, a significant increase in such incidences is anticipated [10].

Case Presentation

A 36- year-old female patient visited on District Hospital Mansa for regular follow-up, with chief complaints of drowsiness and vertigo. She was newly diagnosed tuberculosis (pulmonary Koch's) on 9 August 2022 and her vital was, BP: 62/58 mmHg, SPO2: 98 % RA, PR:115/ min. patient was admitted on 2 September 2022 in District hospital. Patient was started antitubercular treatment, and was conscious but confused condition. Patient was treated with injection Rantac IV stat. Ondansetron IV stat injection. Ceftriaxone 1 gm IV stat injection. NS 500ml IV stat. afterward she was referred to Guru Gobind Singh Medical College and Hospital by the medical officer of Civil Hospital Mansa. On 3 September 2022 patient was admitted in ICU Bed no. 8. and patient chief complaint of lesions over whole body since1 month also, chief complaint in swallowing for 15 days. At the time of admission patient was conscious and oriented to place time. On examination revealed that mucosa, oral, genital region was having hyperpigmented lesion with crusting present over whole body and also Re-epithelialization lesion measuring 2cm × 4cm present over neck. On oral examination tongue appears white coated and patient hemorrhagic crusting present over lips, skin consultation was taken Figure 1.

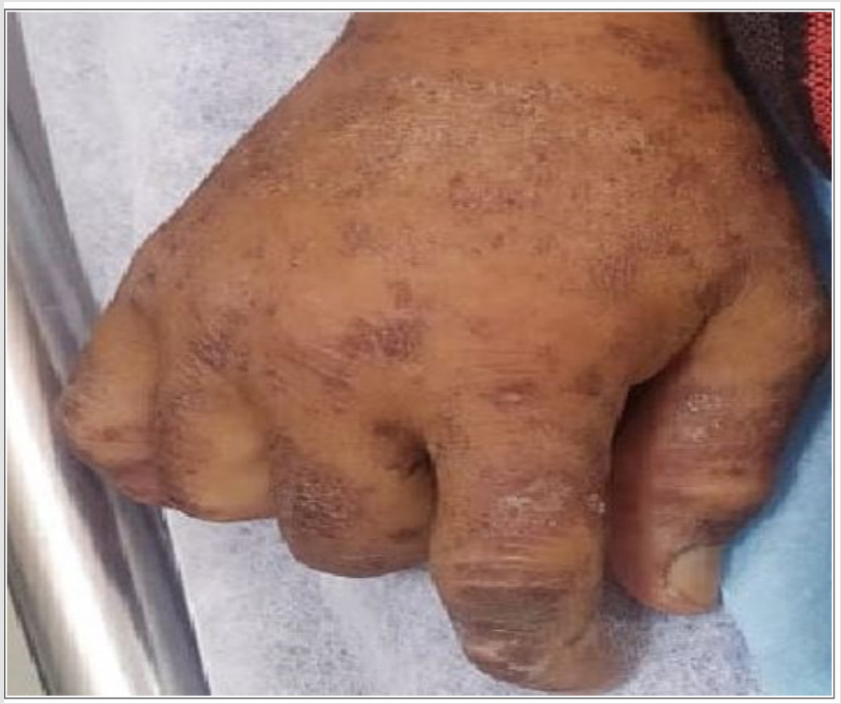

Figure 1.

Investigation

Patient was diagnosed anti-tuberculosis drug induce Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis (SJS/TEN) with sepsis. Routine biochemical investigation revealed the following- Urea: 60mg/dl, Sr. creatinine: 1.1mg/dl, Na:127 mEq/L, K: 4.5 mEq/L, PT. Time:14 seconds, INR:1.0. The 2D ECHO reports revealed moderate pericardial effusion and LVEF-60%, normal LV systolic function. For the management of disease stop anti-tubercular treatment (ATT), and patient started on medication: inj. Meropenem 1gm IV TDS, inj. Clindamycin 60mg IV TDS, inj. Dexa BD, inj. Hepated 2 ampoules in D5% BD, tab. AF 400mg stat, Intravenous fluid: NS500 ml, RL 500ml, Fucidin H Cream BD, Candid mouth paint TDS.

Discussion

SJS and toxic epidermal necrolysis have been linked to ATT, which includes ethambutol, isoniazid, rifampicin, pyrazinamide, streptomycin, and thiacetazone [11]. The occurrence of adverse medication responses is influenced by a variety of risk variables, including polypharmacy, age, gender, race, and genetic factors. Serious adverse responses to antituberculosis medications can cause considerable morbidity and jeopardise TB therapy. SJS, also known as erythema multiforme major, is assumed to reflect a disease spectrum, with erythema multiforme being the most benign and toxic epidermal necrolysis being the most severe. It affects the mucosal membranes of the mouth, nasal passages, throat, oesophagus, urethra, vulvovaginal, and anal areas. SJS to ATT is a well-known consequence, and it is advised that specific second-line medications be introduced with progressive desensitisation [12]. TB infection is a globally widespread illness with high morbidity and mortality. It is the tenth greatest cause of death among HIV-infected and immune-compromised patients worldwide, accounting for more than 90% of such patients' deaths in underdeveloped countries [13,14]. When compared to other medications, antitubercular drugs and anticonvulsants had a longer incubation period (11 days). This can be explained by the fact that patients may be hypersensitive to common medications such as sulfonamides, antibiotics, and nonsteroidal anti-inflammatory drugs, whereas antitubercular therapies and anticonvulsants are usually taken for the first time.

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Author Contributions

All authors have accepted responsibility for the entire content of this manuscript and approved its submission.

Competing interests: Authors state no conflict of interest.

Informed Consent

Informed consent was obtained from all individuals included in this study.

Ethical Approval

The local Institutional Review Board deemed the study exempt from review.

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