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A Case Report On Leptospirosis with secondary Steven Johnson Syndrome



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ABSTRACT

Leptospirosis is a bacterial infection caused by *Leptospira* interrogans which may cause fever, muscle tenderness, jaundice, skin rashes, abdominal pain. Steven Johnson Syndrome is a dermatological reaction of the skin & mucosa resulted in serious clinical outcomes. In this case most frequent cutaneous reactions are observed. It is also termed as life threatening mucocutaneous disease. In this case (we are reporting that) the patient developed drug induced SJS due to usage of drugs like Cefuroxime & Paracetamol/Acetaminophen. It is one of the most severe adverse drug reactions seen in this reporting case. We are reporting that the patient developed rashes & fluid filled lesions on skin all over the body like face, trunk, upper & lower limbs including Genital region within 3 days. These lesions got ruptured to form erosions with ulcers at the site. In this case the patient was treated with systemic steroidal therapy, Antibiotics, supportive care treatment along with some of the topical creams.

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1. Introduction

Leptospirosis is a bacterial infection caused by *Leptospira* species also called as Zoonotic infection as it is transmitted by Infectious carrier animals, it mainly contracted through skin abrasions and the mucosa of the nose, mouth and eyes [1,2]. SJS is the dermatological reaction of the skin mucocutaneous diseases. In which the fluid filled lesions are developed extensively leading to severe complications. It mainly caused due to the medication which are having more than 220 drugs [3,4]. The one of the most triggering factor explained in TEN was delayed hypersensitivity reactions like Keratinocyte apoptosis which occurs due to the activation of immunopathological mechanism [5] where as excess release of inflammatory mediators like cytokines & synthesis of granulysin by T-Lymphocytes & NK cells [6,7] Certain therapeutic interventions should be followed regularly to reduce the risk of complications. It is one of the severe ADR that mainly affects the skin & mucous membranes. The patient with an eruption resembling scalding of the skin called TEN [8]. It is mainly induced by the drugs or infection, environment chemicals, radiation & immunisation or sometimes it can be an idiopathic [9]. We report that the patient with Leptospirosis with SJS was treated with systemic steroidal therapy, Antibiotics, systemic supportive care & some topical creams for healing the fluid filled lesions on all over the body.

2. Case Report

A 40 yrs old male patient was brought to Emergency department with Semiconscious condition presented with the complaints of Multi-

ple Skin lesions & erosions associated with severe Itching all over the body, Intermittent fever, abdominal pain, Pitting type Pedal edema and Seizures for which he was got treated with injection Febrinil 500 mg, injection Avil 45 mg, injection Eptoin 50 mg, injection Meftal spas 10 mg, injection Pantop 40 mg, injection Lasix 10 mg and injection Hydrocortisone 100 mg where patient got stabilized and shifted for ICU management; after 3 hrs he retained fever with chills & rigors, severe Abdominal pain with 2 episodes of vomiting, Burning micturition associated with yellowish discoloration of Urine and Mucopurulent (Pus like) discharge from the skin lesions all over the body; the next day he developed Mouth Ulceration, yellowish discoloration & Purulent discharge from the eyes, tenderness at the joints and Blood in stools. Patient has the history of Seizures from childhood and using Ayurvedic medications; Smoker & Alcoholic from 15 yrs (Chronic); Patient undergone for Appendectomy 4 yrs back, also had a history of Jaundice, Seizures and Paraplegia 2 months ago and on treatment of Tablets: Estuchol, Gabapin, Ceftoprim, Dolo, Ecosprin.

Patient was apparently normal 4 months back where he developed fever with chills & rigors and abdominal pain for 2 days to which he got treated with unspecified medication injection & infusions given at the nearer local hospital for which he developed contusion at the site of injection/infusion (left upper limb) after 10 minutes he got numbness at left upper limb then followed by GTCS type of Seizures associated with mouth drooping & drooling 5-6 episodes for 15 minutes resulted left side Hemiparesis and Postictal state of confusion, later patient complained of itching all over the body after 5 minutes he developed multiple skin lesions & erosions all over the body, for which he was referred to Santhiram Superspeciality Hospitals, Nandyal; for further management.

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On Examination Patient has Scaly Plaques all over the body including Genitals where Erosions & ulcers seen all over the Penis & Scrotum and Greenish discharge was observed, Oral Candidiasis presented with secondary infection and Conjunctivitis of both Eyes and the laboratory findings shown decreased levels of Hemoglobin, Platelet count, Lymphocytes, Total Red Blood Cells, Packed Cell Volume, Total Proteins, Serum Albumin and Increased levels of Polymorphs, Erythrocyte Sedimentation Rate, Mean Corpuscular hemoglobin Concentration, Total & Direct Bilirubin, Serum Glutamic Pyruvic Transaminase, Serum Glutamic Oxaloacetic Transaminase/Aspartate aminotransferase, Alkaline Phosphate, Alanine aminotransferase. Igm Antibodies are found increased. Patient got treated with Hepatoprotective, Antihistamines, Antiaphthous, Antibiotics, Steroids & Corticosteroids, Vitamins, Nutrients & Mineral Supplements and Soothing agents.

3. Discussion

Leptospirosis is a bacterial infection caused by Leptospirae species also called as Zoonotic infection as it is transmitted by Infectious carrier animals, it mainly contracted through skin abrasions and the mucosa of the nose, mouth and eyes [1,2]. SJS is the dermatological mucocutaneous diseases due to drug reactions. It is usually a reaction to a medication like Cefuroxime&Paracetamol/Acetaminophen. These two diseases combination may also caused due to the infection but in rare cases. It causes severe mucocutaneous hypersensitivity reactions. Clinically it is different from Erythema Multiforme major & it also occurs due to infection in most of the cases [10-12]. The mucocutaneous fluid filled lesions present on all over the body (the trunk, face, oral cavity, upper-lower limbs & Genitals) which is considered as an ADR. In drug induced necrolysis these fluid filled lesions when ruptured to form erosions & that blister fluid was responsible for detachment of epidermis [13-15].

In this case the patient was treated with systemic corticosteroid therapy, Antibiotics, supportive systemic care & same topical creams. For Leptospirosis Doxycycline 200 mg was given, to treat Juandice Hepamerz 100 mg given. The systemic corticosteroids like injection Methyl Prednisolone 2CC in IV form was given for 20 days. It is mainly used to treat pain & swelling that occurs with erosions which were ulcerated. There is an exacerbation of fluid filled lesions over the eyes with continuous discharge & redness of the eyes was observed to cure it Moxvel topical eye drops, Lacrygel & Moxicipointment was given which is used to relieve Infection, Inflammation& irritation of the eye. In chronic condition of ophthalmic pathogenic process can lead to vision impairment & loss [16]. The lesions which are developed on ocular region due to pathological condition resulting from a disease or injury [17]. Supportive systemic care like continuous IV infusion of normal saline was provided for maintenance of electrolyte balance & application of some topical creams like Fucibid, Mucopin which is a Steroid for topical erosions. Multiple fluid filled lesions over the oral cavity gets ruptured & forms erosions which are very painful & causing severe complications [16] like impairing speech & feeding. For mucocutaneous oral lesions, Tess gel was given which is a Steroid& used as a topical pain reliever. For severe mucocutaneous hypersensitivity reactions, Pheniraminemalease was given in an i.m form. The patient has nutrient deficiency because she was unable to feed through oral cavity as there is a mucocutaneous oral lesion to treat this, the nutrient supplement like Astymin administered which contains Amino acids and other nutrients like tryptophan which is a stress reliever/reducer was given along with Continuous i.v saline infusions. The patient condition got randomized by providing with the above treatment like Steroidal therapy, supportive systemic care and some topical creams for healing the mucocutaneous oral & skin lesions.



Figure: Demonstrating Multiple Skin Erosions All over the body, a) Both Hands, b) Left limb, c) Right limb, d) Face & Scalp region e) Back region, f) Trunk & Chest region

4. Conclusion

We are reporting that this exploratory clinical study proves the safety & efficacy of systemic steroidal therapy, Antibiotics, supportive systemic care & topical creams. The most commonly used drugs in the management of Leptospirosis & SJS were corticosteroids & selective antibiotic therapy. The fluid filled vesicles & bullae with erosions all over the body (face, mouth, trunk & both upper-lower limbs, Genitals) was got healed and the patient condition was randomized the results need to be further confirmed in a large randomized controlled clinical trials which is an ongoing in our tertiary care teaching hospital.

Conflict of Interest

The authors declare no conflict of interests with respect to authorship & publication of the case.

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