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AMOXICILLIN-CLAVULANATE INDUCED ERYTHEMA MULTIFORME IN HERPES ZOSTER OPHTHALMICUS

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ABSTRACT

Herpes Zoster infection or shingles occurs when the latent varicella Zoster virus (VZV) gets reactivated in the body.Erythemamultiforme is a cell mediated cutaneous and mucosal hypersensitivity reaction that presents as characteristic targetoid lesions in the body,mostly distal extremities. Here, we present a case of Herpes Zoster Ophthalmicus with exposure to Amoxicillin Clavulanate that later led to Erythema Multiforme.

INTRODUCTION

Chickenpox is an infectious disease caused by the varicella-zoster virus (VZV). Usually, the primary infection with varicella zoster virus in non- non-immune host presents as chicken pox. After the course of illness, the virus remains latent in the body, precisely in the dorsal root ganglia of sensory neurons for long. Herpes zoster infection or shingles occurs when the latent virus gets reactivated due to a variety of host related reasons. In majority cases, the risk for reactivation of the virus increases with decline in T cell mediated immune response, which in turn may result from normal ageing, use of immunocompromised medications, infection with HIV/AIDS, or chronic illness. Other causes include physical stress, emotional stress, fatigue or even poor nutrition.

Reactivation of varicella zoster virus in the ophthalmic division of the trigeminal nerve leads to the development of Herpes Zoster Ophthalmicus (HZO). 17-25% of all Herpes Zoster cases present with ophthalmic complications. HZO produces classic periorbital vesicular rash distributed based on affected dermatome but a minority of patients may have ophthalmologic findings limited to cornea like uveitis, conjunctivitis, keratitis, or ocular cranial nerve palsy. The skin manifestations of HZO follow the midline and may involve one or more branches of ophthalmic division of trigeminal nerve, the supraorbital branch, lacrimal branch, and the most serious when affected at the nasociliary branch. The permanent sequelae of HZO include chronic ocular infection, loss of vision, and debilitating pain. The extraocular manifestations of HZO involve a prodromal phase which presents with influenza-like illness including fatigue, malaise and low-grade fever. A majority of patients may experience dermatomal pain of varying intensities along the distribution of ophthalmic nerve.

Erythema Multiforme is a cell mediated cutaneous and mucosal hypersensitivity reaction that presents as characteristic targetoid lesions in the body, mostly distal extremities. It represents an acute or recurrent cutaneous reaction, manifested by bullous, papular, and necrotic lesions. The reaction is triggered either by infection mostly with Herpes simplex virus type 1, herpes simplex virus type 2,Cytomegalovirus, Epstein-Barr virus, Hepatitis C virus, Influenza virus,

Mycoplasma pneumoniae or Vulvovaginal candidiasis, or by exposure to certain drugs like Erythromycin, Nitrofurantoin, Penicillins, Sulfonamides, Tetracyclines, Antiepileptics, Barbiturates, Nonsteroidal anti-inflammatory drugs, Phenothiazines, TNF- alpha, vaccines, statin, antitubercular agents, antipyretics, heavy metals and herbal agents. Early phase of the disease is characterized by influx of macrophages and CD8 T lymphocytes, which in turn stimulate the release of cytokines which mediate the inflammation and eventually cell death. Pathological feature is necrosis of keratinocytes if the process is due to drug hypersensitivity. Lesion of the erythema multiforme is rounded lesion with three concentric circles. The outer ring is erythematous, the middle zone is, edematous and palpable and the center is erythematous covered by a blister. Topical treatment is based on antiseptic mouthwashes and anesthetic. Healing can be enhanced by the application of Vaseline on the lips and vitamin A ointment on the eyes. If erythema multiforme is caused by Mycoplasma pneumoniae infection, is manifested by cough or pulmonary radiological abnormalities and treated with azithromycin for three days.

CASE DESCRIPTION:

A 67-year-old male patient came to the general medicine outpatient department with chief complaints of skin lesions all over the body for 4 days and tiredness. His medical history revealed Type II Diabetes Mellitus, and was on treatment with Tab Metformin 500 mg, twice daily for the same.

On clinical examination, the patient was conscious and oriented. Ophthalmology consultation was sought to examine the skin lesions around the eyes and forehead, and was diagnosed as Herpes Zoster Ophthalmicus. On dermatology consultation to examine the targetoid lesions and bullae on the body and extremities, the patient revealed a history of taking MoxClav for the last 14 days, and had no history of drug allergy. Oral lesions were absent, and the diagnosis of Drug induced erythema multiforme (Amoxicillin Clavulanate) was also made.

The case was managed using topical and oral antiviral agent Acyclovir (TAB ACIVIR 800 mg, 1-1-1-1-1; ACIVIR CREAM Q8H). Aceclofenac 100 mg, and Acetaminophen 500 mg (TAB NODOL 500mg) was given to manage pain. Tab Prednisolone 30 mg was used to treat inflammation and Multiform erythema lesions. Mupirocin cream was prescribed for local application to prevent secondary bacterial infections. Moxiblu eye drops and Just tear eye drops were administered to prevent ocular complications of Herpes Zoster Ophthalmicus.

Figure 1 : Herpes Zoster Ophthalmicus

Figure 2 : Erythema Multiforme

The patient became better after 7 days of hospitalization, swelling subsided, no new vesicles appeared in the body, and was discharged.

DISCUSSION:

Erythema multiforme is a skin condition considered to be a hypersensitivity reaction to infections or drugs. The incidence of this has been estimated to be between 0.01 and 1%. It is usually not associated with any mortality. Most cases are self-limited and resolve without sequelae in 2-4 weeks. Affects males moreoften than females, with a ratio ranging from 3:2 to 2:1. Varicella-zoster virus infections have to be considered as possible trigger of erythema multiforme eruptions. In this case the patient had only

multiple skin lesions. The treatment should be tailored individually; risk /benefit should be evaluated carefully. Erythema multiforme is self-limiting disease. Though symptomatic treatment is satisfactory, topical or systemic steroid (Prednisone [40–60 mg/d, then the dose should be tapered over 2–4 weeks]) to decrease disease duration, may be required. Prophylactic antiviral in addition to EM treatment is necessary when EM is Herpes simplex virus -associated. If the patient experience severe attack with poor oral intake that results in fluid and electrolyte imbalance, then hospitalization is needed for hydration and proper patient management.

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