

INDUCED HERPES ZOSTER: IS FLUVOXAMINE THE CULPRIT?

Dr Santosh S V^{1*}, Dr Yogendra M², Shashank S Hosur³, Sree Nagavalli K³.

^{1*}MBBS, MD, Associate Professor, Department of Psychiatry, Basaveshwara Medical College Hospital and Research Center, Chitradurga. Karnataka. India. Affiliated to Rajiv Gandhi University of Health Sciences, Karnataka. (Recognized by Medical Council of India).

²MBBS, MD (DVL), Professor, Department of Dermatology, Basaveshwara Medical College Hospital and Research Center, Chitradurga. Karnataka. India. Affiliated to Rajiv Gandhi University of Health Sciences, Karnataka. (Recognized by Medical Council of India).

³Intern, Department of Pharmacy Practice, SJM College of Pharmacy, Chitradurga, Karnataka. Affiliated to Rajiv Gandhi University of Health Sciences, Karnataka. (Recognized by Pharmacy Council of India).

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***Correspondence for
Author**

Dr Santosh.S.V

Associate Professor,
Department of Psychiatry,
Basaveshwara Medical
College Hospital &
Research Centre,
Chitradurga-577501.

ABSTRACT

Herpes zoster (HZ) also known as Shingles is an acute viral infection results from reactivation of the DNA virus varicella zoster (VZV) which causes chicken pox. HZ is a localized, generally painful cutaneous eruption that occurs most frequently among older adults and immuno compromised patients. The most commonly affected dermatomes are the thoracic (45%), cervical (23%) and trigeminal (15%). The risk factors of HZ are older age, immunosuppressed individuals, diabetes, female gender, genetic susceptibility, mechanical trauma, recent psychological stress and white race. Fluvoxamine is the drug which acts by inhibiting the serotonin reuptake and has immunomodulatory action. Here we are presenting a rare case report of drug induced herpes zoster in a 58year old female patient suffering

with obsessive spectrum disorder.

KEY WORDS: Herpes Zoster, Fluvoxamine Maleate, Obsessive Spectrum Disorder.

INTRODUCTION

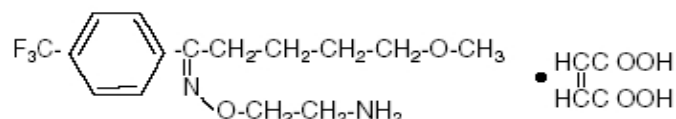
Herpes zoster (HZ) also known as Shingles, derived from the Latin word *cingulum* meaning 'girdle' is an acute viral infection results from reactivation of the DNA virus varicella zoster (VZV) which causes chicken pox. HZ is a localized, generally painful cutaneous eruption that occurs most frequently among older adults and immuno compromised patients. A common

complication of Zoster is postherpetic neuralgia (PHN), a chronic, often debilitating pain condition that can last months or even years. Approximately 3% of patients with zoster are hospitalized. The most commonly affected dermatomes are the thoracic (45%), cervical (23%) and trigeminal (15%) ^[1]. Patients with HZ infections usually progress through three stages: (i) Prodromal stage, (ii) Active stage (also known as acute stage) (iii) Chronic stage. However, some patients do not develop symptoms of all stages. Some patients do not form vesicular eruptions of the active stage, but do develop pain restricted to a dermatome and this has been termed *zostersineherpete* which makes proper diagnosis more difficult ^[2].

The prodromal syndrome stage presents as sensations described as burning, tingling, itching, boring, and prickly or knife like occurring in the skin over the affected nerve distribution. The active stage is characterized by the emergence of the rash that may be accompanied by generalized malaise, headache, low-grade fever and sometimes nausea. The chronic pain syndrome stage is termed PHN. It is defined as the pain lasting beyond the period of healing of the active skin lesions. PHN pain has been described as pain consisting of three distinct components: (i) A constant, usually deep pain; (ii) A brief recurrent shooting or shocking tic-like pain; and (iii) a sharp radiating dysaesthetic sensation evoked by very light touching of the skin, termed allodynia^[2]. The risk factors of HZ are, (i) older age, (ii) immunosuppressed individuals, (iii) diabetes, (iv) female gender, (v) genetic susceptibility, (vi) mechanical trauma, (vii) recent psychological stress, (viii) white race ^[3].

Fluvoxamine maleate is a selective serotonin (5-HT) reuptake inhibitor (SSRI) belonging to the distinct chemical series, the 2-aminoethyl oxime ethers of aralkylketones. It is chemically designated as 5-methoxy-4'-(trifluoromethyl)valerophenone-(E)-O-(2-aminoethyl)oxime maleate (1:1) and has the empirical formula C₁₅H₂₁O₂N₂F₃•C₄H₄O₄. Its molecular weight is 434.41.

The structural formula is



Fluvoxamine Maleate Tablets are available in 25 mg, 50 mg and 100 mg strengths for oral administration. The 50 mg and 100 mg tablets also contain synthetic iron oxides. The

mechanism of action of fluvoxamine maleate in obsessive compulsive disorder is presumed to be linked to its specific serotonin reuptake inhibition in brain neurons. Receptor binding studies have demonstrated that fluvoxamine is a potent serotonin reuptake inhibitor in vitro as well as in vivo ^[4].

Case Details

A 58 years old female consulted a Psychiatrist in Basaveshwara Medical College Hospital & Research Centre and was diagnosed to have obsessive spectrum disorder and was prescribed tablet fluvoxamine 50mg orally per day. Following one dose of the above medication patient developed multiple vesicles with erythematous lesion over the left mandibular and maxillary area of Face with pain and tenderness. Patient also had ulcers and erosions over the lower lip of buccal mucosa. Patient was diagnosed to have Steven Johnson syndrome provisionally by us. So previous medications were stopped and was referred to dermatologist. Patient was diagnosed by dermatologist to have herpes zoster and was treated as In- patient with dexamethasone, sodium fusidate cream topically and tablet acyclovir 800mg five times daily for 5 days and discharged. Over days lesions subsided but patient continued to have tingling sensation over that area with mood fluctuations and psychotic features. Patient was admitted in psychiatry department and diagnosed to have 1) postherpetic neuralgia, 2) bipolar affective disorder currently in mania with psychotic feature, 3) obsessive spectrum disorder For this she was treated with oxcarbazapine 1200mg, risperidone 3 mg, trihexyphenidyl 2mg per day and is on continuous medication for the same. She also received electro-convulsive therapy (ECT) and psychotherapy. Her symptoms subsided over a week and was discharged. Patient didnot have diabetes mellitus, Human immunodeficiency virus infection, fungal infections or was not on any other medication before starting fluvoxamine orally. Patient had a past history of suicidal attempt with organophosphorous compound a year back and was treated by a psychiatrist for one month with risperidone 2mg, trihexyphenidyl 2mg and zolpidem 5mg. Patient discontinued treatment latter on her own. There was no past history of herpes zoster, chicken pox or reaction to any of the drugs.



DISCUSSION

Fluvoxamine is the drug which acts by inhibiting the serotonin reuptake. A preclinical study reports that serotonin has immunomodulatory properties ^[5]. Although few people had herpes zoster during fluvoxamine therapy, the mechanism for Herpes zoster from fluvoxamine is not understood. Between January 2004 and October 2012, 4(0.237%) individuals taking Fluvoxamine Maleate reported Herpes Zoster to FDA. A total of 1685 Fluvoxamine Maleate drug adverse event reaction reports were made with the FDA ^[6]. A study conducted by an organization shows that, until August 21, 2014, 2,516 people got side effects while taking Fluvoxamine maleate. Among which 6 people (0.24%) had herpes zoster. The time on fluvoxamine maleate when people had Herpes zoster was less than 1 month. Also 66.67% and 33.33% of patients were female and male respectively and 80% and 20% of patients belong to age group >60 yrs and 30-39 years group respectively ^[7]. Thus in our report, the patient was female with 58 years. Also this event is considered as rare adverse event ^[8, 9]. The rare adverse event will occur at the frequency of occurring in less than 1/1000 but at least in 1/10,000 patients ⁹. The prescribing guidelines of Fluvoxamine used standard COSTART-based Dictionary terminology was used to classify reported adverse events. They described that in the events like herpes zoster, herpes simplex, the drug was considered as remote. Also they had emphasized that, although the events reported did not occur during treatment with fluvoxamine maleate, a causal relationship to fluvoxamine maleate has not been established ⁴. So there is a need to detect the signal intensively with the proper mechanism of action for it, as it is one of the events which is not clearly understood.

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