



ISSN: 0976-3031

Available Online at <http://www.recentscientific.com>

International Journal of Recent Scientific Research
Vol. 8, Issue, 3, pp. 15856-15857, March, 2017

**International Journal of
Recent Scientific
Research**

DOI: 10.24327/IJRSR

Case Report

HERPES ZOSTER DUPLEX BILATERALIS IN PATIENT WITH RHEUMATOID ARTHRITIS UNDERGOING METHOTREXATE THERAPY

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DOI: <http://dx.doi.org/10.24327/ijrsr.2017.0803.0018>

ARTICLE INFO

Article History:

Received 17th December, 2016

Received in revised form 21th

January, 2017

Accepted 28th February, 2017

Published online 28th March, 2017

ABSTRACT

Varicella zoster virus (VZV) reactivation is increasingly common in various immunocompromised conditions including rheumatoid arthritis particularly due to use of immunosuppressive therapy. However, the simultaneous reactivation of VZV from more than one dorsal root ganglia is not very common.

Key Words:

Herpes zoster, Bilateral, Methotrexate

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INTRODUCTION

Multidermatomal Herpes zoster with bilateral involvement though not a common entity (Gershon, Gershon *et al.* 2010), is particularly seen in immunocompromised hosts. Herpes zoster bilaterally involving two different dermatomes simultaneously is referred to as Herpes zoster duplex bilateralis. It may be symmetric if the same dermatome is involved bilaterally and asymmetric, if different dermatomes are involved on both sides. (Takayama, Takayama *et al.* 1988, Yoo, Park *et al.* 2009). This scientific communication reports a case of herpes zoster duplex bilateralis, where lesions appeared on both side involving different dermatomes.

A 65-year-old non-alcoholic, nonsmoker male attended the outpatient department with multiple aggregated vesicular, painful blisters located at right chest, armpit (T2, T3), skin over right scapula extending to the midline of his back (T3,T4) and also on the skin over left scapula (T1) since three weeks [Fig-1,2].

Previously, the patient experienced constant pain along rash site, causing much discomfort to lie on right side since 2-3 days before appearance of the eruptions. The pain was of same intensity at all sites and developed simultaneously. The patient was a known case of seropositive rheumatoid arthritis on treatment with Methotrexate, Omnacortil and

Hydroxychloroquin. He has no history of diabetes, hypertension, weight loss, asthma or malignancy.



Fig 1 Blistering eruptions on skin over anterior thorax



Fig 2 Blistering eruptions on skin over posterior thorax

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No history of similar lesions in the past could be elicited. He had no risk factors for HIV/AIDS. He has no history of insomnia or sudden mental trauma. A presumptive clinical impression of herpes zoster duplex bilateralis was made after taking history and thorough clinical examination. Methotrexate was withdrawn and the patient was treated with Tab acyclovir 800 mg five times daily for 10 days; and Tab Naproxen 500 mg as symptomatic management. The seven days post treatment follow up demonstrated lesions to start becoming dry; intensity of pain was also reduced.

DISCUSSION

Following primary infection, Varicella zoster virus (VZV) remains latent in sensory dorsal root ganglia of Trigeminal, Cervical, Thoracic, Lumbar and Sacral nerves for weeks to years, as demonstrated by VZV DNA in autopsy studies (Gilden, Vafai *et al.* 1983, Kennedy and Cohrs 2010). The highest VZV viral load distribution on the side of dorsal root ganglion determines the occurrence of unilaterality of zoster. (Pevenstein, Williams *et al.* 1999). Any subsequent reactivations are averted by the concurrent VZV specific immunoboosting induced by Herpes Zoster eruption. However multiple dorsal root ganglia may get reactivated, particularly in immunosuppressed host, when the virus accidentally get escaped from cellular immunity. In our case contiguous thoracic dermatomes (T2 -T4) were affected on right side, however in left side it is only T1 dermatome which is involved. Herpes Zoster most often accompanies a prodrome of pain and burning sensation (Takahama, Tsukahara *et al.* 2007), which is in consistent with the index case. The global "incidence rate of herpes zoster ranges from 1.2 to 3.4 cases per 1,000 healthy individuals, increasing to 3.9–11.8 per year per 1,000 individuals among those older than 65 years" (Takayama, Takayama *et al.* 1988, Arfan ul, Iftikhar *et al.* 2003, Yoo, Park *et al.* 2009). Any form of immunosuppression which may be due to ageing (Takayama, Takayama *et al.* 1988, Takahama, Tsukahara *et al.* 2007), autoimmune disease (Lewis and Mitchell 1971)/ immunosuppressive diseases/ chemotherapy (Roux, Breuil *et al.* 2011), malignancy (Yoo, Park *et al.* 2009) may result in unblocking of the dormancy of the latent virus leading to reactivation and appearance of clinical zoster. As per one study "Herpes zoster occurred in 14.5 cases per 1,000 patient-years in the methotrexate-treated rheumatoid arthritis patients." (Antonelli, Moreland *et al.* 1991)

CONCLUSION

Though a rare variant, Herpes zoster duplex bilateralis is a well recognized and reported condition worldwide, significantly seen more commonly in immunocompromised. It has been suggested that the multidermatomal involvement in Herpes zoster duplex bilateralis may either be due to contiguous spread or due to reactivation at multiple site simultaneously involving more than one dermatome (Vijay and Dalela 2015).

In our case it might be assumed that a group of different ganglia get reactivated simultaneously as the occurrence of blisters were simultaneous and intensity of prodrome was similar at all the rash sites.

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How to cite this article:

Binod Kumar Pati.2017, Herpes Zoster Duplex Bilateralis in Patient with Rheumatoid Arthritis Undergoing Methotrexate Therapy. *Int J Recent Sci Res.* 8(3), pp. 15856-15857.