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A clinical profile of patients with Herpes Zoster in a Tertiary care centre in South India

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Abstract
Introduction
Herpes zoster, zoster meaning "girdle" suggests segmental distribution. It is caused by reactivation of Varicella zoster virus, which lies dormant in sensory ganglia. It is characterized by unilateral radicular pain with vesiculobullous eruptions along the dermatomal innervation . Its incidence & pattern in this era of HIV is significant .we undertake this study to assess the incidence, pattern & evolution of Herpes zoster along with associated co-morbidities if present.
Materials
An analytical study for 6 months was conducted based on a proforma containing preliminary information, clinical evaluation regarding the segment involved, morphology,pattern, complications, disseminations, comorbidities and investigations to establish provocative factors if present .
Results & Conclusion
Incidence of herpes zoster was mainly in the third and fourth decades of life .A past history of chicken pox was present in 56% cases.In 28% cases ,co-morbidities like Psoriasis,Pemphigus vulgaris ,HIV,Diabetes mellitus were observed .The commonest segment affected was thoracic (48%) followed by cranial (24%) and cervical (16%).46% of patients had complications like post herpetic neuralgia , depigmentation ,secondary infections & Ulceration.One patient had HIV infection as the provocative factor . In this era of increasing HIV prevalence, the incidence of herpes zoster has been on rise. It is imperative for clinicians to be familiar with the common morphologies, patterns and complications .Our study had significant proportion of patients with complications like post herpetic neuralgia,which lacks effective treatment and requires further research.
Keywords*-herpes zoster,HIV- AIDS,post-herpetic neuralgia,dermatome,varicella zoster*

I. Introduction

Herpes Zoster is a common condition caused by reactivation of VZV,which lies dormant in the sensory ganglia.[1]It is generally characterized by unilateral radicular pain with vesiculo-bullous eruptions along the dermatomes innervated by spinal or cranial sensory ganglion.The reactivation of the virus may be due to immunosuppressive state or may be spontaneous.The pattern and incidence of herpes zoster in this era of HIV/AIDS is very significant. The most common complication of herpes zoster is post herpetic neuralgia,and no single effective drug is present for this condition .[2]Herpes zoster , Zoster meaning " girdle" suggests segmental distribution .The reactivation of latent VZV was first suggested by Garlanin 1973 &confirmed by Weller et al .[3,4]According to studies conducted by Opstelten et al &Schmader et al , it was observed that herpes zoster is common in women and less common in blacks.[5,6]The incidence of herpes zoster mainly increases with age due to decrease in cell mediated immunity. A study conducted by Latheef et al suggested that risk factors commonly include underlying malignancy, disorders of cell mediated immunity and chronic kidney /lung diseases. Risk of developing herpes zoster is commonly present in HIV patients,but doesnot predict its rapid progression to AIDS .[7]We aim to undertake this study to assess the clinical profile of patients with herpes zoster along with any associated co-morbidities if present.

II. Materials And Methods

A descriptive & observational study of 50 patients in the age group of 1-90 years with herpes zoster attending the OPD at Father Muller Medical College, Mangalore between February 2016 to July 2016 was conducted. Purposive type of sampling technique was used with exclusion and inclusion criteria. A written and informed consent was taken from each patient enrolled in this study.A detailed history regarding the prodromal and presenting symptoms, day of occurrence of skin lesions after prodrome, nature of pain , its intensity , duration and other symptoms if present was recorded.Past history of chicken pox and previous attack of herpes zoster if present was noted.Provocative factors like drugs, trauma ,surgery, radiation, diabetes mellitus, pulmonary tuberculosis, immunosuppressive and cytotoxic chemotherapy , HIV infections were enquired.HIV

status of the patient was evaluated by a separate informed consent and VTCT. A detailed cutaneous examination was done, with regards to the segment involved,morphology & pattern of lesions, regional lymph node involvement, motor complications and dissemination if present. Tzanck smear was done at the time of presentation, along with complete blood counts,urine routine examination and blood sugar levels.Patients were followed up for development of any delayed complications till the end of the study. Collected data was analyzed by frequency, percentage and Chi-square test.

III. Results

Out of 50 patients ,29 patients were males & 21 patients were females.The age group ranged from 1-90 years, with the maximum incidence being in the range of 31-40 years (48%), followed by 21-30 years (32%) and 11-20 years (8%). The least incidence was found in the age group of 1-10 years , and above 50 years. [The age & sex distribution is given in the table 1 below]. Out of 50 patients ,28 patients (56%) had definite history of chicken pox in childhood.Fourteen patients out of fifty had certain provocative factors.Two patients were on steroids for bronchial asthma and pemphigus vulgaris (shown in figure 1) respectively. Three patients had psoriasis,lichen planus .Three patients were undergoing chemotherapy & radiation for various malignancies.Four patients had diabetes mellitus.One patient had pulmonary tuberculosis & one patient had HIV infection(shown in figure 2).Twelve patients had fever,arthralgia ,headache as constitutional symptoms prior to the onset of vesicles. Pain preceded the onset of vesicles in 41 patients (82%), and concurrently started with the vesicles in 8 patients.The segmental distribution of herpes zoster is given below.The commonest dermatome involved is thoracic (shown in figure 3) in which T4 was the most common segment affected, followed by cranial nerve (24%), cervical (16%),lumbar (6%) and sacral (4%).Eleven patients had trigeminal nerve involvement and one patient had facial nerve involvement.Thirty patients had lesions on the right side of the body and twenty on the left side.Seventy percent of patients had tender lymphadenopathy at the time of presentation, twenty percent developed after 1 week and remaining ten percent never developed lymphadenopathy.The peroid of resolution of symptoms ranged from 11-20 days ,with an average of 10-12 days.Out of fifty patients , twenty three patients (46%)developed complications. Twelve patients (24%) developed post herpetic neuralgia in which nine cases were males, three females.Four patients (8%) developed ulcerations ,two cases (4%) had secondary bacterial infections(shown in figure 4),post herpetic itching and one patient developed depigmentation(shown in figure 5)

Table 1 Showing Age & sex distribution of patients with herpes zoster

AGE GROUP IN YEARS	MALE	FEMALE	TOTAL NUMBER OF CASES	PERCENTAGE (%)
1-10	1	-	1	2%
11-20	3	1	4	8%
21-30	8	8	16	32%
31-40	14	10	24	48%
41-50	2	-	2	4%
51-60	1	-	1	2%
61-70	-	1	1	2%
71-80	-	1	1	2%
81 & ABOVE	-	-	-	-
TOTAL	29	21	50	100%

Table 2 showing Segmental distribution of patients with herpes zoster

REGION	MALE	FEMALE	SIDE OF INVOLVEMENT (R)	(L)	TOTAL NUMBER OF CASES	PERCENTAGE
CRANIAL	6	6	9	3	12	24%
CERVICAL	4	4	6	2	8	16%
THORACIC	18	6	11	13	24	48%
LUMBAR	1	2	2	1	3	6%
SACRAL	-	2	1	1	2	4%
CERVICO-THORACIC	-	1	1	-	1	2%
THORACO-LUMBAR	-	-	-	-	-	-

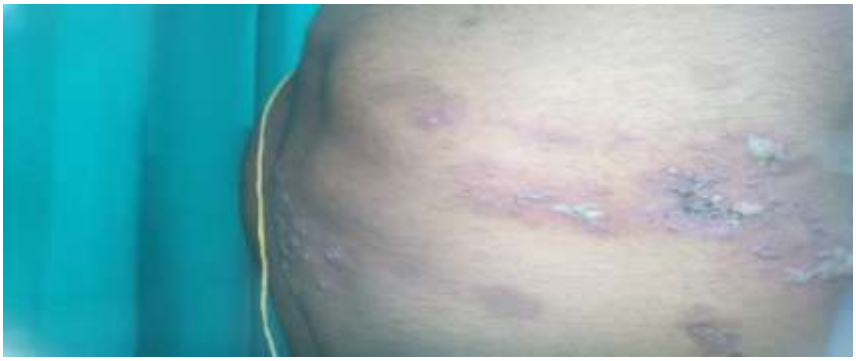

Figure 1 showing disseminated involvement in a patient with Pemphigus Vulgaris

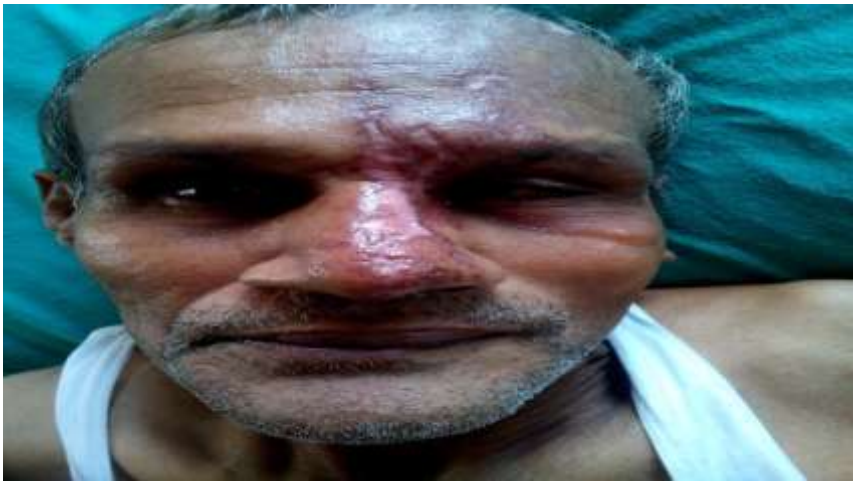

Figure 2 showing cranial nerve involvement in a HIV patient

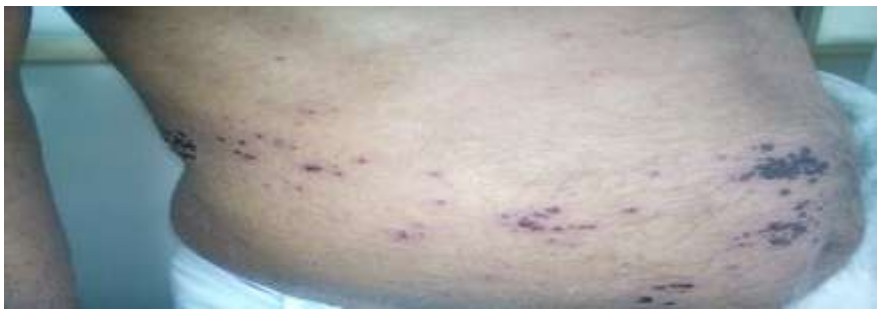

Figure 3 showing crusted lesions along T10 dermatome

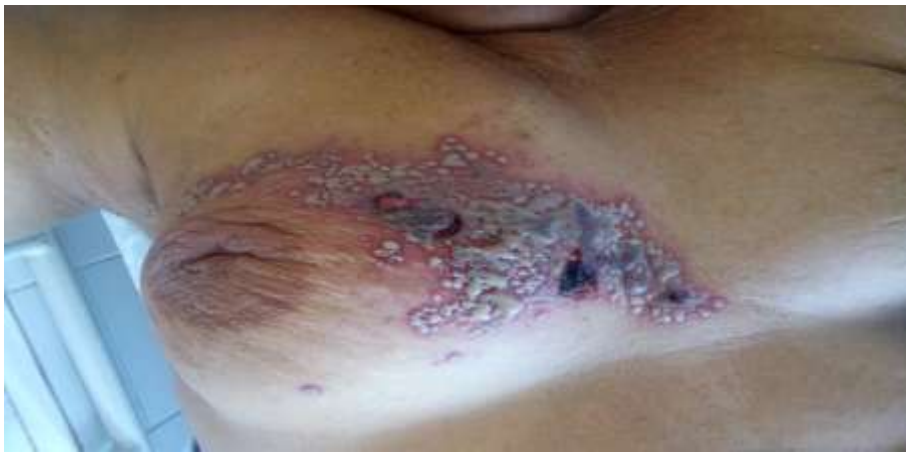

Figure 4 showing grouped vesicles with secondary infection along T4 dermatome

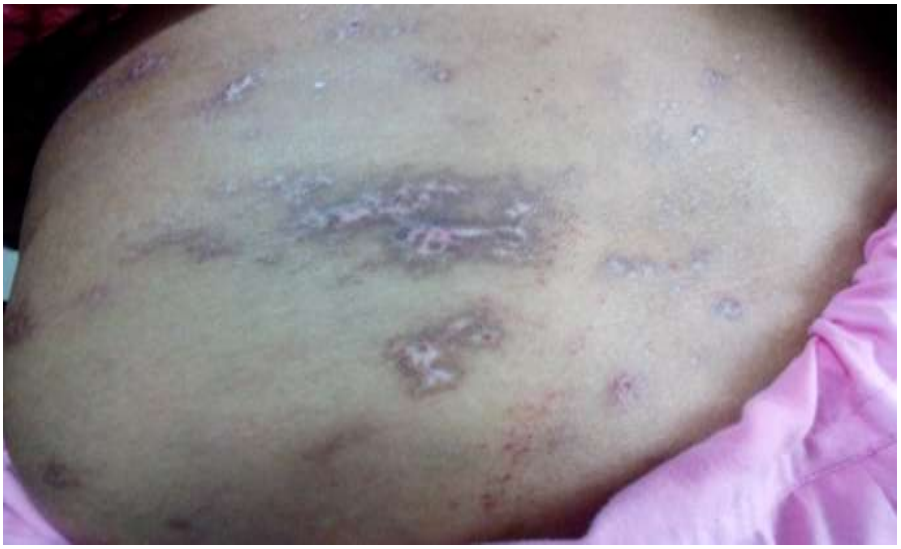

Figure 5 showing depigmentation and scarring

IV. Discussion

The study of 50 patients of herpes zoster suggested that the majority of involvement was seen in age group of 31-40 years (48%) which is in accordance with the study conducted by E N Abdul Latheef et al .The results are in contrast with other literature studies.The majority of the affected individuals were males 1.38:1 compared to females,this is similar to the Indian study conducted by Whitley R J et al, and in contrast with the western study conducted by Liesegang T J et al where males were equally affected as females .[8]In 28 % of the cases various provocative factors were found, which included steroid therapy,immunosuppressants and chemoradiation for various malignancies. Four patients were on oral hypoglycemic drugs for diabetes mellitus,one patient had pulmonary tuberculosis and one more patient had HIV Infection. Depressed cell mediated immunity in the above conditions may be the probable cause for the reactivation of the disease seen in these patients.[9]The prevalence of constitutional symptoms like fever ,headache ,arthralgia was found in 12 patients (24%) which was significantly lower in our study compared to the study conducted in North India by Choudhary S D et al.[10]Forty one patients had pain preceding the development of vesicles, while 9 cases had concurrent development.The pattern of dermatomal involvement was different from the studies conducted by Mandal B K et al & Pavithran K et al [11]. The commonest involved dermatomes were thoracic (48%), followed by cranial nerves unlike other studies where thoracic was followed by cervical dermatome.Even though literature claims that the disease is extensive in older age groups, our study group observed only 6 % of such cases.Post herpetic neuralgia was found in 11 cases (24%)with a majority being in the age group of 30-60 years, which is in contrast with various literature reports.One patient had HIV with herpes zoster ,but no evidence of any dissemination or unusual morphologies was noted unlike previous studies.[12]

V. CONCLUSION

In this era of increasing HIV prevalence, the incidence of herpes zoster has been on rise. It is imperative for clinicians to be familiar with the common morphologies, patterns and complications .Our study had significant proportion of patients with complications like post herpetic neuralgia,which lacks effective treatment and requires further research

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CONFLICT OF INTEREST

None.

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