

CLINICAL PROFILE OF HERPES ZOSTER IN A RURAL TERTIARY CARE HOSPITAL IN SOUTH INDIA

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Abstract

Introduction: Herpes zoster (Hz), which presents as localized, painful cutaneous eruption is a common clinical problem, particularly among adults of above 50 years of age and immunocompromised patients. It results from reactivation of varicella zoster virus.

Aim: To analyze the clinical pattern of herpes zoster with special emphasis to the precipitating factors and incidence of post herpetic neuralgia.

Material and Methods: 100 clinically diagnosed cases of herpes zoster, attending the Dermatology department of MVJ Medical College and Research Hospital Bangalore, India from a period of June 2010 to May 2012 were included in the study. The clinical pattern of herpes zoster with special emphasis to the precipitating factors and incidence of post herpetic neuralgia were analyzed.

Results and Conclusion: The study showed a male preponderance. Age group varied from 8-80 years. 42% of the total patients presented during summer season when the incidence of varicella is also high. Past history of chicken pox was present in 68% of the patients. 11% of the patients were on immunosuppressive treatment. 8% of the patients had associated diabetes mellitus and 7% showed HIV seropositivity. Thoracic dermatomal involvement was seen in majority of patients. Most commonly observed complication was post herpetic neuralgia which was encountered in 36% of the patients and most of these patients were (77%) were above the age of 60years.

Key words: Herpes Zoster; Varicella Zoster; Postherpetic Neuralgia

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Introduction

Herpes zoster (HZ), which presents as localized, painful cutaneous eruption is a common clinical problem, particularly among adults of above 50 years of age and immunocompromised patients. It results from reactivation of varicella zoster virus (VZV). After primary infection of varicella, the virus persists asymptomatically in the ganglia of sensory cranial nerves and spinal dorsal root ganglia. As cellular immunity to VZV decreases with age or because of immunosuppression, the virus reactivates and travels along the sensory nerves to the skin, causing the distinctive prodromal pain followed by eruption of the rash [1]. Clinical presentation is dependent on rapidity of immune response and ranges from typical zoster to scattered vesicles, zoster sine herpette or disseminated zoster. It is a cause of considerable morbidity, especially in the elderly and can be fatal in immunocompromised or critically ill patients.

Aim of the Study

To analyze the clinical pattern of herpes zoster with special

emphasis to the precipitating factors and incidence of post herpetic neuralgia.

Materials and Methods

100 clinically diagnosed cases of herpes zoster, attending the Dermatology department of MVJ Medical College and Research Hospital, Bangalore, India from a period of June 2010 to May 2012 were included in the study.

Detailed history was recorded with emphasis to the presenting symptoms, chicken pox in the past, risk factors, associated systemic diseases and complications. Clinical examination including the segment of involvement, morphology of lesions and any evidence of complications was carried out. Tzanck smear examination and hematological investigations including complete hemogram, blood sugar and HIV serology was done. Patients were followed up once a week for 2 weeks and once a month for 6 months. The data was tabulated and analyzed statistically.

Results

The study showed a male preponderance with a male to female ratio of 3:2 ($p=0.00186$). Age group varied from 8-80 years. 38% of the patients were above the age of 60 years and 6% of the patients belonged to less than 20 years of age ($p=0.002$) (Tabl. I). 42% of the total patients presented during summer season when the incidence of varicella is also high. Past history of chicken pox was present in 68% of the patients ($p=0.0001$). 11% of the patients were on immunosuppressive treatment either on long term steroid therapy or on chemotherapeutic agents. 8% of the patients had associated diabetes mellitus and 7% showed HIV seropositivity. 36% of the patients complained of a prodromal symptom of pain 3-7 days prior to the development of lesions and 24% had paraesthesia. Thoracic dermatomal involvement was seen

Age Distribution (Yrs)	Percentage of Cases (%)
<20	6
20-40	24
40-60	32
>60	38

Table I. Age distribution.

Discussion

In the present study majority of the patients (38%) belonged to the age group of >60 years followed by 32% of patients in 40-60 years group. An increase in the reactivation of varicella zoster virus (VZV) with increasing age is reported in the literature. One study reported a 0.3% rate of VZV reactivation in the overall population, compared with 1.0% in persons older than age 80 [2]. This is thought to result from the decline in virus-specific, cell-mediated immune responses that accompanies advancing age [3]. A male preponderance with a male to female ratio of 3:2 is observed in this study which is in accordance with other studies from south India [4,5]. Trauma and stress as a result of their occupation and outdoor activity may be the predisposing factor for the male preponderance in Indian rural setup [4]. Increased incidence noticed during the summer months in this study could be attributed to reactivation of latent infection on exposure to varicella virus as chicken pox is also more in these months. This is in contrast to the reports of herpes zoster risk reduction through exposure to chicken pox patients. This exogenous boosting hypothesis states that re-exposure to circulating VZV can inhibit viral reactivation and consequently also herpes zoster in VZV-immune individuals which is also the basis for varicella zoster vaccination [6].

Past history of chicken pox was present in 68% of patients and none of our patients had taken the varicella vaccination. Various prodromal symptoms usually precedes herpes zoster by 2-10 days; the most common being pain, paraesthesia, tingling and itching. Rarely other symptoms like hiccup also can precede herpes zoster of the cervical and thoracic dermatome [7,8]. In this study similar to the other studies, pain (36%) and paraesthesia (24%) were the common prodromal symptoms. In our study thoracic dermatomal involvement was seen in majority of patients (62%) followed by lumbar (16%) and cranial

in majority of patients (62%) followed by lumbar (16%) and cranial (14%) and cervical (8%) dermatomes ($p=0.0001$) (Tabl. II). Among the cranial nerves, trigeminal nerve was involved in 11 patients and one patient had Ramsay-Hunt syndrome. 9 patients had herpes zoster ophthalmicus, of which 4 had corneal involvement. Multidermatomal involvement was observed in 11 patients and disseminated herpes zoster and herpes zoster duplex bilateralis were observed in one case each. All these patients were immunocompromised.

In majority of the patients lesions resolved within 10-14 days except in immunocompromised individuals which prolonged upto 21 days. Most commonly observed complication was post herpetic neuralgia which was encountered in 36% of the patients and among them 28 (77%) were above the age of 60 years.

Segmental Distribution	Percentage of Cases (%)
Thoracic	62
Lumbar	16
Cranial	14
Cervical	8

Table II. Segmental distribution.

(12%) and cervical (8%) dermatomes. This is in contrast to the study by Goh and Khoo where the most commonly involved dermatomes were thoracic in 45% and cervical in 23% [9]. In our study multidermatomal involvement was observed in 11 patients and herpeszoster duplex bilateralis and disseminated herpes zoster was observed in one case each, all of them were immunocompromised. This is in concordance with other studies [4,10] where as Gahalaut et al has reported a case of herpeszoster duplex bilateralis in an immunocompetent individual [11]. HIV seropositivity was seen in 7% of the patients in our study and two of them had multidermatomal and one had disseminated zoster. This is similar to the study by Kar et al where they observed a seropositivity of 9.5% in 115 cases studied [12]. Smith et al in their study of 912 HIV-1 seropositive patient, found that 53 patients (16%) of the study population had herpes zoster. Approximately 15% of their patients had previous history of herpes zoster [13].

Post herpetic neuralgia (PHN) was encountered in 36% of cases and 77% of these patients belonged to the age group of >60 years. A higher incidence of PHN (82%) was observed in patients with ophthalmic zoster which is in contrast to study by Abdul Latheef et al [4]. Among these patients one of them progressed to trigeminal neuralgia as reported in one study [14].

Conclusion

Majority of our patients were above age of 60 years and males outnumbered females. An increase in incidence of herpes zoster was noticed during the summer months. Disseminated zoster and multidermatomal involvement was encountered in immuno compromised individuals. Post herpetic neuralgia was seen more in the elderly patients, especially in cases of ophthalmic zoster.

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