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ORIGINAL RESEARCH

A comparative study of Valacyclovir and famciclovir in herpes zoster

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ABSTRACT:
Background: Herpes zoster (HZ), or shingles, is a clinical syndrome resulting from the reactivation of latent varicella zoster virus (VZV) within the sensory ganglia, manifesting as a unilateral vesicular skin eruption involving one to three dermatomes. The present study was conducted to compare famciclovir and valacyclovir in cases of herpes zoster. **Materials & Methods:** 56 patients of herpes zoster of both genders were divided into 2 groups of 28 each. Group I patients were prescribed famciclovir 500 mg thrice daily and group II patients were prescribedvalacyclovir 1000 mg thrice daily.Patients were recalled regularly and the lesions were recorded in relation to site and pain score (VAS). **Results:** Group I had 14 males and 14 females and group II had 12 males and 16 females. Site involved was cervical in 28% in group I and 25% in group II, thoracic 48% in group I and 51% in group II, lumbar13% in group I and 15% in group II and trigeminal11% in group I and 9% in group II. The difference was non- significant (P> 0.05). On 3rd day, mean VAS in group I was 6.20 and in group II was 6.80, on 7th day, in group I was 4.90 and in group II was 4.51, on 14th day, in group I was 2.46 and in group II was 2.02 and in 25th day, in group I was 1.72 and in group II was 1.23 The difference was non- significant (P>0.05). **Conclusion:** Valacyclovir was efficient than famciclovir in management of patients with herpes zoster.
Key words: Herpes zoster, Valacyclovir, Famciclovir

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INTRODUCTION

Herpes zoster (HZ), or shingles, is a clinical syndrome resulting from the reactivation of latent varicella zoster virus (VZV) within the sensory ganglia, manifesting as a unilateral vesicular skin eruption involving one to three dermatomes.[1]It is typically characterized by unilateral radicular pain along with grouped vesicular eruptions. It also showed an increased incidence at the age of 60 years as 6 – 8% and also at the age of 80 years as incidence being 8 – 12%. Immunosuppression and increasing age are well-established risk factors that can lead to latent virus reactivation.[2]

The characteristic rash and associated pain occur when varicella-zoster virus, which becomes dormant in sensory ganglia following primary varicella-zoster virus infection, is reactivated, often in association with declining cellular immunity associated with advancing age. Thus, in otherwise healthy adults, the risk of herpes zoster increases with age. Pain persisting after rash healing occurs in more than 50% of untreated patients and is the major complication in older adults. The pain is often accompanied by abnormal sensations such as allodynia, tingling, or numbness and decreases gradually over several months in most patients, although some patients have pain persisting beyond 6 months.[3]

The management of uncomplicated HZ involves antiviral therapy to promote faster healing of the cutaneous lesions.[4] In patients with moderate to severe acute neuritis, analgesic treatment may also be given. Famciclovir, the oral prodrug of penciclovir, belongs to the same family of anti-herpetic agents as acyclovir and valaciclovir (oral prodrug of acyclovir), but has different pharmacokinetic and antiviral properties.[5]The present study was conducted to compare famciclovirand valacyclovir in cases of herpes zoster.

MATERIALS & METHODS

The present study comprised of 56 patients of herpes zoster of both genders. All were informed regarding the study and their written consent was obtained.

Data such as name, age, gender etc. was recorded. Patients were divided into 2 groups of 28 each. Group I patients were prescribed famciclovir 500 mg thrice dailyand group II patients were prescribedvalacyclovir 1000 mg thrice daily.Patients were recalled regularly and the lesions were recorded in relation to site and pain score (VAS). Results were analysed statistically. P value <005 was considered significant.

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RESULTS

Table I: Distribution of patients

Groups	Group I (28)	Group II(28)
Drug	500 mgFamciclovir	1000 mgValacyclovir
M:F	14:14	12:16

Table I shows that group I had 14 males and 14 females and group II had 12 males and 16 females.

Table II: Distribution of lesions

Site	Group I	Group II	P value
Cervical	28%	25%	0.87
Thoracic	48%	51%	
Lumbar	13%	15%	
Trigeminal	11%	9%	

Table II, graph I shows that site involved was cervical in 28% in group I and 25% in group II, thoracic48% in group I and 51% in group II, lumbar13% in group I and 15% in group II and trigeminal11% in group I and 9% in group II. The difference was non- significant (P> 0.05).

Graph I: Distribution of lesions

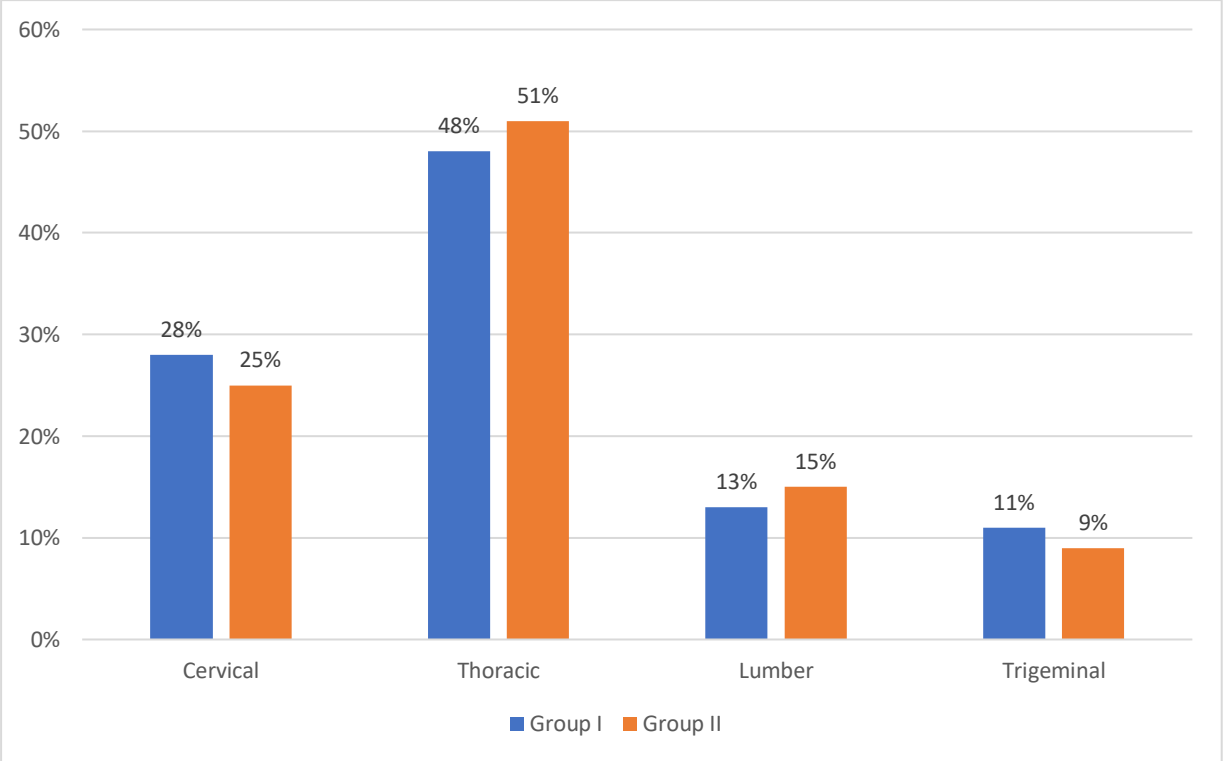

Table III: Comparison of VAS in both groups

Days	Group I	Group II	P value
3rd	6.20	6.80	0.92
7th	4.90	4.51	0.81
14th	2.46	2.02	0.09
25th	1.72	1.23	0.72

Table III, graph I shows that on 3rd day, mean VAS in group Iwas 6.20 and in group II was 6.80, on 7th day, in group I was 4.90 and in group II was 4.51, on 14th day, in group I was 2.46 and in group II was 2.02 and in 25th day, in group I was 1.72 and in group II was 1.23 The difference was non- significant (P>0.05).

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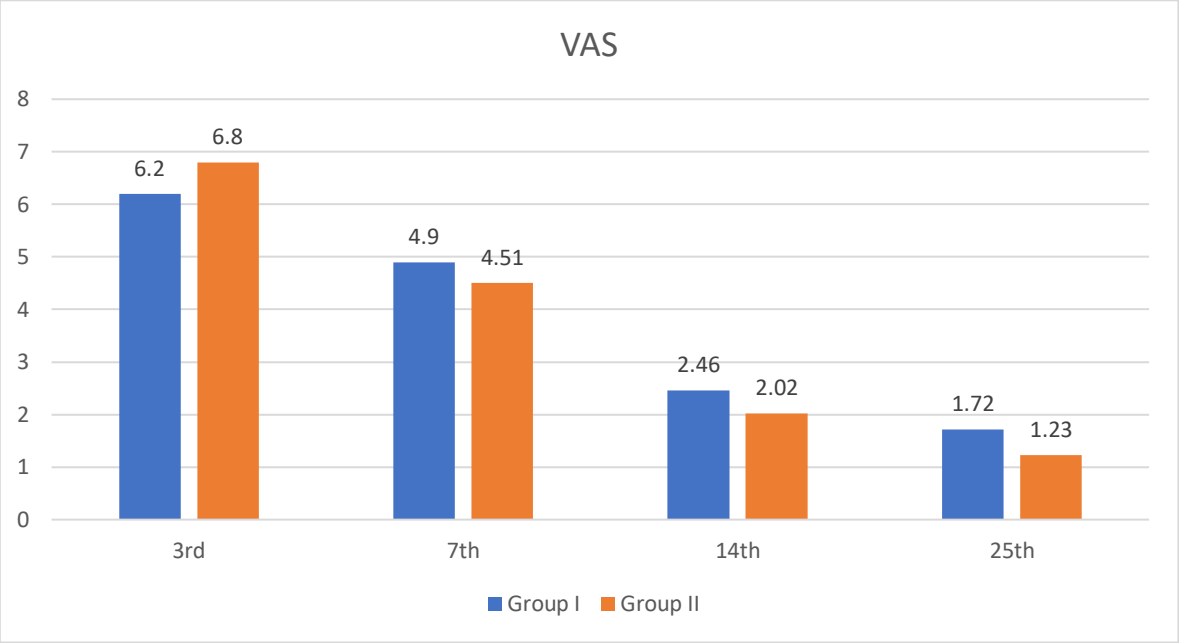
Graph I: Comparison of VAS in both groups



DISCUSSION

Herpes zoster a localized disease has been known since ancient times and is often referred by different names such as varicella zoster and shingles. In the course of viral reactivation, the virus spreads centrally and peripherally from the dorsal ganglia, producing intense inflammation in the skin, affecting the peripheral nerves and nerve roots; it may also reach the spinal cord.[6] The vesicular rash is often painful and the pain can occur before the onset of rash, or may occur without the development of a rash in rare cases.[7]Valacyclovir is known to accelerate the resolution of acute pain associated with herpes zoster and also decreases the number of patients complaining of persistent pain.[8] Famciclovir is another antiviral agent, which is a prodrug of penciclovir available with the advantage of a longer intracellular half-live and a better bioavailability.[9,10]The present study was conducted to compare famciclovir and valacyclovir in cases of herpes zoster.

We found that group I had 14 males and 14 females and group II had 12 males and 16 females.Tyring et al[11]compared the efficacy and safety of valacyclovir hydrochloride and famciclovir for the treatment of herpes zoster.There were 597 otherwise healthy immunocompetent outpatients, aged 50 years and older, who presented within 72 hours of onset of zoster rash.Treatment with valacyclovir hydrochloride (1 g 3 times daily) or famciclovir (500 mg 3 times daily) for 7 days.Resolution of zoster-associated pain and postherpetic neuralgia, rash healing, and treatment safety.Intent-to-treat analysis did not detect statistically significant differences for valacyclovir vs famciclovir on resolution of zoster-associated pain. Furthermore, no differences were evident between treatments on rash healing rates and on a range of analyses of postherpetic neuralgia. Safety profiles for valacyclovir and famciclovir were similar, with headache and nausea being the more common adverse events.

We found that site involved was cervical in 28% in group I and 25% in group II, thoracic 48% in group I and 51% in group II, lumbar13% in group I and 15% in group II and trigeminal11% in group I and 9% in group II. Beutner et al[12] evaluated safety and efficacy of oral valaciclovir given at a dosage of 1,000 mg three times daily for 7 or 14 days and oral acyclovir given at a dosage of 800 mg five times daily for 7 days were compared in immunocompetent adults aged >50 years with herpes zoster. Patients were evaluated for 6 months. The intent-to-treat analysis (1,141 patients) showed that valaciclovir for 7 or 14 days significantly accelerated the resolution of herpes zoster-associated pain compared with acyclovir; median pain durations were 38 and 44 days, respectively, versus 51 days for acyclovir. Treatment with valaciclovir also significantly reduced the duration of postherpetic neuralgia and decreased the proportion of patients with pain persisting for 6 months (19.3 versus 25.7%). However, there were no differences between treatments in pain intensity or quality-of-life measures. Cutaneous manifestations resolved at similar rates in all groups. Adverse events were similar in nature and prevalence among groups, and no clinically important changes occurred in hematology or clinical chemistry parameters. Thus, in the management of immunocompetent patients >50 years of age with localized herpes zoster, valaciclovir given at 1,000 mg three times daily for 7 days accelerates the resolution of pain and offers simpler dosing, while it maintains the favorable safety profile of acyclovir.

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We found that on 3rd day, mean VAS in group I was 6.20 and in group II was 6.80, on 7th day, in group I was 4.90 and in group II was 4.51, on 14th day, in group I was 2.46 and in group II was 2.02 and in 25th day, in group I was 1.72 and in group II was 1.23. Colin et al[13]included one hundred ten immunocompetent herpes zoasteropthalmicus patients. Patients randomized to the valaciclovir group received two 500-mg tablets of valaciclovir three times daily and one tablet of placebo twice daily. Patients in the acyclovir group received one 800-mg tablet of acyclovir five times daily and one tablet of placebo three times daily for 7 days.Ocular complications of herpes zoster ophthalmicus were similar in the valaciclovir and acyclovir treatment groups. The main complications were conjunctivitis (54% and 52%, respectively), superficial keratitis (39% and 48%, respectively for punctate keratitis; 11% in each group for dendritic keratitis), stromal keratitis (13% in each group), and uveitis (13% and 17%, respectively). The long-term outcomes of these ocular complications were favorable and similar in both treatment groups. Pain duration and severity and outcome of skin lesions were similar between groups. Most patients reported prodromal pain. After 1 month, 25% of patients in the valaciclovir group and 31% in the acyclovir group still reported pain. The percentage of patients experiencing postherpetic neuralgia decreased during follow-up. The tolerance to acyclovir and valaciclovir was comparable and considered good. The most frequent adverse events were vomiting and edema of the eyelids or face (3%–5%). Three serious adverse events not linked to the study drugs occurred.

CONCLUSION

Authors found that valacyclovir was efficient than famciclovir in management of patients with herpes zoster.

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