

# The Clinical Effect of External Application of Scorzonera Glabra Herpes Ointment on the Treatment of Herpes Zoster in the Ear

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## Abstract:

Objective to Exploring the effect of external application of scorzonera glabra Herpes Ointment on the treatment of Herpes zoster of the ear (HZE). Methods Select 100 HZE patients who met the inclusion criteria and were treated at the 988th Hospital of the Chinese People's Liberation Army Joint Logistics Support Force from January 2021 to June 2023. Divide into a treatment group and a control group using a random number table method, with 50 cases in each group. The treatment group was treated with external application of crow onion herpes ointment, while the control group was treated with external application of acyclovir ointment. After 10 days of treatment, the therapeutic effect was evaluated, and the HZE comprehensive symptom and sign efficacy score and visual analogue scale (VAS) were observed and compared between the two groups on the 10th day. The time for erythema reduction, blister stop, nodulation, and detachment were observed throughout the treatment process; Compare the difference in air conduction and air bone conduction between two groups before and after treatment (1 month after treatment); Observe and compare the incidence of postherpetic neuralgia (PHN) between two groups one month after treatment. Results The difference between the two groups was statistically significant ( $P < 0.05$ ), and the clinical effect of the treatment group was significantly better than that of the control group. Compared with the control group, the total score of HZE symptoms and signs in the treatment group was lower, and the difference was statistically significant ( $P < 0.05$ ). The comparison of air conductance between the treatment group and the control group before and after treatment (1 month after treatment) showed that the average air conductance was ( $35.5 \pm 4.5$ ), ( $35.9 \pm 4.7$ ), ( $15.6 \pm 2.2$ ), and ( $21.0 \pm 3.1$ ) dBHL, respectively; The air bone conduction differences were ( $10.1 \pm 2.7$ ), ( $10.5 \pm 2.8$ ), ( $5.1 \pm 0.3$ ), and ( $10.0 \pm 2.4$ ) dBHL, respectively. The differences in air conduction between the two groups before and after treatment (1 month after treatment) were statistically significant ( $P < 0.05$ ); The difference in air bone conduction between the two groups before and after treatment (1 month after treatment) was statistically significant ( $P < 0.05$ ); However, there was no statistically significant difference in air bone conduction difference between the control group before and after treatment ( $P > 0.05$ ). The incidence of PHN in the treatment group was lower than that in the control group, and the difference was statistically significant ( $P < 0.05$ ). There was no statistically significant difference in the incidence of adverse reactions between the two groups ( $P > 0.05$ ).

## Conclusion

The external application of scorzonera glabra Herpes Ointment has a significant effect on treating HZE, and can shorten the course of the disease, improve hearing, restore the function of the auditory nerve, and effectively prevent PHN.

**Key words:** herpes zoster; scorzonera glabra herpes ointment; acyclovir ointment; pure tone electrical audiometry; visual simulation scoring method

## Introduction

The herpes zoster virus in the ear often invades the geniculate ganglia of the auditory and facial nerves, causing severe discomfort such as ear pain, deafness, and postherpetic neuralgia (PHN) [1-3]. Early active treatment

of herpes zoster and peripheral neuropathic pain in the ear [4-6] can protect hearing and reduce the incidence of PHN [7]. At present, Western medicine mainly relies on antiviral drugs such as acyclovir orally or

externally for the treatment of HZE, but the effect is not satisfactory. Traditional Chinese medicine treatment for HZE has the characteristics of good efficacy, short duration, and no toxic side effects. Especially in recent years, we have achieved good clinical results in the treatment of HZE with the internal preparation of scorzonera glabra herpes ointment applied externally. The specific situation is reported as follows.

## 1. Materials and Methods

### 1.1 General information

Select 100 HZE patients who met the inclusion criteria and were treated at the 988th Hospital of the Chinese People's Liberation Army Joint Logistics Support Force from January 2021 to June 2023. Divide into a treatment group and a control group using a random number table method, with 50 cases in each group. There was no statistically significant difference in the course, gender, age, and degree of pain between the two groups ( $P>0.05$ ), indicating comparability. See Table 1. This study was approved by the Medical Ethics Committee of our hospital (SP20001 V2.0).

### 1.2 Diagnostic criteria

According to the "Clinical Diagnosis and Treatment Guidelines - Dermatology and Sexually Transmitted Diseases", the diagnosis of HZE is based on the fact that the rash is caused by a single ear, with visible blisters on the auricle, external ear canal, and tympanic membrane surface, as well as band like erythema and clustered herpes, accompanied by peripheral nerve pain.

### 1.3 Inclusion criteria

① Meets HZE diagnostic criteria; ② The appearance time of the skin lesion is less than 3 days, and no medication or method has been used before the visit; ③ Age 13y-60y; ④ The principle of voluntariness, understanding and reasoning, and signing an informed consent form.

### 1.4 Exclusion criteria

① Individuals who are allergic to acyclovir; ② Long term suffering from severe cardiovascular and cerebrovascular diseases and difficulty in controlling blood sugar; ③ Pregnant or lactating women; ④ Long term use of corticosteroids or immunosuppressants.

### 1.5 Dosage method

The treatment group applied graffiti scallion herpes ointment (The 988th Hospital of the Joint Logistics Support Force of the People's Liberation Army of China. batch number: 20200310, specification: 30g/box) on the affected area, with a thickness of about 0.1mm, 5 times a day, covered with sterile gauze for 3 hours before removal. The control group applied acyclovir ointment externally to the affected area [Jiangsu Yongda Pharmaceutical Co., Ltd., National Medical Standard H19993851, specification: 10g, 300mg (3%)], with a thickness of approximately 0.1mm, 5 times a day. All patients were treated continuously for 10 days. At the same time, both groups were treated with methylprednisolone injection (Pfizer Pharmaceuticals, National Medical Standard HJ20170197, specification: 40mg) 500mg+0.9% physiological saline 250ml pulse therapy, intravenous infusion, and discontinuation for 3 consecutive days.

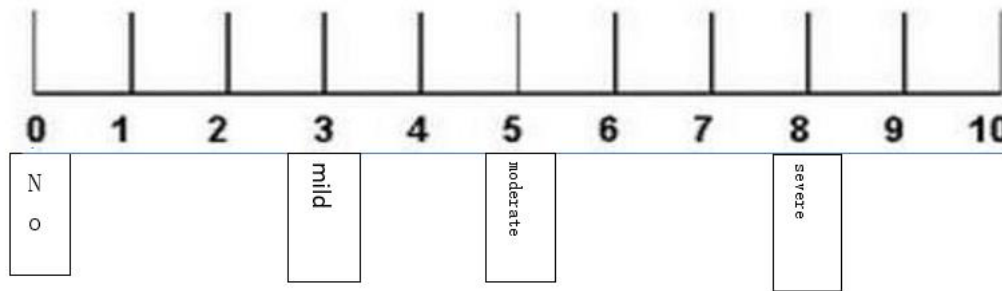
gender[n (%) Pain level [n (%) groupsn [y, M (P25, P75)] course [d, M (P25, P75)]				
M	F	mild	moderate	severe
Treatment 50	53.4(34.00,60.01)	3(1,4)	26(52.00)	24(48.00) 6(12.00) 31(62.00) 13(26.00)
Control 50	52.3(35.00,62.14)	3(1,4)	25(50.00)	25(50.00) 7(14.00) 32(64.00) 11(22.00)
Z/x <sub>2</sub>	0.087	/	0.074	0.411
P	0.921	/	0.787	0.663

**Table 1** Comparison of baseline data between two groups

### 1.6 Observation of therapeutic effects

1.6.1 Observation indicators: Observe and record the patient's symptoms and signs before treatment and on the 10th day after treatment. Evaluate the degree of pain using the Visual Analog Score (VAS) method (see Table 2). The specific method is to draw a horizontal line (10cm in length) on the paper, with the two ends of the line being 0 and 10 respectively, where 0 represents painlessness; 10 represents severe pain; The pain gradually intensifies from 0 to 10. Patients can mark their pain levels online based on their own feelings. The average value of mild pain is ( $2.57 \pm 1.04$ ); The average value of moderate pain is ( $5.18 \pm 1.41$ ); The average value of severe pain is ( $8.41 \pm 1.35$ ). Significant effect, that is, the patient's

pain symptoms completely disappear, and the VAS score decreases by more than 70%; Effective, that is, after treatment, the patient's neurological pain symptoms have improved, and the VAS score has decreased by 45% -70%; Invalid, meaning that the patient's neuralgia symptoms have not improved after treatment, and the VAS score has decreased by less than 45%. The total effective rate is the sum of apparent efficiency and effective rate. Observe and record the time for erythema reduction, blister arrest, scab formation, scab removal, and adverse reactions in two groups. Follow up of PHN occurrence one month after the healing of herpes zoster in the ear.



**Table 2 Visual Simulation Rating Scale**

1.6.2 Evaluation criteria for efficacy refer to the efficacy evaluation criteria formulated in the 2023 version of the Diagnosis and Efficacy Criteria for Traditional Chinese Medicine Diseases [8]. Cure: The rash subsides, clinical signs disappear, and there are no painful sequelae. Improvement: The rash has subsided by about 30%, and the pain has significantly decreased. Not cured: The rash has subsided by less than 30% and there is still pain.

**1.7 Statistical methods**

Statistical analysis was conducted on the obtained data using SPSS 26.0 software. Quantitative data that conform to a normal distribution are expressed as mean ± standard deviation (x soil s) using t-test. Measurement data that do not conform to a normal distribution are represented as median or quartile [M (P25, P75)], using Mann Whitney U

test. Count data expressed in examples or percentages, using X 2 Inspection. Before and after treatment, t-tests were used for hearing (pre - and post-treatment air conduction, and pre - and post-treatment air bone conduction difference), and the results were statistically analyzed. The difference is statistically significant with P<0.05.

**2 Results**

**2.1 Comparison of treatment effects between two groups**

After 10 days of treatment, the total effective rate of the treatment group was 98.00%, while the total effective rate of the control group was 84.00%. Both rows X Two tests showed that the treatment group had better therapeutic effects than the control group, and the difference was statistically significant (P<0.05). See Table 3.

groups	n	cure	Better healed	
Treatment	50	33(66.00)	16(32.00)	1(2.00)
Control	50	26(52.00)	16(32.00)	8(16.00)
X2		5.983		
P		0.015		

**Table 3: Comparison of treatment effects between two groups, %)**

**2.2 Comparison of total scores of HZE symptoms and signs before and after treatment between two groups**

After repeated measures analysis of variance, there was a statistically significant difference (P<0.05) in the total score of HZE symptoms and

signs between the two groups at the same time point. On the 10th day after treatment, the total score of HZE symptoms and signs was lower than before treatment, and the difference was statistically significant (P<0.05). See Table 4.

groups	n	before	On the 10th day after treatment
Treatment	50	21.18 ±5.89a	4.04±1.97 a
Control	50	20.97±5.01b	7.76±2.12b
t组间/P组间		0.252/>0.05	-13.350/<0.001
ta/Pa		20.574/<0.001	
tb/Pb		18.642/<0.001	

**Table 4 Comparison of total scores of HZE symptoms and signs between two groups before and after treatment score, (x±s)**

**Note:** Compared with before treatment in this group, P<0.05; Compared with the control group at the same time point after treatment, P<0.05.

**2.3 Comparison of Erythema Reduction Time, Scar Stopping Time, Scab Formation Time, and Scab Removal Time between Two Groups**

The time for erythema reduction, blister arrest, scab formation, and scab removal in the treatment group was shorter than that in the control group, and the difference was statistically significant (P<0.05). See Table 5

groups	n	Reduce time	Stop blister time	Scabbing time	Scab shedding time
Treatment	50	3.34±1.78	4.46±2.13	5.87±1.67	9.02±2.45
Control	50	3.98±1.87	5.41±2.34	7.67±1.84	12.23±3.23
t	2.420	2.870	6.686	7.026	
P	0.019	0.006	<0.001	<0.001	

**Table 5 Comparison of time for erythema reduction, blister arrest, scab formation, and scab removal between two groups (d,x±s)**

## 2.4 Comparison of VAS scores between two groups before and after treatment

After repeated measurements, there was a statistically significant difference ( $P < 0.05$ ) in VAS scores between and within groups before and after treatment. See Table 6.

Groups treatment	n	before	On the 10th day after
Treatment	50	8.64±1.84a	2.81±0.87a
Control	50	8.56±1.81	3.98±1.12
tInter group/P Inter group		0.307/>>0.05	9.508/<0.001
ta/Pa		22.401/<0.001	
tb/Pb		17.890/<0.001	

**Table 6** Comparison of VAS scores between two groups before and after treatment (scorex±)

**Note:** Compared with before treatment in this group,  $P < 0.05$ ; Compared with the control group at the same time point,  $P < 0.05$ . VAS: Visual Analog Scoring Method.

## 2.5 Comparison of incidence rates of PHN between two groups

There was no occurrence of PHN in the treatment group, while there were 12 cases in the control group, with an incidence rate of 24.00%. The incidence of PHN in the treatment group was significantly lower than that in the control group, and the difference was statistically significant ( $X^2$  values=13.636,  $P < 0.05$ ).

## 2.6 Comparison of air conduction and air bone conduction differences between two groups before and after treatment (1 month after treatment)

The difference in air conduction between the two groups before and after treatment (1 month after treatment) was statistically significant ( $P < 0.05$ ), indicating that both the treatment group and the control group can significantly improve air conduction hearing after treatment. The difference in air bone conduction between the two groups before and after treatment (1 month after treatment) was statistically significant ( $P < 0.05$ ); However, there was no statistically significant difference in air bone conduction difference between the control group before and after treatment ( $P > 0.05$ ). See Table 7.

Treatment group	control group	Air conduction
before	35.5±4.5	35.9±4.7
One month after treatment	15.6±2.2	21.0±3.1
t	31.265	22.413
P	<0.001	<0.001
Air bone conduction differencebefore	10.1±2.7	10.5±2.8
One month after treatment	5.1±0.3	10.0±2.4
t	13.093	1.262
P	<0.001	0.219

**Table 7** Comparison of air conduction and air bone conduction differences between two groups before and after treatment (1 month after treatment) (dBHL)

## 2.7 Comparison of incidence rates of adverse reactions between two groups

During the treatment period, no adverse reactions occurred in the treatment group; There were 6 cases of adverse reactions in the control group, including 4 cases of nausea, vomiting, and poor appetite, and 2 cases of abdominal pain and diarrhea. The incidence of adverse reactions was 12.00%. There is a statistically significant difference in the incidence of adverse reactions between the two groups ( $X^2$  values=6.383,  $P < 0.05$ ).

## 3 Discussion

HZE is a common skin disease in clinical practice. After infection with herpes zoster virus, the virus can lurk in the posterior root of the spinal cord and cranial ganglion cells. When the body's resistance/immunity decreases, the herpes zoster virus will be reactivated, causing a series of symptoms and signs, such as burning, stabbing, and other symptoms [9]. Some patients have left behind PHN in the long term [10], often manifested as burning like, needle like pain [11-13], Seriously affecting the work and daily life of patients [14-15]. The auricle and external ear canal belong to the distribution area of the sensory branch of the facial nerve, with visible blisters on their surface, as well as band like erythema, clustered herpes, and peripheral nerve pain. The herpes zoster virus in the

ear often affects other brain nerves and often causes symptoms of meningitis to a certain extent. After the herpes zoster virus invades the auditory nerve and its ganglia, it can lead to permanent deafness. Facial paralysis caused by the herpes zoster virus in the ears can be temporary, but if not treated promptly, it may also lead to permanent facial paralysis.

Western medicine treatment for HZE is currently mainly antiviral therapy [16], commonly used being acyclovir. Although this drug has the effect of inhibiting virus replication, it cannot reduce the incidence of PHN [17], and acyclovir has significant side effects, often including nausea, poor appetite, dizziness, bloating, and renal function damage.

In clinical treatment of HZE, corticosteroid drugs are often used in addition to antiviral therapy. But it is usually used in the early stages of the disease, and commonly used methods such as methylprednisolone injection combined with physiological saline for 3D shock therapy have significant clinical effects. As this drug is an immunosuppressive agent and belongs to the hormone class, it has anti-inflammatory and anti-allergic effects, and can also inhibit the growth of viruses. But this medicine cannot be used for a long time. Long term use can cause metabolic disorders of fat and protein, as well as drug-induced liver damage.

scorzoneria glabra herpes ointment is a traditional Chinese medicine topical ointment developed by our hospital. When applied to the affected area, it can directly act on the affected area and kill the virus without the need for liver and kidney metabolism. It can regulate the function of the organs through the meridian system and promote the recovery of herpes. The main ingredient of scorzonera glabra herpes ointment is scorzonera, which has a bitter and spicy taste, a cold nature, and has the effects of clearing heat, detoxifying, treating sores, and dispersing nodules. There are literature reports that scorzonera has antiviral, analgesic, immunomodulatory, and antidepressant effects [17-20].

After 10 days of treatment in both groups, the total effective rate of the treatment group was 98.00%, while the total effective rate of the control group was 84.00%. The treatment effect of the treatment group was better than that of the control group, and the difference was statistically significant ( $P < 0.05$ ); After external application of scorzonera glabra herpes ointment, there was a statistically significant difference ( $P < 0.05$ ) in the comparison of symptoms, signs, and VAS scores between the two groups. On the 10th day after treatment, the total score of HZE symptoms and signs was lower than before treatment, and the difference was statistically significant ( $P < 0.05$ ). This indicates that the external application of scorzonera glabra herpes ointment has a good therapeutic effect on herpes zoster in the ear.

The incidence of PHN between the two groups was compared, with no PHN occurring in the treatment group and 12 cases in the control group, with an incidence rate of 24.00%. The incidence of PHN in the treatment group was significantly lower than that in the control group, and the difference was statistically significant. This indicates that external application of scorzonera glabra herpes ointment can indeed alleviate or eliminate postherpetic neuralgia (PHN) in the treatment of herpes zoster in the ear.

The external application of Ya Cong Herpes Ointment to treat ear herpes zoster not only reduces symptoms but also relieves pain, which is related to an important substance contained in Ya Cong itself. Their research found that the extracts from the ground and roots of Ya Cong have anti-inflammatory and analgesic effects [22]; Some scholars have studied [19] and found that extracts C, glucosylflavones, and 7-methylisochlorohydrin have analgesic and anti-inflammatory effects. Therefore, scorzonera glabra herpes ointment can improve the symptoms and signs of HZE and alleviate the pain of patients.

Scorzoneria glabra herpes ointment can not only improve the symptoms and signs of HZE, alleviate the pain of patients, but also shorten the course of the disease. Comparison of the time for erythema reduction, scar arrest, scab formation, and scab removal between the two groups showed that the treatment group had shorter time for erythema reduction, blister arrest, scab formation, and scab removal compared to the control group, and the difference was statistically significant ( $P < 0.05$ ). Its mechanism may be related to its antiviral and wound healing promoting functions. Scholars have found that the extract of scorzonera can directly destroy the ability of VZV to infect human embryonic lung diploid fibroblasts (2BS cells), inhibit the proliferation of VZV in 2BS cells, and reduce virus proliferation [23]. Some scholars have also found through experimental research that the extract of scorzonera can promote wound healing [24]. This study also confirms from a clinical perspective that scorzonera glabra herpes ointment has anti VZV effects and the ability to promote wound healing.

Comparison of the incidence of adverse reactions between the two groups, during the treatment period, no adverse reactions occurred in the

treatment group; There were 6 cases of adverse reactions in the control group, including 4 cases of nausea, vomiting, and poor appetite, and 2 cases of abdominal pain and diarrhea. The incidence of adverse reactions was 12.00%. There is a statistically significant difference in the incidence of adverse reactions between the two groups. This indicates that the incidence of adverse reactions is low when treated with external application of scorzonera glabra herpes ointment.

The difference in air conduction between the two groups before and after treatment (1 month after treatment) was statistically significant ( $P < 0.05$ ), indicating that both the treatment group and the control group can significantly improve air conduction hearing after treatment. The difference in air bone conduction between the two groups before and after treatment (1 month after treatment) was statistically significant ( $P < 0.05$ ); However, there was no statistically significant difference in air bone conduction difference between the control group before and after treatment ( $P > 0.05$ ). This indicates that external application of scorzonera glabra Herpes Ointment in the treatment of ear herpes zoster can not only improve the patient's air conduction hearing, but also effectively enhance bone conduction hearing. At the same time, it also indicates that the crown onion herpes ointment can better promote the recovery of auditory nerve function.

In summary, the external application of scorzonera glabra Herpes Ointment has a significant effect on the treatment of HZE, and can shorten the course of the disease, improve hearing, and effectively prevent PHN. The clinical application has minimal toxic side effects and is worthy of clinical promotion and application.

**Conflict of Interest:** All authors have no conflict of interest.

## Reference

1. Sheng Yujun, Hu Zhulin, Zhang Amping, (2021). Risk factor analysis of postherpetic neuralgia [J]. *Dermatology and Sexually Transmitted Diseases*,43 (1): 1-3
2. Yang Yongwang, Xu Zhiwang, Yao Yangcheng. (2022). Clinical efficacy analysis of lidocaine gel plaster combined with high-energy red light in the treatment of post herpetic neuralgia in trunk [J]. *Journal of Clinical and Experimental Medicine*, 21 (23): 2575-2577
3. Li Liangwen, Wang Xiaojia, Zheng Bixin, et al. (2023). The efficacy and safety of high-voltage and standard voltage pulse radiofrequency therapy for herpes zoster related pain: a meta-analysis of randomized controlled trials [J]; *Chinese Journal of Pain Medicine*, 29 (1): 24-31
4. Tao Li, Xie Han. (2023). Analgesic treatment analysis of an elderly patient with herpes zoster neuralgia combined with chronic renal insufficiency [J]. *Medical Journal*,42 (4): 578-580
5. Ding Zhiyun, Li Tianju, Long Ting, (2021). Clinical efficacy of navel needle combined with medication in the treatment of herpes zoster neuralgia [J]. *Henan Medical Research*, 33:6261-6264
6. Liu Bo, Zhang Jinsong, Lu Fengyan, (2022). Observation of the therapeutic effect of pregabalin on postherpetic neuralgia [J]. *Dermatology and Sexually Transmitted Diseases*, 44 (1): 64-65
7. Xiao Yanling, Zhang Binghou. (2020). Exploring the characteristics of medication for the treatment of postherpetic neuralgia [J]. *Chinese Journal of Traditional Chinese Medicine*,35 (3): 1254-1256



8. State Administration of Traditional Chinese Medicine. Industry Standards for Traditional Chinese Medicine in the People's Republic of China. Diagnostic and Therapeutic Efficacy Standards for *Traditional Chinese Medicine Diseases* [M] ZY/T0011.1-94. Nanjing: Nanjing University Press, 2023:259-260
9. The Chinese Medical Journal Dermatology Chronic Disease Ability Enhancement Project, Pain Physician Branch of the Physician Association, National Remote Medicine and Internet Medicine Center Dermatology Special Committee. Expert Consensus on the Whole Process Management of Herpes Zoster Related Pain [J]. *Chinese Journal of Dermatology*, 2021,54 (10): 841-846
10. Xiong Mei, Luo Zhicheng, (2022), Epidemiological research progress on herpes zoster [J]. *Journal of Practical Clinical Medicine*, 26 (7): 144-148
11. Wang Cheng long, Song Tao. (2020,). Comparison of therapeutic effects between short-term spinal cord electrical stimulation and bipolar pulse radiofrequency in the treatment of postherpetic neuralgia in the dorsal root ganglion [J]. *Journal of China Medical University*, 49 (3): 280-283
12. Wang Qin, Song Jianmin, Li Yan, (2022). Study on the analgesic effect and mechanism of pulsed radiofrequency combined with medication in the treatment of severe postherpetic neuralgia in elderly patients [J]. *Practical Geriatrics*, 36 (3): 261-264
13. Zhu Qian, Fan Biffa, Zhang Dying, (2020). Consensus of Chinese experts on the diagnosis and treatment of peripheral neuropathic pain [J]. *Chinese Journal of Pain Medicine*, 26 (5): 321-328
14. Tang Yareni C, Wang M, (2021). Altered gray matter volume and functional connectivity in patients with herpes zoster and postherpetic neuralgia [J]*Brain Research* ,1769 (2):147608.
15. Lang Aspinall R, (2021). Vaccination for quality of Life: herpes zoster vaccine [J]. *Aging Clin Exp Res* ,33(4):1113- 1122.
16. Huang Gaozhen, Wang Liang, Wu Jinghua, (2021). Comparison of the therapeutic effects of traditional Chinese medicine, acupuncture, and Western medicine in antiviral treatment of herpes zoster [J]. *Journal of Hubei Minzu University · Medical Edition*, 38 (4): 16-20
17. Huang Zhong, (2021). Clinical efficacy and adverse reactions analysis of acyclovir combined with methylprednisolone in the treatment of herpes zoster [J]. *Clinical and Practice*, 25 (31): 4504-4506
18. Kupeli Akkol E, Bahadir Acikara O, Sutar I, (2012). Ethnopharmacological evaluation of some Coroner species: in vivo anti-inflammatory and antinociceptive effects [J]. *Ethnopharmacology* ,140(2):261-270.
19. Bahadur Acikara O, Hosek J, Babula P, (2016). Turkish Coroner species extracts attenuate cytokine secretion via inhibition of NF-kB activation, showing anti-inflammatory effect in vitro [J]. *Molecules*, 21(1): E43.
20. Horakova, Nikolaev SM, Tolstoian VV, (2003). Immunomodulating properties of lignin glucoside from cultivated cells of Coroner Hispanic L.[J]. *J Pharm Chem*,37(7):345-346.
21. Yang Hui, Li Xiurong. (2011). Experimental study on antidepressant effect of Onion [J]. *traditional Chinese patent medicines and simple preparations*, 33 (9): 1588-1589
22. Shen Dex in, (2020). The medicinal value of the coroner [J]. *Chinese Medical Journal*, 17 (18): 41-44
23. Zhou Ying, Zhang Fukun, Sun Yuexiu, (2022). The effect of coroner extract on the in vitro proliferation of chickenpox zoster virus [J]. *Chinese Journal of Biological Products*, 35 (3): 281-284
24. Sinter I, Acikara OB, Citole GS, (2012). In vivo and in vitro evaluation of the therapeutic potential of some Turkish Coroner species as wound healing agent [J]. *Curr Pharm Des* ,18(10):1421-1433.



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