Tabari Biomedical Student Research Journal

OPEN ACCESS

Case Report: Atypical Presentation of Herpes Zoster: A Clinical Case Report

Hamed Jafarpour	Student Research Committee, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran.
Nazanin Reisi	Student Research Committee, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran.
Farzad Zeynali	Student Research Committee, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran.
Ali Anjam	Student Research Committee, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran.
Ahmad Tajallikhah	Student Research Committee, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran.

ARTICLE INFO

Submitted: 26 Mar 2023
Accepted: 14 May 2023
Published: 01 Jun 2023

Keywords:
Foot;
Herpes zoster;
Limb;
Shingles

Correspondence:
Hamed Jafarpour, Student Research Committee, School of Medicine, Mazandaran University of Medical Sciences, Sari, Iran.
Email: hamed.jafarpour7@gmail.com
ORCID: 0000-0003-0652-2363

Citation:
Jafarpour H, Reisi N, Zeynali F, Anjam A, Tajallikhah A. Atypical Presentation of Herpes Zoster: A Clinical Case Report. Tabari Biomed Stu Res J. 2023;5(1):42-45.

10.32598/tbsrj.v5i1.10529

ABSTRACT

Introduction: Herpes zoster, which is infected with varicella zoster virus (VZV), is a neurological infection and an immunodeficiency syndrome. Most patients who contact physicians complain of itchy and sometimes painful skin rashes. Herpes zoster, also known as "shingles," results from the reactivation of VZV in the dorsal ganglia. Most skin patches occur on the hands or abdomen; rashes on the feet are rare. We aimed to report Herpes zoster presentation in the foot.

Case Presentation: A 47-year-old male patient presented to private practice with a rash, itching, and pain in the left lower extremity for 3 days. He was diagnosed with herpes zoster and symptoms were relieved by the administration of acyclovir five times daily for one week. The patient was advised to use Calamine lotion, a cool bath, and a cold compress to relieve the pain and itching. On his next visit to the office, the rash on the left lower extremity disappeared after using the prescriptions and methods.

Conclusion: Considering that the prevalence of herpes zoster in the hands and feet is very low and only 7 cases have been reported in the world. This case was reported for the first time in Iran. Knowing the presentation of the disease and getting to know the patients' complaints can help in timely diagnosis and control.

Introduction

Herpes zoster which is usually known as "Shingles", is a viral disease (1), which is very common in children in the United State, yearly about 1 million visits are due to herpes zoster infection (2). This disease contains two phases. In the first phase, symptoms appear with skin rashes accompanied by itching and pain, and in the second phase during three months, the pain will decrease and the skin spots will disappear (3). Shingles mainly occur in the elderly due to reactivation of the Varicella zoster virus (VZV), caused by reactivation of VZV, which is a localized, painful, vesicular rash involving a dermatome or adjacent to it (4). Primary VZV infection appears in the body in the form of chicken pox and then it hides in the Cerebral or posterior root ganglion. Secondary VZV infection is caused by a decrease in the body's immunity which can be

[DOI: 10.32598/tbsrj.v5i1.10529]

caused by aging, hard work, chemotherapy, and the use of immunosuppressive drugs (5). The most common ganglions involved in VZV include the Lumbar posterior root ganglion, Thoracic and sacral ganglion, geniculate ganglion, cervical ganglion especially 7th cranial nerve ganglion and trigeminal nerve ganglion (6). Until now the quantity of articles about herpes zoster has been low, thus we decided to report another case of this disease.

Case Presentation

A 47-year-old male patient presented to the private office with a skin eruption, itching, and pain in the left lower limb from three days ago (***Figure 1***). He had no underlying diseases and Chickenpox infection in the past. He just used Acetaminophen for his pain yesterday. The vital sign was normal. In physical examination, painful rash with blisters had been seen in the right L4 dermatome, medial of the calf. The range of motion was normal. Acyclovir 200 milligrams every four hours for seven days (five times in the day) was started. Recommended to the patient use the Calamine lotion, cool bath, and cold compress to reduce pain and itching.

Discussion

Herpes zoster infection also known as Shingles is an immunodeficiency syndrome caused by reactivation of Varicella zoster virus. The reactivation of VZV is because of immune system weakness against VZV caused by advancing in age or immune-suppression. This disease could occur at any age but it often occurs at an advanced age (7). Herpes zoster is a contagious disease that the virus reactivations for the first time in the dorsal sensory ganglia which is called Chickenpox. After recuperation, it incubates in the dorsal sensory ganglia and it might be reactive again (8). There is not any proven research on the prevalence of Herpes zoster in a particular gender or the predominately of the disease in the left or right part of the body. The most visits to medical centers were in summer and the lowest was in spring (9).

Figure 1. Skin involvement in the left lower limb

In most cases, VZV causes involvement in the dermatome of the skin in areas such as chest and lumbar and movement disability. The spread of transmission from direct contact with the skin to inhalation of contaminated droplets. It is interesting to note that the different types of VZV could occur at the same time such as Herpes, Cytomegalovirus (CMV), and Epstein-Barr virus (EBV) (1).

After reactivation, the virus goes to the body's cells and causes local inflammation and blisters. The pain of this disease is due to inflammatory damaged nerves (10, 11). The

[DOI: 10.32598/tbsrj.v5i1.10529]

most common complication of Shingles is its neuropathic pain or post-therapeutic neuralgia (PHN). Therefore, treatment should focus on pain relief. The use of drugs that minimize side effects has been considered in new science. Antidepressants such as Gabapentin, and Pregabalin are the first choices. Although a drug like Gabapentin can cause drowsiness and dizziness which are its side effects, this drug must be used for at least 10 weeks to make its full impact (12).

According to research conducted by Armitage et al, 60% of the sample population has been female and 40% of the remaining have been male. The average age of referred was 58 years old and the range of age variations was 9-96 years old. The left side of the body is more involved in the disease than the right side. The most involved parts of the body have been from more to less: chest 56%, neck 17%, lumbar 10%, and vertebrae 5% (13). In ***Table 1***, we see some cases of Herpes zoster in the lower limbs, especially the feet. Considering this research and the rate of involvement of this virus in areas such as hands and legs is very rare, we aimed to report this case of Herpes zoster that has manifested its symptoms in the foot.

Table 1. Summary of cases of Herpes zoster with lower limbs involvement

Authors	Age (year)	Presentation	Involvement areas
Seo et al. (14)	57	Foot drop	Both feet
Whitby et al. (15)	52	Weakness	Left foot
Leung et al. (16)	69	Rashes	Right foot
Almazan et al. (17)	50	Painful rashes	Left foot
Sprenger De Rover et al. (18)	74	Weakness	Right foot
Sprenger De Rover et al. (18)	71	weakness and rashes on hip and leg.	Foot and hip
Mourgela et al. (19)	48	Paralysis	Right foot

Conclusion

Considering that the prevalence of herpes zoster in the hands and feet is very low and only 7 cases have been reported in the world. This case was reported for the first time in Iran. Knowing the presentation of the disease and getting to know the patients' complaints can help in timely diagnosis and control.

Ethical standards statement

The written informed consent was obtained from the patient for publication of this report and any accompanying images.

Acknowledgments

The authors thank the patient for permitting us to report this case.

References

1. Nair PA, Patel BC. Herpes Zoster. StatPearls. Treasure Island (FL): StatPearls Publishing Copyright © 2022, StatPearls Publishing LLC.; 2022.
2. Kota V, Grella MJ. Varicella (Chickenpox) Vaccine. StatPearls. Treasure Island (FL): StatPearls Publishing Copyright © 2022, StatPearls Publishing LLC.; 2022.
3. Fritz DJ, Curtis MP, Kratzer A. Shingles. Home Healthcare Now. 2020;38(5):282-3.
4. Heineman TC, Cunningham A, Levin M. Understanding the immunology of Shingrix, a recombinant glycoprotein E adjuvanted herpes zoster vaccine. Curr Opin Immunol. 2019;59:42-8.
5. Cvjetković D, Jovanović J, Hrnjaković-Cvjetković I, Brkić S, Bogdanović M. [Reactivation of herpes zoster infection by varicella-zoster virus]. Med Pregl. 1999;52(3-5):125-8.
6. Stankus SJ, Dlugopolski M, Packer D. Management of herpes zoster (shingles) and postherpetic neuralgia. Am Fam Physician. 2000;61(8):2437-44, 47-8.
7. Sampathkumar P, Drage LA, Martin DP. Herpes Zoster (Shingles) and Postherpetic Neuralgia. Mayo Clinic Proceedings. 2009;84(3):274-80.

[DOI: 10.32598/tbsrj.v5i1.10529]

8. Mallick-Searle T, Snodgrass B, Brant JM. Postherpetic neuralgia: epidemiology, pathophysiology, and pain management pharmacology. J Multidiscip Healthc. 2016;9:447-54.
9. Glynn C, Crockford G, Gavaghan D, Cardno P, Price D, Miller J. Epidemiology of Shingles. Journal of the Royal Society of Medicine. 1990;83(10):617-9.
10. Senderovich H, Grewal J, Mujtaba M. Herpes zoster vaccination efficacy in the long-term care facility population: a qualitative systematic review. Curr Med Res Opin. 2019;35(8):1451-62.
11. Davis AR, Sheppard J. Herpes Zoster ophthalmicus Review and Prevention. Eye Contact Lens. 2019;45(5):286-91.
12. Koshy E, Mengting L, Kumar H, Jianbo W. Epidemiology, treatment and prevention of herpes zoster: A comprehensive review. Indian J Dermatol Venereol Leprol. 2018;84(3):251-62.
13. Armitage P, Berry G, Matthews JNS. Statistical methods in medical research: John Wiley & Sons; 2008.
14. Seo DH, Lee SJ, Hyun JK, Kim TU. A case of herpes zoster peripheral polyneuropathy manifested by foot drop in chronic myeloid leukemia. Ann Rehabil Med. 2012;36(5):724-8.
15. Whitby E, Bateman M. Foot drop post varicella zoster virus. BMJ Case Reports. 2018;11(1):e226273.
16. Leung G. Herpes zoster radiculopathy as a rare cause of foot drop: a case report. Hong Kong Med J. 2021;27(3):213-5.
17. Almazan TH, Zain J, Jung JY. Lesion on the Plantar Foot. Shingles. JAMA Oncol. 2015;1(6):833-4.
18. Sprenger De Rover WB, Alazzawi S, Hallam PJ, Hutchinson R, Di Mascio L. Herpes zoster virus: an unusual but potentially treatable cause of sciatica and foot drop. Orthopedics. 2011;34(12):e965-e8.
19. Mourgela S, Sakellaropoulos A, Tavouxoglou K. A case of recurrent herpes zoster leg paresis without rash. Journal of pain & palliative care pharmacotherapy. 2010;24(1):33-8.

[DOI: 10.32598/tbsrj.v5i1.10529]