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Case Report

A Case of Herpes Zoster with Bilateral Double-Striped

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Abstract

This report presents a case of a patient with bilateral double herpes zoster. This case report details a 60-year-old man who had herpes zoster duplex bilateralis with a history of Hepatitis C, advanced hepatocellular cancer (BCLC stage C), and continuous chemotherapy (bevacizumab, sintilimab, mFOLFOX6). He had a bilateral vesicular lesion that was dispersed throughout the face, neck, chest, and upper arm, which are the locations where nerves are distributed. The eruption began as painful, zosteriform vesicular lesions on the left neck and chest and developed dynamically to include non-contiguous dermatomes on the contralateral trunk and upper arms, accompanied by clusters of blisters, pustules, and blood blisters over the upper arms. Management included intravenous acyclovir, immunoglobulin, and immunomodulation with thymopentin. While the cutaneous lesions showed significant improvement, with blisters crusting over within six days, the patient's condition deteriorated due to a severe pulmonary infection. After treatment with antiviral medication, nerve-nourishing therapy, and immune-function-adjusting medications, the skin lesion improved, but the patient died due to secondary severe pneumonia. This report also analyzes the inducement, pathogenesis, clinical manifestation, treatment, prognosis and cause of death of the disease and the patient in this case. Bilateral zoster is a biomarker of impending systemic collapse rather than just a widespread mucocutaneous incident, it mandates early combination antiviral-immunomodulatory therapy, vigilant surveillance for secondary infections and, whenever feasible, reduction of iatrogenic immunosuppression.

Keywords

Herpes Zoster, Bilateralis, Case Report

1. Introduction

Herpes zoster, caused by varicella-zoster virus (VZV) reactivation in sensory ganglion, presents with painful, zosteriform distribution clustered vesicles [1]. If the lesion involves two non-contiguous territories, it is classified as duplex herpes zoster (unilateral or bilateral) [2]. The diagnosis of "herpes zoster duplex bilateralis" was made in this case, which involved a bilateral vesicular lesion spread throughout the respective nerve distribution areas, including the face, neck, chest, and upper arm.

2. Clinical Data

A 60-year-old man arrived at our hospital with blisters and excruciating erythema on his left neck and chest that had been there for three days. Without a clear cause, the eruption started three days prior as patchy erythema on the left neck. It progressed to blisters, papulovesicles, and pea- to bean-sized papules in band-like clusters, all accompanied by a lingering burning feeling. Later on, the rash spread to the left ear and left chest. The lesions on the left ear, neck, and chest had gotten worse on the second day of the hospital stay, with more blisters and confluent erythematous areas. On the right chest

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and both upper arms, new lesions also developed that were characterized by band-distributed, non-confluent clusters of pea-sized papules, blisters, and pustules with surrounding erythema.

The patient, who had a 30-year history of therapy-naive "hepatitis," was diagnosed with Hepatitis C two months ago and is presently undergoing Epiclusa Tab (Sofosbuvir 400 mg, Velpatasvir 100 mg; brand, city, country) treatment. Two months prior, the patient was additionally diagnosed with primary hepatocellular carcinoma, staged as BCLC stage C (T4N1M1, IVB), with Child-Pugh class B liver function. The patient is presently undergoing chemotherapy with bevacizumab and sintilimab injection paired with mFOLFOX6. The personal history reveals a 1-year history of intravenous injection narcotics (details not available) use and a 30-pack-year history of smoking. He denies having ever used alcohol, engaged in high-risk sexual activity, had surgery, or received a transfusion. There is no family history of similar diseases.

Physical examination: conscious, emaciated, showing signs of chronic illness, superficial lymph nodes not palpable for enlargement, abdominal distension, jugular venous distension, varicose veins of the abdominal wall, positive shifting dullness, liver approximately 5 cm below the costal margin, 10 cm below the xiphoid process, with mild percussion tenderness, and examination of the heart, lungs, and other systems revealed no obvious abnormalities.

Dermatological condition: Both scleras are somewhat jaundiced. There is an ulcer on the lower lip with a size of approximately 0.5 cm, with white attachment on the surface. On the foundation of erythema, there are clustered blisters, pustules and blood blisters ranging in size from mung bean to broad bean, surrounded by erythematous halo. Some blisters and pustules merge into patches. The blister walls show tension, and Nikolsky's sign is negative. Some blisters have ruptured and crusted, covered with reddish-brown crust. The skin lesions present a zosteriform distribution, being more severe on the left trunk.

Laboratory tests: White blood cell counts were 4.64×10^{9} /L, neutrophil counts were 68.7%, lymphocyte counts were 26.1%, erythrocyte counts were 3.38×10^{12}/L, hemoglobin levels were 107.0g/L, and platelet counts were 60.0×10^{9} /L; Blood ammonia was 57 umol/L (0-54); alpha-fetoprotein was 115600.00IU/mL (0.00-5.80); cytomegalovirus IgG, rubella virus IgG, and Herpes simplex virus type II and type I IgG were all positive; interleukin-6 was 44.47 pg/mL; and procalcitonin was 2.80 ng/mL. No clear abnormalities were seen in urine analysis, fecal routine, occult blood in stool, or liver and kidney function.

The final diagnosis was herpes zoster duplex bilateralis. The treatment scheme included intravenous injection of acyclovir and immunoglobulin, intramuscular injection of thymopentin, combined with external application of fusidic acid cream. After six days of the above treatment, the blister and pustule basically dried up and formed scabs. On the Eighth day after admission, the patient died due to the invalidity of rescue because of severe pneumonia and critical condition.

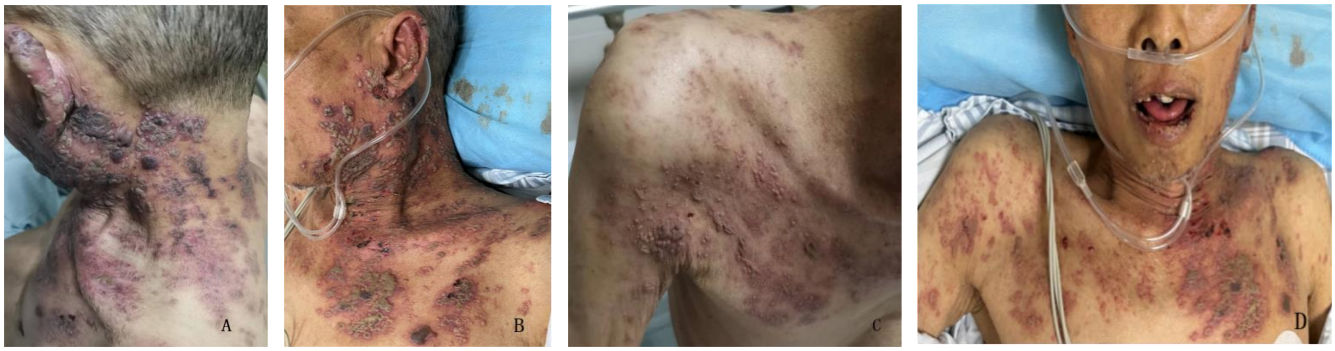

Figure 1. *Serial clinical photos of the skin lesions. A: Left auricle and left neck. B: Left auricle, left neck and left anterior chest. C: Right anterior chest and right upper arm. D: Upper chest.*

Table 1. *A Review of Clinical Cases of Herpes Zoster Duplex from 2020 to 2025.*

Citation (Year)	Case (Sex/Age)	Anatomic Site of Lesions	Past Medical History	Presumed Cause/Trigger
Tan J W, et al (2020) [5]	Male/39 years old	Right thoracodorsal region at T3-T4 level, left abdominal region at T6-T7 level.	Diabetes mellitus	/
Liu R, et al (2020) [6]	Female/64 years old	Right lumbodorsal and abdominal region; left scalp, forehead, and eyelid.	Hypertension	Fatigue; Poor sleep
Li Y W, et al	Male/51 years	Bilateral thoracodorsal, cervicoscapular, and	/	Fatigue; Cold

Citation (Year)	Case (Sex/Age)	Anatomic Site of Lesions	Past Medical History	Presumed Cause/Trigger
(2020) [7]	old	lateral upper arm regions.		exposure
Tang X M, et al (2021) [8]	Male/53 years old	Bilateral dorsal region, left abdominal region, right thoracic region.	Asymptomatic HIV infection	/
Huang Q Q, et al (2022) [9]	Male/31 years old	Left lumbar region, right thoracodorsal region.	Systemic lupus erythematosus, Lupus nephritis	/
Zhao W Q, et al (2022) [10]	Female/73 years old	Left thoracic region; right mandibular, cervicoscapular, and anteromedial upper arm regions.	/	Fatigue
Lei S L, et al (2022) [11]	Female/61 years old	Bilateral dorsal region, right thoracic region, left lumbar region.	/	Back myofasciitis
Dai S Q, et al (2022) [12]	Male/55 years old	Left thoracodorsal region at T4-T6 level, right ear.	/	Heavy alcohol consumption
Huang P L, et al (2023) [13]	Male/62 years old	Bilateral lumbar region; left eyelid, upper limb, and scapulodorsal region.	Active dermatomyositis	Recent significant stress increase
Jack Min Ng, et al (2023) [14]	Female/71 years old	Bilateral periorbital region, right forehead.	/	/
Hazique Parvaiz Koul (2024) [15]	Female/62 years old	Bilateral thoracodorsal region.	/	/

3. Discussion

In immunocompetent individuals, VZV may cause local diffusion in the midline territory of the body through cross-innervation of small nerve branches, resulting in sparse exanthema in 1-2 adjacent dermatome. This localized symptom arises from the "Spillover effect" of peripheral nerves rather than simultaneous bilateral viral activation. Therefore, it usually presents with mild symptoms, no risk of systemic infection, and a good prognosis, without the need to deviate from the standard antiviral treatment regimen [3]. In contrast, true multiganglionic herpes zoster is relatively rare, with foreign literature reports indicating a probability of less than 0.5%, and most cases involve only 2 ganglia. Its pathophysiology is yet unclear, but it is known to be closely linked to severe immunodeficiency [4]. According to incomplete statistics, from 2020 to 2025, the number of reported cases of Bilateral herpes zoster is less than 20. Although clinical observations indicate that the morbidity in young immunocompetent groups is on the rise (which may be related to New immune interference factors such as mental stress and circadian rhythm disorders), the main risk groups are still the elderly, women, and those with Immunodeficiency such as Autoimmune disease.

This patient's skin lesions had features of dynamic progression. Initially, clustered blister with zosteriform distribution appeared on the left trunk accompanied by severe neuralgia. Subsequently, the original exanthema deteriorated rapidly, and new herpes zoster-like blister appeared on the contralateral trunk, but the scope of involvement and pain intensity on the left side still dominated. During the first phase, the body's memory immunization response localized the reactivation of VZV. However, the virus may be able to evade local immunological monitoring due to the ensuing deterioration in cellular immune activity. The reactivated virus diffused to other ganglia through neural pathways and might be transmitted to the central nervous system and visceral organs through the blood, eventually leading to bilateral severe lesion [16].

4. Conclusion

In this case, after combined treatments including early and adequate antiviral therapy, short-term high-dose intravenous immunoglobulin injection, thymopeptide immunomodulation, and neurotrophic therapy, blisters had basically dried and formed scabs during the 6-day follow-up. But regrettably, the patient passed away due to severe pneumonia. The patient's past history of chronic hepatitis, primary cancer of liver, and intravenous narcotics use had already left the body's immune defense mechanism at a low level. The immunosuppression effect caused by recent biological agent treatment and chemotherapy further exacerbated T cell immunodeficiency. This cumulative immunosuppression created conditions for the extensive reactivation of VZV, ultimately leading to the oc-

currence of herpes zoster duplex bilateralis. Herpes zoster duplex bilateralis is a dangerous signal of severe immunosuppression. In addition to enabling the virus to traverse the ganglion barriers and reach the opposing side, this state of immunological failure also sets the stage for a secondary, potentially lethal lung infection. The pain caused by herpes zoster and the bed rest limitations also increase the risk of pulmonary infection. Second, improved immunomodulatory treatments for Herpes zoster, like thymopentin, which stimulates T cell function, and immunoglobulin therapy, which can support antibodies, are useful for regulating virus diffusion [17], but they are limited effective in treating long-term immune paralysis brought on by biological agents and chemotherapy. Immunoglobulin, as a passive therapy, cannot rapidly restore cellular immune function, making the lungs highly susceptible to invasion by hospital-acquired drug-resistant bacteria or opportunistic pathogens. However, the antiviral drug acyclovir lacks antibacterial and antifungal effects and fails to effectively address this risk. Lastly, the organ functional reserve is further weakened by the patient's general health and any underlying conditions (liver cancer, hepatitis), which increases the likelihood that severe pneumonia may develop into multi-organ failure. The superposition of the three factors, namely immunosuppression, risk of infection, and organ failure, eventually led to a rapid deterioration of the patient's condition to a fatal state.

Abbreviations

VZV Varicella-Zoster Virus

Conflicts of Interest

The authors declare no conflicts of interest.

References

[1] Zhang X J, Zheng J. Dermatology and Venereology (9th Edition). Beijing: People's Medical Publishing House, 2018: 68-69.

[2] Vu AQ, Radonich MA, Heald PW. Herpes zoster in seven disparate dermatomes (zoster multiplex): report of a case and review of the literature. J Am Acad Dermatol. 1999, 40(5 Pt 2): 868-869. https://doi.org/10.1053/jd.1999.v40.a96944

[3] Yoo KH, Park JH, Kim BJ, et al. Herpes zoster duplex bilateralis in a patient with breast cancer [J]. Cancer Res Treat. 2009, 41(1): 50-52. https://doi.org/10.4143/crt.2009.41.1.50

[4] Marra F, Parhar K, Huang B, et al. Risk Factors for Herpes Zoster Infection: A Meta-Analysis. Open Forum Infect Dis. 2020, 7(1): ofaa005. https://doi.org/10.1093/ofid/ofaa005

[5] Tian J W, Yang L J. A Case of Bilateral Double Herpes Zoster [J]. China Journal of Integrative Dermatology and Venereology, 2020, 19(02): 175-177. https://doi.org/CNKI:SUN:ZXYD.0.2020-02-026

[6] Liu R, Sun X, Hu Z, et al. Bilateral bilateral herpes zoster [J]. Journal of Clinical Dermatology, 2020, 49(05): 290-292. https://doi.org/10.16761/j.cnki.1000-4963.2020.05.011

[7] Li Y W, Meng Z Y. A Case of Bilateral Symmetrical Herpes Zoster with Literature Review [J]. China Journal of Integrative Medicine and Dermatology, 2020, 19(04): 374-375. https://doi.org/CNKI:SUN:ZXYD.0.2020-04-027

[8] Tang X M, Zheng T Y, Li Y P, et al. A Case of Bilateral Asymmetric Mixed Herpes Zoster [J]. China Journal of Pain Medicine, 2021, 27(05): 397-398. https://doi.org/CNKI:SUN:ZTYZ.0.2021-05-023

[9] Huang Q Q, Cao X W. Bromocriptine Treatment of a Case of Bilateral Asymmetric Herpes Zoster [J]. China Journal of Dermatology and Venereology, 2022, 36(04): 436-438. https://doi.org/10.13735/j.cjdv.1001-7089.202110036

[10] Zhao W Q, Bu X L, Zhang L L. A Case of Bilateral Non-Symmetrical Herpes Zoster [J]. Dermatology and Venereology, 2022, 44(04): 347-349. https://doi.org//CNKI:SUN:PFBX.0.2022-04-018

[11] Lei S L, Chen Y Y. A Case of Bilateral Herpes Zoster with Elevated Cardiac Muscle Enzyme Levels [J]. Hainan Medical Journal, 2022, 33(05): 668-669. https://doi.org/CNKI:SUN:HAIN.0.2022-05-036

[12] Siqi Dai, Xiaowen Huang, Yuxiang Chen, et al. Bilateral asymmetrical herpes-zoster with Ramsay hunt syndrome in an immunocompetent adult. Virol J. 2020, 15; 17(1): 123. https://doi.org/10.1186/s12985-020-01392-0

[13] Huang B L, Ci C, He C F, et al. A Case of Bilateral Multisegmental Herpes Zoster with Active Dermatomyositis [J]. Journal of Southern Hunan Medical College (Medical Edition), 2023, 25(04): 47-48. https://doi.org/10.16500/j.cnki.1673-498x.2023.04.012

[14] Jack Min Ng, Ching-Hsi Hsiao. Bilateral herpes zoster ophthalmicus in an immunocompetent patient. Eur J Ophthalmol. 2024, 34(1): NP32-NP34. https://doi.org/10.1177/11206721231177895

[15] Hazique Parvaiz Koul. Bilateral Thoracic Herpes Zoster in a 62-year-old Immunocompetent Woman. J Assoc Physicians India. 2024, 72(12): e57-e58. https://doi.org/10.59556/japi.72.0764

[16] Chen W, Liu J L. Research Advances on the Pathogenesis of Herpes Zoster [J]. China Medical Abstracts (Dermatology), 2017, 34(01): 33-38+5. https://doi.org/CNKI:SUN:ZYXW.0.2017-01-007

[17] Wang Y, Liu Y, Yang J D, et al. Meta Analysis of the Efficacy and Safety of Thymosin in Treating Herpes Zoster [J]. China Pharmaceutical, 2024, 33(12): 110-115. https://doi.org/CNKI:SUN:YYGZ.0.2024-12-022