An Atypical Presentation of Multidermatomal Herpes Zoster: A Case Report

Mohammed Alhayyas*, Mehmood Chaudhry and Sabrina Berdouk

Abstract

Background: Herpes Zoster (HZ) also known as shingles is common dermatological pathology seen in the emergency department. Multidermatomal involvement is an uncommon presentation and usually is linked to individuals with comprised immune system. However it is rarely reported in the immunocompetent population.

Case presentation: We report a 30-year-old Emirati male complaining of low-grade fever for 3 days, sore throat and uncomfortable pruritic erythematous rash over his chest and back for 2 days. He was treated the day preceding his presentation in another facility for a presumed allergic reaction after taking ibuprofen. On physical examination, he was found to have exudative tonsillitis and influenza and was treated for both and discharged. He returned again reporting increasing pain and was referred to be seen in the dermatology clinic where a biopsy was obtained and he was discharged with a steroid topical cream. 14 days later, he returned to the clinic reporting crusting of the rash, the biopsy results were positive for Herpes Zoster. The diagnosis of multidermatomal herpes Zoster was made and he was then treated with antivirals.

Conclusions: Herpes Zoster can present with atypical manifestations. Multidermatomal HZ is a rare dermatological manifestation in the immunocompetent adult. It is characterised by a rash spread over two or more adjacent dermatomes. This case highlights the challenging diagnosis of this dermatological presentation.

Keywords: Herpes, Zoster, Multidermatomal, immunocompetent.

Background

Herpes Zoster (HZ) also known as shingles is common dermatological pathology that arises from the reactivation of dormant Varicella Zoster virus in the dorsal ganglia. Typically, the condition manifests as painful vesicular skin eruption preceded by 24-72 hour or neuropathic pain. The vesicular rash typically is described to follow the distribution of a single sensory dermatome without crossing the midline 1. Localised HZ - affecting a single unilateral dermatome is the most common presentation of HZ with thoracic dermatomes (45%), cervical (23%) and trigeminal (15%) being most affected 2. Herpes Zoster affecting multiple adjacent dermatomes known as multidermatomal herpes zoster and is a quite rare phenomenon. Furthermore, Multidermatomal HZ is associated with immunosuppression and is a very rare manifestation in the immunocompetent population 3. The purpose of our paper is to present the case of 30-year-old immunocompetent male with a challenging presentation of multidermatomal Herpes Zoster with delayed vesicular eruption.

Case presentation

A 30-year-old male presented to the emergency department with low-grade fever, sore-throat and generalised malaise that started 3 days ago. He went to his primary care physician who treated as a viral upper respiratory tract infection with ibuprofen and paracetamol. On the next day, he developed an erythematous pruritic warm raised rash on his left anterolateral chest extending the the medial aspect of the axilla. He also noticed the same rash on his mid-back. He went to an emergency department 12 hours after that. He was evaluated and treated with the impression of allergic reaction to ibuprofen. He was given antihistamine and hydrocortisone in hospital and was discharged with topical steroid cream and antihistamine tablets. The ibuprofen was also stopped on that visit. 12 hours after that presentation he appeared in another emergency department complaining of worsening itchiness and heat from the rash. He described the rash to be extremely itchy and
discomfortable preventing him from sleeping at night. His past medical history is negative except for gout controlled with allopurinol. He denied any previous hospitalisations, surgeries, other medications, allergies to food, substance or medications. He also denied any recent travel and sick contacts. He is a regular smoker with 10 year-packs history and had no alcohol or illicit drug use history. 

Upon examination, he was found to be febrile (38.2°C), tachycardic (108 bpm). He also was found to have white spots (exudate) on his tonsils. Otherwise, his ear, nose and throat examination was unremarkable. His respiratory, cardiovascular examinations were all normal. 

His integumentary examination revealed erythematous, raised rough warm plaques on the anterior left lateral chest wall extending to the medial aspect of the left axilla and mid thoracic area on his back left to the midline (Images 1,2). 

Investigations showed positive results for point of care influenza B swab and unremarkable full blood count, renal profile and C-reactive protein. A throat culture was sent. 

He received 1.2 million units of intra muscular Penicillin G benzathine under the clinical impression of scarlet fever, intravenous diphenhydramine and methylprednisolone as symptomatic treatment and paracetamol for fever. He was then discharged on oral oseltamivir, loratadine, paracetamol and was advised to continue using the topical steroid cream.

A day later, the patient reported no improvement and decided to seek medical care again. He was seen in the emergency department with worsening pruritus and pain in the lesion and was referred to dermatology clinic to be seen on the same day. The dermatologist decided to biopsy the lesion and discharged the patient on clobetasol 0.05% topical cream for 14 days and oxycodone oral tablets with a follow-up in the dermatology clinic in 14 days. Fourteen days later, the patient followed-up with the dermatologist. He described a change in the rash couple of days after he was seen in the clinic. He described raised vesicles that disappeared a a week later leaving a white lesions that persisted till the say of the appointment (Image 3). His biopsy results showed Herpes-Zoster virus. He was then prescribed oral valacyclovir for 7 days with the diagnosis of multidermatomal herpes zoster (T1-T4).
Discussion and conclusions

In around 16% of patients with Herpes Zoster the rash disseminates beyond one dermatome especially in elderly and immunocompromised individuals. Multidermatomal involvement is uncommon in HZ and usually is indicative of immunosuppression\(^3\). Rarely, this appears in multiple adjacent dermatomes. Only a few cases of multidermatomal Herpes Zoster have been reported in the literature. Furthermore, only a handful number of cases with this manifestation described in healthy immunocompetent individuals\(^4,5\). A recent case report by Beuerlein et al.\(^6\) summarised the the published cases of multidermatomal HZ and found only 9 cases in the literature. Most of the 9 cases described were in patients with known immunodeficiencies such as HIV and malignancies with around 66% involving cervical dermatomes.

Despite the fact that Herpes Zoster remains a clinical diagnosis, the delay in this patient’s diagnosis is thought to be due to two main factors. The first factor is the atypical presentation with multidermatomal involvement. The second factor is the late onset of the typical vesicular eruption. This has been described in some previous case reports where pain precedes the skin manifestation by more than 7 days or 3 weeks\(^7\). we concluded that painful skin manifestation should alert the clinician to broaden the differential diagnosis to consider Herpes Zoster.

Consent

Written consent for publishing this case report including the images was taken from the patient.

Abbreviations

ED: Emergency department; HZ: Herpes Zoster; IV: Intravenous; IM: Intramuscular.

Acknowledgements

Authors’ contributions

MA carried out the literature review and wrote the manuscript draft. MC reviewed and edited the manuscript. SB assisted and guided SK during the process. All authors approved the final manuscript.

Ethics approval and consent to participate

Written consent from the patient was obtained.

Consent for publication

Written consent was taken from the patient to publish this case report and related images.

Competing interests

The authors declare that they have no competing interests.

References

1. Gnann, Jr. J. Varicella-Zoster Virus: Atypical Presentations and Unusual Complications. The Journal of Infectious Diseases. 2002;186(s1):S91-S98.
2. Ranjan P, Dube S, Rajshethkar V. Multidermatomal herpes zoster ophthalmicus in an immunocompetent male. Journal of Clinical Ophthalmology and Research. 2017;5(1):38.
3. Kim S, Kang J, Yoon N, Park S. A case of herpes zoster duplex bilateralis. Korean Journal of Dermatology. 2004; 42:367–369.
4. Ganjoo S, Sawhney M, Chawla D. Painless Multidermatomal Herpes Zoster in an Immunocompetent Elderly Male: a Case Report. Serbian Journal of Dermatology and Venereology. 2015;7(4):172-180.
5. Gupta L, Kuldeep C, Mittal A, Singhal H. Multidermatomal herpes zoster in an immunocompetent female. Indian Journal of Dermatology, Venereology and Leprology. 2005;71(3):210.
6. Beuerlein K, Strowd L. Multidermatomal herpes zoster: a pain in the neck?. Dermatology Online Journal [Internet]. 2019 [cited 7 February 2020];25(11). Available from: https://escholarship.org/uc/item/9kz407dx
7. Sanguankeo A, Upala S, Somprom S, Thamcharoen N. Varicella-zoster meningitis with a late-onset of skin eruption. Case Reports. 2015;2015(feb17 1):bcr2014208056-bcr2014208056.