

## Necrotic Herpes Zoster in an Otherwise Healthy Patient

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### Abstract

**Observation:** Herpes zoster (HZ) is a distressing, painful cutaneous eruption caused by reactivation of varicella-zoster virus (VZV), which stays latent in dorsal root ganglia after causing primary infection, varicella. It has been reported that HZ affects 20-30% of the individuals in the general population at some point in their lifetime and up to 50% of those are above 80 years old, since VZV-specific cell mediated immunity diminishes physiologically with the aging process. In fact, except post-herpetic neuralgia, HZ is a self-limited benign condition, which usually resolves without intervention unless the patient is immunosuppressed. On the other hand, in immunocompromised patients HZ may manifest with several clinical presentations and complications including disseminated HZ with visceral involvement, multidermatomal HZ, and treatment resistant HZ, also crusted, verrucous lesions, which are highly specific for especially human immunodeficiency virus-infected patients. Here, we want to present an otherwise healthy 30-year-old male patient, who had demonstrated an extensive large necrotic ulcer with an eschar-like crusting in a dermatomal distribution leading us to make a diagnosis of necrotic HZ.

### Introduction

Herpes zoster (HZ), also known as shingles, is typically characterized by painful, blistering cutaneous eruption following a dermatomal distribution. HZ is one of the two clinical manifestations of varicella-zoster virus (VZV), the other of which is primary varicella infection. Indeed, HZ is caused by reactivation of varicella-zoster virus (VZV), which is the etiological agent of primary varicella infection (chickenpox). HZ is usually a benign, self-limited disease in the immunocompetent hosts. On the other hand, in immunocompromised patients HZ may manifest with several clinical presentations and complications [1, 2, 3]. Here, we report a case of necrotic herpes zoster in an otherwise healthy patient, who is presented with an extensive large necrotic ulcer with an eschar-like crusting.



**Figure 1.** An extensive large ulcer with brown-black coloured crust and an erythematous border in the right dorsal lumbar region of the patient

## Case Report

A 30-year-old male patient came to our outpatient clinic with a two-weeks history of a wound on his right lower back. He told that three weeks ago he felt an unpleasant burning sensation and a distressing pain in right side of his trunk. Feeling under a state of emergency, he applied to emergency department and in spite of a thorough clinical evaluation and relevant laboratory investigations, no diagnosis was able to be made. However, in the following days he noticed extensive crops of blisters on the right side of his lower back and visiting a dermatologist he was prescribed with valacyclovir 1000 mg three times a day for 7 days and nonsteroidal anti-inflammatory drugs owing to the diagnosis of HZ. There was no family history and past history of any other diseases or medication. The physical examination of the patient was normal and vital signs were stable. On dermatological examination, we observed a large ulcer with eschar-like crusting extending in a dermatomal distribution on right dorsal lumbar region (**Figure 1**). Based on history and clinical findings we made a diagnosis of necrotic HZ. Since we wanted to exclude necrotizing fasciitis (NF), we performed laboratory investigations including complete blood count and differential, erythrocyte sedimentation rate, and serum chemistry profile, all of which were completely normal. Serologic tests for hepatitis B, C, syphilis and human immunodeficiency virus (HIV) were negative. "Finger probe test" which is widely used to differentiate NF from other cutaneous infections was also negative. Accordingly, we prescribed systemic analgesics and topical wound care therapies. After a month of treatment, the patient's symptoms significantly improved except the residual atrophic scar on the affected area.

## Discussion

HZ most commonly begins with a prodrome of intense pain and burning, itching or tingling sensation in the affected area which precedes typical eruption presenting as grouped vesicles on an erythematous base [1]. Although mostly accompanied by post-herpetic neuralgia with varying severity, HZ is usually a benign, self-limited disease in the immunocompetent hosts [1, 2, 3]. On the other hand, in immunocompromised patients HZ may manifest with several diverse clinical presentations and complications including, disseminated HZ, multidermatomal HZ, recurrent HZ, and treatment resistant HZ. In addition, ecthymatous lesions, verrucous or crusted nodules, punched-out ulcerations are typical

clinical patterns in immunosuppressed patients especially HIV-positive individuals [3, 4, 5].

Zoster gangrenosum is a rare complication of HZ which is indeed NF of the HZ-affected area. Only a limited number of case reports about HZ complicated with NF have been published in the literature so far [6, 7, 8]. All of these reported patients have been regarded to be immunocompetent although one of which was under the treatment of low dose systemic corticosteroid and methotrexate because of rheumatoid arthritis. The clinical presentations of the patients were typical for NF with symptoms of systemic toxicity. In point of fact, the underlying causes of NF in these patients have not been clearly understood [6, 7, 8]. The reason why we diagnosed our case as necrotic HZ instead of zoster gangrenosum was that our patient did not show the clinical features of NF like fever, altered mental state, tachycardia, tachypnea, elevated white blood cell and blood urea nitrogen and decreased serum sodium levels [9, 10]. On the other hand, we assume our case as an exceptional example of necrotic HZ since he was completely healthy with stable vital signs, normal physical findings and laboratory results. In elderly and undernourished, HZ may run an atypical course in which the eruption usually evolves into necrotic lesions [3]. However, we could not also demonstrate the clear-cut pathogenesis of necrotic lesions in our young, healthy patient.

*Figure legend:* An extensive large ulcer with brown-black coloured crust and an erythematous border in the right dorsal lumbar region of the patient

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