

# Herpes Zoster Duplex Bilateralis

## Bilateral Herpes Zoster Dupleks

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**ABSTRACT** Herpes zoster is a common disease caused by reactivation of latent varicella zoster virus in dorsal root ganglia. Unilateral, clustered vesicles with erythematous base within a dermatomal distribution is its typical clinical manifestation. Involvement of two noncontiguous dermatomes is seen very rarely. A case of herpes zoster duplex bilateralis in 36-year-old immunosuppressed patient due to treatment of systemic lupus erythematosus were reported.

**Keywords:** Herpes zoster; herpesvirus 3, human

**ÖZET** Herpes zoster dorsal kök ganglionlarındaki latent varisella zoster virüsün reaktivasyonu ile oluşan sık görülen bir hastalıktır. Tek taraflı, dermatomal yayılım gösteren, eritemli zeminde kümeler oluşturan veziküller bu hastalığın tipik klinik bulgusudur. Bu hastalıkta birbirine komşu olmayan iki dermatomun tutulumu oldukça nadir görülmektedir. Burada sistemik lupus eritematozus nedeniyle aldığı tedaviler ile bağışıklığı baskılanmış 36 yaşındaki bir hastada gelişen bilateral herpes zoster dupleks olgusu sunulmuştur.

**Anahtar Kelimeler:** Herpes zoster; herpesvirüs 3, insan

**H**erpes zoster typically occurs unilaterally within a dermatomal distribution. Unilateral involvement is very distinctive feature of herpes zoster. Disease is very common in immunosuppressed patients and atypical and severe forms can be seen.<sup>1,2</sup>

### CASE REPORT

A 36-year-old woman was admitted to our clinic with painful vesicles and edema on her face and body for 4 days. She had been treated periodically with prednisone, hydroxychloroquine, cyclophosphamide for systemic lupus erythematosus for the last 20 years. On dermatological examination there were bilaterally periorbital edema and clustered, impetiginized and erythematous vesicles on her right periorbital region (Figure 1). Furthermore, there were grouped vesicles, confined to dermatome T1, on her left side of back, thorax and medial side of left arm (Figures 1, 2).

Laboratory examination (complete blood cell count, renal and liver function tests) with in normal limits except elevated sedimentation rate



**FIGURE 1:** Clustered, impetiginized and erythematous vesicles on her right periorbital region; periorbital edema; grouped vesicles on left side of thorax and medial side of left arm.



**FIGURE 2:** Clustered, erythematous vesicles on her left side of back.

(33mm/h) and C reactive protein level (3,3). She was diagnosed as herpes zoster and ophthalmologist indicated her to have corneal involvement. She was treated with intravenous acyclovir and ampicillin sulbactam combination against secondary bacterial infection. Wet compress, nonsteroidal anti-inflammatory drug for pain, and ophthalmic ointment containing acyclovir were initiated and cyclophosphamide treatment was interrupted.

All of vesicles were crusted, edema and erythema regressed and there was no new vesicular lesion on day 7.

## DISCUSSION

Herpes zoster is caused by varicella zoster virus (VZV) which remains latent on sensory dorsal root ganglion cells after natural infection or immunization (1) When VZV-specific cellular immunity falls below some critical level VZV reactivates and spreads down the sensory nerve, causing intense neuritis and is released from the sensory nerve ending in the skin. Finally the characteristic clinical manifestation, clustered vesicles with erythematous base located unilaterally on dermatomal distribution, appears.<sup>2</sup> Unilateral and dermatomal distribution is the most distinctive feature of the disease. But rarely bilateral or multi-dermatomal involvement may be seen. Most of these cases have contagious skin lesions, noncontagious multidermatomal herpes zoster is very rare.

If the zoster occurs in 2 noncontiguous dermatomes it has been referred as zoster duplex unilateralis or bilateralis, depending on body halves involvement.<sup>3</sup> Herpes zoster duplex is distinct from disseminated herpes zoster infection. The incidence of Herpes zoster duplex bilateralis was estimated below 0.5%.<sup>4</sup> Majority of presented cases with Herpes zoster duplex had immunosuppressant, as our case had.

Trigeminal and T1 dermatomes were involved in our case. The most frequently reported involvement area was the thoracic dermatomes followed by cervical and trigeminal dermatomes.<sup>4</sup>

It is suggested that VZV remains latent in many peripheral sensory dorsal root ganglia and the highest viral genome load leads to clinical Herpes zoster. This suggestion may be a reasonable explanation for how herpes zoster multiplex might occur.<sup>4,5</sup>

Our patient was on immunosuppressive treatment. Herpes zoster may present in atypical forms in pathologic or iatrogenic immunosuppressive patients. Ulceration, necrosis, hyperkeratosis may be seen in a lesion and also multiple dermatomal in-

involvement and dissemination are much more seen in immunosuppressive patients.<sup>6</sup>

Although widespread zoster lesions are commonly seen in immunosuppressive patients, bidermatomal involvement is a rare entity as the main cause of this presentation.

### **Conflict of Interest**

*Authors declared no conflict of interest or financial support.*

### **Authorship Contributions**

**Idea/Concept:** Rebiay Kıran, Evren Demirsoy, Aysun Şikar Aktürk; **Design:** Rebiay Kıran, Evren Demirsoy; **Control/Supervision:** Rebiay Kıran, Evren Demirsoy; **Data Collection and/or Processing:** Ufuk Güleç; **Analysis and/or Interpretation:** Rebiay Kıran, Evren Demirsoy, Aysun Şikar Aktürk; **Literature Review:** Ufuk Güleç; **Writing the Article:** Evren Demirsoy, Rebiay Kıran; **Critical Review:** Aysun Şikar Aktürk.

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