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## CLINICAL VIGNETTE

# Trauma and Herpes Zoster: Two Cases

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### *Case 1: An Unintended Consequence of Aesthetics*

A 42-year-old woman with a history of Hashimoto's thyroiditis on levothyroxine went for her first facial after receiving a gift certificate. Several days later, she noticed a non-pruritic papular rash on her right forehead, and conjunctival injection in the right eye without accompanying visual changes. She promptly saw a primary care physician who was concerned about Zoster Ophthalmicus. She initiated oral famciclovir and referred to an ophthalmologist who diagnosed Herpes zoster conjunctivitis without corneal ulcers. The patient completed her course of famciclovir and the rash resolved without complications.

### *Case 2: Zip-line Malfunction*

A 55-year-old healthy woman was zip-lining when the handle mechanism abruptly jammed, catapulting her body forward and down. She fell approximately 15 feet, forcefully landing on her back into the lake below. Approximately 7 days later, she noticed a nagging pain in her R axilla, upper back and chest, followed by a characteristic herpes zoster rash in the same distribution. She saw a physician at the onset of the rash and started oral famciclovir. The painful rash resolved completely within 10 days, without the development of post-herpetic neuralgia.

### *Discussion*

Herpes Zoster or "Shingles" is caused by reactivation of a primary varicella zoster virus (VZV) or "Chicken Pox" infection which usually occurs in childhood. The reactivation rash assumes a dermatomal distribution because the primary infection remains dormant in the dorsal sensory nerve roots. In some cases, the reactivation may take the form of disseminated VZV, a potentially serious or even life-threatening condition. Most patients presenting with Shingles are older (>50) or immunocompromised and it is theorized that waning VZV-specific cell-mediated immunity is responsible for this predisposition.<sup>1,2</sup>

In both cases, the patients were relatively young and healthy, but they had experienced physical trauma in the days or weeks preceding the onset of the Herpes Zoster (HZ) rash. In both cases, the dermatomal distribution of the Zoster rash corresponded to the area of prior physical trauma. There are multiple citations in the oral surgery literature conjecturing the association of oral trauma to the outbreak of VZV in the

distribution corresponding to the trauma dating back to the early 1900's.<sup>3</sup> The earliest reference we found in the medical literature is from 1932 in which the association with tissue trauma and subsequent eruption of VZV is described: "Herpes zoster should appear in the region or within the range of injury. The disease should appear within one day to one month after the injury."<sup>4</sup>

We conducted a search of the recent (2000 to present) medical literature using the terms "Herpes Zoster, Etiology, and Trauma", and were able to find case reports linking the onset of HZ to physical trauma resulting from therapeutic procedures. The sources of trauma included: cryotherapy, knee arthroplasty, liver biopsy, spinal surgery, intubation, axillary nerve block, and shiatsu massage.<sup>5-11</sup>

In terms of overall trauma by site, the strongest association with the subsequent development of Herpes Zoster (in order of frequency) was with trauma to the head, trunk and limbs. Patients who developed cranial HZ were >25 times more likely than controls to have had cranial trauma in the week prior.<sup>12</sup> With respect to time frame, the highest risk for development of the rash is in the first week post trauma, as is demonstrated in both clinical cases.

### *Conclusion*

There is an association with onset of Herpes zoster rash and previous physical trauma. The association is particularly strong with reference to trauma involving the head, neck and trunk. Physicians should ask about recent trauma in patients with zoster who lack the typical risk factors such as advanced age and immunosuppression. Additionally, physicians should add zoster to their differential when there are worsening skin changes or pain at the site of previously trauma.

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