Trigeminal Trophic Syndrome with Extensive Ulceration: A Rare Complication of Herpes Zoster

Jamie Lea Schaefer, MD1,2; Kara Jones, MS1; Jean-Paul Abboud, MD3; Zachary Zinn, MD4; John Nguyen, MD1,5

Introduction

Trigeminal Trophic Syndrome (TTS) is a rare condition characterized by unilateral facial anesthesia, paresthesia, and soft tissue ulceration due to injury of the ipsilateral trigeminal nerve. We describe a severe case of TTS following herpes zoster ophthalmicus, causing ulceration of the right upper eyelid, forehead, and cornea.

Description of Case

53-year-old, otherwise healthy, African-American male with three-month history of an exudative, necrotic, sharply demarcated ulceration involving the right trigeminal V1 hemi-dermatome (Figure 1). The ulceration slowly progressed due to an uncontrollable urge to scratch the affected areas. Associated symptoms included blurry vision and photophobia. Three months prior to onset of symptoms, the patient was treated with oral acyclovir for severe herpes zoster ophthalmicus.

- Visual acuity: hand motion OD and 20/25 OS
- No pupillary abnormalities or motility deficits
- Cicatricial ectropion of the right upper eyelid with complete tarsal eversion and madarosis along with 3mm lagophthalmos OD
- Anterior segment exam: moderate conjunctival injection with diffuse corneal haze and infratemporal desmatocele
- Corneal sensation diminished OD
- Wound Swab PCR: (-) varicella zoster virus
- Wound Culture: (+) methicillin-sensitive Staphylococcus

Treatment

- The patient was treated with a two-week course of IV Acyclovir for herpes zoster ophthalmicus resulting in TTS. After placement of a temporary tarsorrhaphy, he underwent eyelid reconstruction with skin graft placement and permanent tarsorrhaphy. He was also prescribed doxepin for pruritus.
- At one month follow up, he had minimal residual lagophthalmos and the corneal disease improved leaving a remnant scar. He was continued on wet dressings for the forehead wound for 6 months.
- Over the course of three years, he underwent two additional skin grafting procedures due to recurrence of ectropion and exposure from keloid formation.
- At five years follow up, he was without lagophthalmos but had count fingers acuity from a stable corneal scar in the right eye (Figure 2).

Figure 1: Extensive ulceration of the right upper lid and forehead with cicatricial ectropion and tarsal eversion with exposure keratoconjunctivitis. Dense white cornea ulceration inferotemporal.

Figure 2: Five year post operative follow up showing keloid formation of forehead and resolved ectropion of the right upper lid after skin grafting of the upper lid with medial and lateral tarsorrhaphy. Presence of stable right cornea scar.

Conclusion

TTS is most often due to an iatrogenic, ischemic, or ablative process resulting in damage to the trigeminal nerve1. It is commonly seen in females during the 5th decade of life. Of the approximately 200 cases of TTS described since the early 20th century2, the ala nasi is involved in >70% of cases. This compares to 16% of cases with eyelid involvement, requiring surgical intervention with skin grafts and flaps, although post-surgical recurrence1,3 is common. This report describes severe eyelid and corneal involvement in TTS and highlights the combined surgical and pharmacological interventions necessary to treat this disease.

References


The authors have no conflicts of interest to disclose.