

EM CASE OF THE WEEK.

BROWARD HEALTH MEDICAL CENTER
DEPARTMENT OF EMERGENCY MEDICINE



Care Warriors

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Herpes Zoster Ophthalmicus

A 78-year-old male with a past medical history of hypertension presents to the emergency department complaining of a painful rash on the right side of his forehead. Patient reports pain began 2 days ago and the rash developed yesterday. Today, the patient reports the rash has spread to the right side of his nose and his vision has become blurry. Patient reports he has never experienced anything like this before, but had chicken pox at the age of 10. Patient denies headache, double vision, fever, chills, nausea, or vomiting. Patient's vitals are within normal limits. On physical exam, patient has a vesicular rash on the right side of his forehead down the right side of his nose. The patient's right eyelid was mildly edematous and the conjunctiva of his right eye was injected. Pupils were equal, round, and reactive to light and accommodation bilaterally, EOM were intact, visual acuity was 20/70 OD 20/30 OS and 20/40 OU. Dendritic lesions were present on the cornea during slit lamp examination of a fluorescein stained eye. Which of the following is the most appropriate initial treatment for this patient?

- A. Discharge patient with a prescription for Acyclovir 800mg PO 5 times a day for 7 days and have them follow up with ophthalmologist in a week
- B. Administer Acyclovir 800mg PO and initiate an Ophthalmology consult
- C. Discharge with Acyclovir 800mg PO BID q 7 days and oxycodone 5mg q 4-6 hours as needed for pain. Symptomatic treatment- the virus must run its course
- D. Place a patch on the patient's right eye, apply topical corticosteroids to the rash.



Image courtesy of JS Huff/Medscape

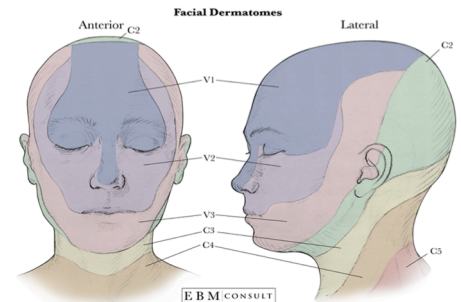


Image Courtesy of EBM Consult

Figure 1: A man with herpes zoster ophthalmicus. Figure 2: The distribution of the facial dermatomes.

Note herpes zoster ophthalmicus follows the distribution of the Ophthalmic branch of the trigeminal nerve, but does not cross the midline.

EM Case of the Week is a weekly "pop quiz" for ED staff.

The goal is to educate all ED personnel by sharing common pearls and pitfalls involving the care of ED patients. We intend on providing better patient care through better education for our nurses and staff.

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Answer: B, Administer Acyclovir 800mg PO and initiate an Ophthalmology consult. This patient has herpes zoster ophthalmicus which can lead to permanent vision loss if not treated promptly and properly. The patient did present with dendritic lesions on a fluorescein stained eye under slit lamp examination along with blurry vision and Hutchinson sign which is indicative of ocular involvement.

Discussion:

Herpes zoster is a reactivation of the varicella-zoster virus. Primary infection with varicella-zoster virus initially presents as chicken pox. After chicken pox resolves the virus lies latent in the dorsal root ganglion which can reactivate and present as herpes zoster. Risk for reactivation increases in immunocompromised patients. Herpes zoster ophthalmicus occurs when herpes zoster affects the ophthalmic branch (V1) of the trigeminal nerve. This distribution occurs in approximately 10-25% of all herpes zoster cases.

Presentation of herpes zoster ophthalmicus typically begins with a prodrome of flu-like symptoms such as a headache, malaise, and fever. Patients then typically develop hyperesthesia to a unilateral side of their forehead followed by eruption of a painful rash that presents in a dermatomal pattern. The rash initially presents as a macular rash which progresses to a vesicular rash and eventually scabs over. Patient with herpes zoster ophthalmicus may also present with injected conjunctiva and lid edema. Patients with herpes zoster ophthalmicus may develop keratitis, iritis, or scarring which can lead to lifelong visual changes or blindness. Vesicular lesions that are present on the tip of a patient's nose are highly indicative of ocular involvement. Lesions in this area indicate involvement of the nasociliary branch of the trigeminal nerve. The nasociliary branch innervates the globe. These lesions are called 'Hutchinson sign' and indicate the need for a thorough eye examination. The eye exam should include extraocular movements, pupillary assessment and reaction to light, and examination of fluorescein stained eye under slit lamp examination. If a patient has herpes zoster ophthalmicus, dendritic lesions may be visualized on the cornea during a slit lamp exam with fluorescein stain.

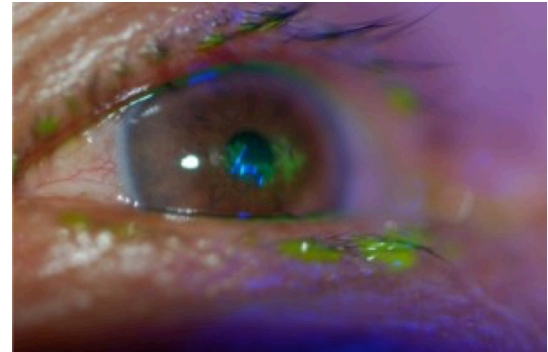


Photo Courtesy of Western Journal of Emergency Medicine

Above photo: Dendritic lesions on an eye stained with fluorescein. This finding indicates herpes zoster ophthalmicus.

Treatment:

Patients with herpes zoster ophthalmicus generally have good outcomes with early diagnosis and prompt treatment with antiviral therapy. Acyclovir initiated within the first 72 hours of initial symptoms has proven to greatly decrease adverse effects. Initial treatment in the emergency department consists of antiviral therapy, pain control, and possibly steroid therapy. Studies have reported that treatment with antiviral therapy within 72 hours of symptoms reduced pain, reduced likelihood of developing post herpetic neuralgia, decreased length of viral shedding, and decreased incidence of corneal involvement. Acyclovir 800mg PO 5 times per day for 7 days is the recommended treatment. Valacyclovir 1000mg PO 3 times per day for 7 days can also be used and has proven higher rates of compliance due to decreased dosing frequency. Intravenous antiviral therapy is also available for high-risk cases. Pain medication such as NSAIDs or opiates have proven to be beneficial due to the extreme pain that is experienced during herpes zoster outbreaks. Steroids have proven to be beneficial in expediting the healing process and decreasing inflammation, however; it is important to consult an ophthalmologist before initiating steroid therapy.

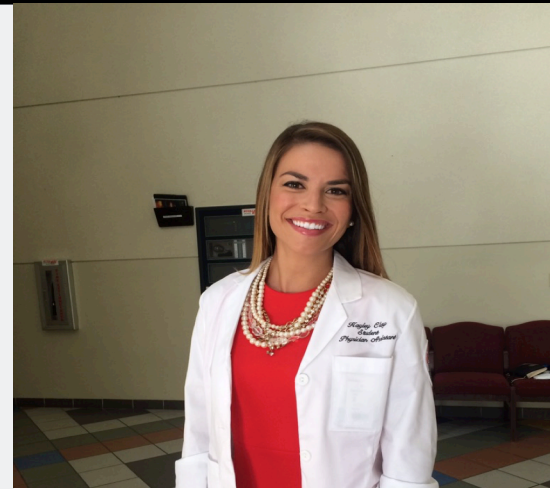
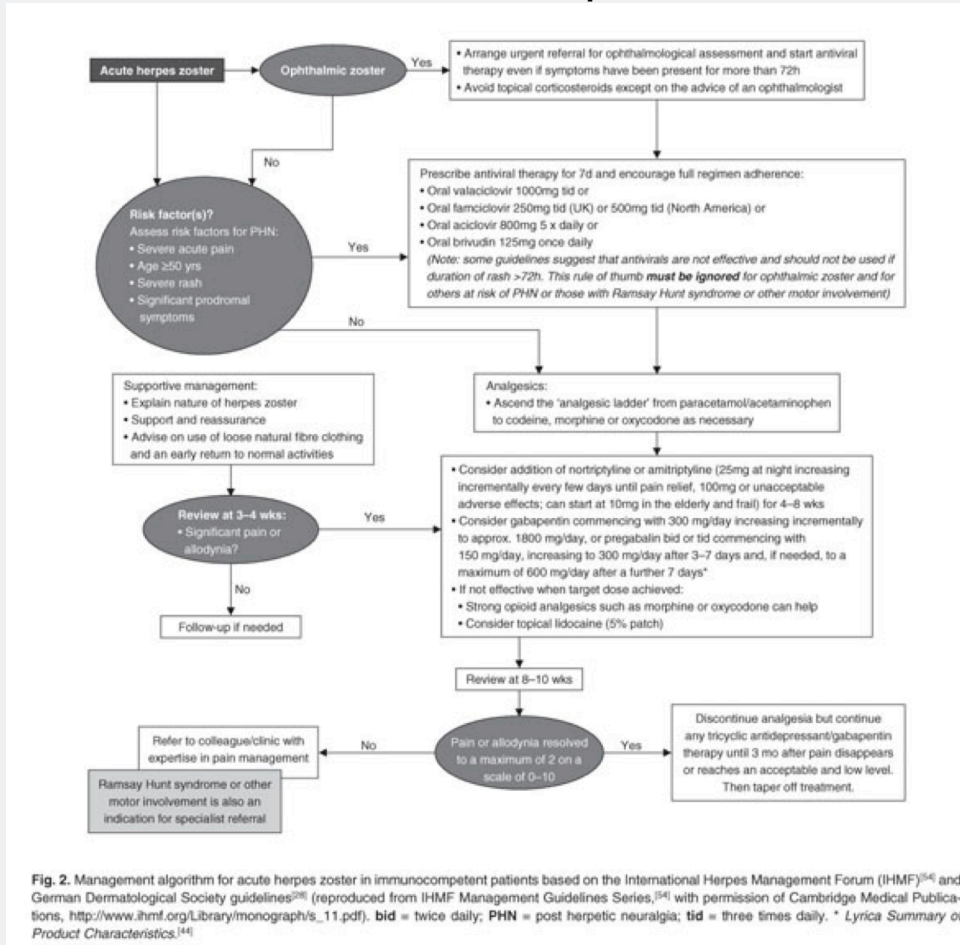
There is a vaccination (Zostavax) available to prevent herpes zoster outbreaks. Zostavax is a live vaccination that is recommended to people over the age of 60 even if they have never had a previous herpes zoster outbreak or chicken pox virus. It is important to avoid administering the vaccination to a patient with an acute outbreak.

For a list of educational lectures, grand rounds, workshops, and didactics please visit BrowardER.com and click on the "Conference" link.

All are welcome to attend!

Warriors

Treatment of Acute Herpes Zoster



ABOUT THE AUTHOR

This month's case was written by Kayley Clay. Kayley is a second year Physician Assistant student from Nova Southeastern Physician Assistant Program. She did her emergency medicine rotation at BHMC in February 2018.

Courtesy of American Journal of Clinical Dermatology

Take Home Points

- Herpes zoster is a reactivation of the varicella zoster virus that lies latent in the dorsal root ganglion.
- Herpes zoster ophthalmicus is specifically when the ophthalmic portion of the trigeminal nerve is affected. If it is left untreated, it can lead to permanent vision loss.
- Hutchinson Sign refers to herpes zoster vesicular lesions on the tip of the patient's nose, potentially indicating ocular involvement.
- On a corneal exam with stain under a slit lamp, herpes zoster ophthalmicus will present as a dendritic lesion.
- If herpes zoster ophthalmicus is suspected or present, immediately consult an Ophthalmologist.
- Antivirals such as acyclovir and valacyclovir are the mainstay of treatment. They are more effective when initiated in the first 72 hours of symptoms by reducing the likelihood of developing post herpetic neuralgia, decreasing length of viral shedding, and decreasing incidence of corneal involvement.

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