BACKGROUND

- Varicella-zoster virus (VZV) reactivation affects the U.S. with an incidence of 1 million people per year.\(^1\)
- The most common complications of any VZV reactivation are post-herpetic neuralgia, bacterial superinfections and ocular complications.\(^2\)

TEACHING POINTS

- The live attenuated zoster vaccine reduces both the incidence of VZV reactivation and the rate of post-herpetic neuralgia.
- Early diagnosis and treatment of VZV reactivation is important in order to minimize its associated morbidity and complications.

CASE

HISTORY: A 78 year old man with a history of dementia developed purulent secretions from his left eye along with canthal and periorbital erythema.

Within four days, the left eye erythema progressed to a vesicular rash that involved the V1 dermatome including the skin covering his left ear and left forehead region.

PHYSICAL EXAM: Findings consistent with herpes zoster ophthalmicus of left eye with flagrant vesicular eschar lesions to the left V1 distribution, 2+ ptosis, moderate lagophthalmos, 2+ stromal edema with 2+ descemet's folds and superimposed cellulitis.

Multiple, erythematous 2-5 mm papules on the thorax, upper thighs and inguinal region, a few with vesicular appearance.

LABSTUDIES: Fluid from skin lesions: positive for VZV by direct immunofluorescence assay (DFA), positive for methicillin-resistant *Staphylococcus aureus* (MRSA) by culture.

CT of Head showed periorbital soft tissue swelling consistent with cellulitis and mild ethmoid sinus thickening, but no infectious involvement of the globe or bone.

HOSPITAL COURSE: Treatment with high dose IV acyclovir along with vancomycin resulted in marked improvement in the appearance of the rash and drainage.

PREVENTION WITH ZOSTA VAX:

- Vaccine is prepared from a live attenuated VZV strain
- Reduces the risk of developing herpes zoster by 51.3%\(^3\)
- 66.5% efficacious for preventing post-herpetic neuralgia \(^4\)
- Indicated for individuals >60 yrs of age without contraindications \(^5\)
- Main contraindication is an immune compromised state
- Covered under Medicare Part D with a retail cost under $200
- Vaccination is cost-effective with estimates of quality-adjusted-life year (QALY) gained from $27,000-$112,000
- Most efficacious and cost-effective for ages 60-69 \(^5\)

DIAGNOSIS AND TREATMENT:

- Most diagnoses are through clinical assessment
- Confirmatory diagnosis is recommended in atypical presentations
- Laboratory diagnosis is usually accomplished by DFA on scrapings from active vesicular lesions that have not yet crusted
- Viral isolation by culture is also commonly combined with DFA for confirmation, but is slow to grow
- Polymerase Chain Reaction (PCR) to detect VZV DNA is both rapid and sensitive, but not always available \(^6\)
- Treatment within 72 hrs reduces the incidence of post-herpetic neuralgia and the risk of sight-threatening ocular complications \(^7\)
- Hutchinson’s sign is indicative of nasociliary nerve involvement with a higher likelihood of ocular involvement \(^8\)
- Ophthalmoscopic examination is warranted if there is suspicion of ocular involvement
- Oral anti-viral therapy can be initiated as an outpatient for less severe cases of herpes zoster ophthalmicus \(^8\)

REFERENCES