Prevalence of Ocular Syphilis at University of Pittsburgh Medical Center Sites in Greater Pittsburgh Region

Brian P. Rosario¹ BS, Richard Couso² MD, Sohani Amarasekera² MD, Manuel Paez² MD, Marie-Helene Errera² MD, PhD

University of Pittsburgh School of Medicine, Pittsburgh, PA, USA¹
University of Pittsburgh Medical Center, Pittsburgh, PA, USA²

Background

Syphilis
• Can present in three phases of the disease caused by Treponema Pallidum
  • Primary Syphilis: Presents with painless genital chancre
  • Secondary Syphilis: Characterized by reddish brown papular rash throughout the body; individual is highly contagious during this phase
  • Tertiary Syphilis: Patient can have gummas, cardiovascular syphilis and neurosyphilis

Ocular Syphilis
• Ocular Syphilis: Rare but serious manifestation of infectious disease, Syphilis, caused by Treponema Pallidum
• Ocular presentation in 0.6% of syphilis cases
• Can be transmitted sexually as well as congenitally
• Ophthalmic presentation can be seen affecting adnexa, anterior segment, uvea, retina, optic tract and even CNS

Treatment
• Usually includes single dose of IV penicillin G

Objective
• We investigated if there had been a statistically significant increase in the number of cases of ocular syphilis per year at UPMC sites as well as possible significant increase in general syphilis diagnoses at UPMC sites.

Results

Results and Statistical Analysis
• 17 patients (34 eyes) were identified with ocular syphilis over the allotted time span.
• 1 patient was excluded due to lack of ophthalmic records; remaining 16 patients (32 eyes) were used included in study.
• Cases of ocular syphilis per year had mean of 2.29 cases/year and standard deviation of 2.05. 2021 showed 6 cases (Z-score 1.81 [p=0.035]).
• Cases of syphilis per year had mean of 253 cases/year; 2021 showed 316 cases (6 of which had ophthalmic findings: 1.9% Z-score 1.41 [p=0.078]).
• All patients were treated with IV penicillin G
• 7/8 patients recovered vision to 20/30 or better while 1/8 patients had vision remain stable at 20/40.

Conclusions

Main Takeaway
• A statistically significant increase in the number of cases of ocular syphilis is seen at UPMC sites in 2021.

Why is this Important?
• Ocular syphilis, although very rare, is a very treatable disease and has a good visual prognosis if identified and treated appropriately.
• It is important to identify symptoms of ocular syphilis and diagnose the disease as quickly as possible so that it can be treated promptly and appropriately

Future Directions and Limitations

Future Directions
• Look into specific breakdown of symptoms in presentation of ocular syphilis
• Begin to quantify most common and least common ocular symptoms in presentation of ocular syphilis

Limitations
• Small sample size due to rarity of ocular syphilis in general population

References and Acknowledgements
