Serratia Endocarditis with Septic Endophthalmitis

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History

- 58yo woman, s/p recent cadaveric renal transplant presented to clinic with lethargy
- Diagnosis of *Serratia marcescens* urinary tract infection was made
- During hemodialysis, patient had acute loss of vision in her right eye
- Ophthalmologic examination was consistent with retinal artery occlusion
Physical Exam

- Vital signs: 37.3°C, 154/71 mmHg, SpO₂ 97% on 2L oxygen
- Laying in bed, somnolent, arousable to voice
- Blind in right eye, right superior eyelid erythematous and swollen
- 2/6 holosystolic murmur loudest at the left upper sternal border. 2+ pitting edema of both lower extremities
Investigations

- White blood cell count 10.3 K/uL
- BUN 60 mg/dL
- Creatinine 5.61 mg/dL
- Blood and urine cultures grew *S. marcescens*.
- MRI/MRA showed right ophthalmic artery occlusion and multiple small areas of recent ischemia and infarction in right parietal lobe and basal ganglia
Hospital Course

- On the morning after admission, globe of right eye appeared swollen. Fluid aspirated from the anterior chamber grew *S. marcescens*

- Systemic vancomycin, cefepime and ciprofloxacin plus intraocular vancomycin and tobramycin were initiated
Hospital Course (continued)

- Transthoracic and transesophageal echocardiograms, upper and lower extremity dopplers, ultrasound of her arteriovenous graft and full body CT scans did not reveal an embolic source of infection.
- Repeat echocardiography 10 days later revealed a mitral valve vegetation measuring 2.5 cm in diameter.
Hospital Course (continued)

- Patient was taken to the operating room for mitral valve replacement.
Discussion

- *Serratia marcescens* is a lactose-fermenting Gram negative rod
- The most prevalent predisposing conditions for severe *Serratia* infections are malignancy and renal failure
- Most commonly associated with urinary and respiratory infections, and bacteremia
Less frequent are reports of *S. marcescens* endocarditis

Prior reports of *S. marcescens* endocarditis from identified contaminated external sources.

Pathogen should be recognized as cause of significant morbidity in the immuno-compromised host.