CAVERNOUS SINUS THROMBOSIS CAUSED BY ACNE

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INTRODUCTION: Orbital cellulitis is an uncommon entity that can be associated with multi-systemic involvement and life-threatening complications.

CASE PRESENTATION: 42 years old male patient presented with productive cough, fever, bilateral palpebral erythema, and blurry vision. 7 days prior, he developed an acne flare over his nasal bridge; inflammation extended until the eyes were involved. Review of systems was positive for asthenia, myalgia, night sweats and poor appetite. On arrival to the Emergency Department, he was febrile, tachycardic, and tachypneic with 4 liters/minute of nasal cannula saturating 90%. Physical exam was remarkable for bilateral palpebral inflammation, left eye chemosis and proptosis, and right CNVI nerve palsy. Laboratory workup: WBC 5.0 k/uL, platelets 60 l/uL, lactate 6.5mmol/l, CK 1,866 units/L, Influenza A positive, PCR positive for MSSA bacteremia. Fluid resuscitation and broad-spectrum antibiotics were started empirically. CT scan of the chest was remarkable for multiple bilateral opacities with central cavitation. He was admitted to MICU for left-sided orbital cellulitis complicated by high-grade MSSA bacteremia with septic pulmonary emboli. TTE and TEE negative for cardiac vegetations. MRA-MRV brain identified bilateral cavernous sinus thrombosis with extension into bilateral superior ophthalmic veins and acute thrombosis within the left internal jugular vein. Bilateral abducens nerve neuritis and peri-neuritis of the left facial nerve were also seen. Anticoagulation was initiated. Mental and respiratory status worsened and subsequently, he was placed on mechanical ventilation. CXR revealed ARDS. His course was further complicated by a left thigh hematoma, hence anticoagulation had to be held. Left loculated pneumothorax was identified and he underwent VATS. Several extubation attempts were unsuccessful thus a tracheostomy was performed and he was transferred to a long term acute care facility.

DISCUSSION: Orbital cellulitis affects the muscles and the fat contained in the orbit, beyond the septum. The most frequent pathogens are Staphylococcus aureus and streptococci, introduced in the skin by local trauma or hematogenous spread. Proptosis, ophthalmoplegia, and painful eye movements are the usual manifestations, however, it can produce a multi-organic variety of symptoms, depending on disease spread. Upon clinical suspicion, imaging is required for confirmation. Treatment involves antibiotics against the above-mentioned organisms, gram-negative bacilli, and sometimes anaerobic organisms. Neuro-meningeal extension is a feared complication. Pulmonary involvement is rare but possible and can lead to severe sequelae.

CONCLUSIONS: Prompt diagnosis and a multi-disciplinary approach are essential in orbital cellulitis management. Novel diagnostic and therapeutic tools have improved outcomes, while delayed presentation, as in our patient, negatively impacted his prognosis.


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