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CLINICAL VIGNETTE

Retropharyngeal Abscess in a Patient with Diabetes Mellitus

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Case

A 78-year-old male presents to his primary care doctor's office to reestablish care and complains of sore throat. The sore throat started four days ago, and he started coughing the night prior. He also had dysphagia and odynophagia on the left side of the throat. He denies fever, rhinorrhea, otalgia, or sinus pain. His wife states that his voice is muffled, unable to talk for prolonged periods, and has difficulty eating. He denies recent dental work. Past medical history is pertinent for poorly controlled diabetes mellitus on insulin with a HgbA1c of 9.4%, complicated by chronic kidney disease and retinopathy. He was a former smoker who quit 40 years prior and denies alcohol or illicit drug use. On physical exam, his blood pressure is 124/60, heart rate 89, respiratory rate 14, temperature 37.5 °C, and SO₂ 95% on room air. He is a thin, alert, well-appearing male in no acute distress. Head and neck exam is pertinent for an erythematous and swollen left pharynx with the uvula deviated. His neck exam reveals tender left-sided lymphadenopathy. His cardiovascular exam reveals regular rate and rhythm with no murmurs, rubs, or gallops. Lung exam is clear to auscultation with no wheezing, rales, or rhonchi. His breathing is not labored and speaks in full sentences. His extremities are warm and peripheral pulses are normal. He has no neurological deficits. Given concern for a peritonsillar abscess, the patient was given Ceftriaxone 1gm IM and Depo-Medrol 40 mg IM in clinic. He was instructed to go to a nearby hospital for urgent CT of the neck and possible evaluation for abscess drainage.

At the local hospital, the patient's vital signs and physical exam remained stable. His white cell count was 14.3 and urgent CT of the neck showed a retropharyngeal fluid collection from the oropharynx that extended down into the left piriform sinus, right vocal cord paralysis, and no airway compromise. He was given piperacillin-tazobactam 3gm IV and dexamethasone 10 mg IV. The patient was then transferred to an academic medical center for further management and treatment.

Upon arrival to the academic medical center, the patient was continued on Unasyn 3gm every 8 hours and started on Vancomycin 1gm every 24 hours for broad antimicrobial coverage. Dexamethasone was continued for soft tissue edema. The following morning, the patient had difficulty clearing his secretions and was unable to swallow. He was transferred to the ICU for closer monitoring and intubation. Otolaryngology was consulted and performed an incision and drainage. Surgical culture grew out *Candida glabrata*. He completed a course of Unasyn and Caspofungin. The patient's hospital course was complicated by multiple failed swallow studies, necessitating

tube feeds. He was discharged home after a 17-day admission; it was advised that the patient remain NPO with tube feeds or PEG placement given high risk of aspiration. Against medical advice, the patient had declined these recommendations and started a puree diet. His primary care physician saw him 5 days after discharge from the hospital. He endorsed weight loss since his surgery and discharge from the hospital. He was eating a pureed diet with added protein and had started seeing a speech therapist. Two weeks after discharge, he saw ENT for follow-up at which time a videolaryngoscopy with stroboscopy was performed and showed sensory deficit and pharyngeal weakness without aspiration. At his 2-month post-operative follow-up with ENT, another videolaryngoscopy with stroboscopy was performed, which showed improvement with no aspiration risk. He was cleared to start a regular diet. Three months after hospitalization, he was tolerating a regular diet and had no residual deficits.

Discussion

Retropharyngeal abscesses are part of deep neck space infections, which most commonly arise from a septic focus of the mandibular teeth, tonsils, parotid gland, deep cervical lymph nodes, middle ear, or sinuses. Generally, retropharyngeal abscesses are rare in adults. They most commonly occur in immunocompromised patients or as a foreign body complication.¹ They are considered dangerous and sometimes fatal in that they can easily extend into the superior and posterior mediastinum via the "danger space" causing acute necrotizing mediastinitis and empyema.² Patients with retropharyngeal abscesses typically present with symptoms of sore throat, difficulty swallowing, difficulty breathing, and trismus. Computed tomography (CT) is the test of choice for prompt diagnosis. Treatment consists of appropriate antibiotics and surgical drainage.³ Treatment is also based upon the most probable source (odontogenic, rhinogenic, or otogenic). In immunocompetent patients, for odontogenic source, ampicillin-sulbactam or penicillin, plus metronidazole or clindamycin, is suggested; for rhinogenic or otogenic source, ampicillin-sulbactam or ceftriaxone, plus metronidazole or ciprofloxacin in addition to clindamycin, is suggested. Vancomycin or linezolid should be added for MRSA coverage to those at risk. In immunocompromised patients, one of the following regimens is recommended: cefepime plus metronidazole or imipenem or meropenem, or piperacillin-tazobactam; vancomycin or linezolid should be added to those at risk for MRSA.

Our patient was immunocompetent but has diabetes (a risk factor for MRSA), so he was given ampicillin-sulbactam and vancomycin to cover either an odontogenic, rhinogenic, or otogenic source. After surgical cultures grew out *Candida glabrata*, he was also given a course of caspofungin. Fungal retropharyngeal infections are quite rare. It is unclear whether the patient presented above had a mere nosocomial colonization of *Candida glabrata*,⁴ the surgical cultures were obtained after the patient had received antibiotics and had been hospitalized in the ICU for several days. Generally intravenous antibiotics are continued for two to three weeks depending on the clinical improvement of the patient. One serious complication of a retropharyngeal abscess is impaired swallowing. It is imperative to have the patient restrict oral intake until swelling resolves completely to avoid aspiration.

In summary, retropharyngeal abscesses can quickly become a life-threatening emergency. High clinical suspicion with the aid of CT imaging is required to make a prompt diagnosis. Treatment consists of broad-spectrum antibiotics along with surgical consultation.

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