

# Uvulitis

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A 53-year-old African-American female presented to the emergency room with sudden onset of dysphagia. The patient was driving to the grocery store when she developed difficulty swallowing, sore throat and drooling. She denied shortness of breath, fevers, chills, rash, rhinorrhea, cough or any sore throat previously. She denies new medications, but the patient does have a history of hypertension for which she is on nisoldipine, torsemide, carvedilol and aspirin. Prior to arrival at the emergency room, the patient did not attempt any intervention. The patient was fully immunized as a child.

Physical exam shows an uncomfortable, afebrile, hypertensive patient with an injected pharynx bilaterally and symmetrical, erythematous tonsils without exudates (*Figure 1*). The uvula has moderate edema. No stridor or trismus was noted. Tongue swelling and elevation are absent. The patient appears to have difficulty swallowing with some drooling. There is no perioral or facial swelling noted. During her workup she had a negative strep test and a negative soft tissue x-ray of the neck. Her basic metabolic panel showed elevated blood glucose and low potassium. The complete blood count had a hemoglobin of 10 grams/deciliter (13-17.5g/Dl normal) without leukocytosis or left shift.

## QUESTIONS:

### 1. What is the most likely diagnosis?

- Angioedema
- Epiglottitis
- Streptococcal Pharyngitis
- Uvulitis

### 2. Which of the following is a recommended treatment for uvulitis?

- Corticosteroids, antihistamines and epinephrine
- High dose intravenous immunoglobulin and aspirin
- Penicillin V or amoxicillin
- Treatment of uvulitis depends on the specific cause

FIGURE 1:



## ANSWERS

### 1. What is the most likely diagnosis?

The correct Answer is:

D) Uvulitis

The patient has an inflamed and enlarged uvula on exam in association with clinical history consistent with uvulitis. Angioedema is an inherited or acquired edema of the dermis, most commonly involving the periorbital or perioral regions. Some triggers include food, medications or exercise.<sup>1</sup> Large, swollen wheals frequently involving the eyelids and lips, but can erupt in the pharynx and larynx causing airway obstruction.<sup>1</sup> Epiglottitis is rapid progressive inflammation of the epiglottis.<sup>1</sup> Patients usually have a toxic appearance with drooling, dysphagia, “hot potato voice” and foreign body sensation. Lateral neck films may show the classic “thumb print” sign.<sup>1</sup> Streptococcal pharyngitis is generally associated with swollen, enlarged tonsils with or without exudates, cervical lymphadenopathy and fever.<sup>1,2</sup>

### 2. Which of the following is a recommended treatment for uvulitis?

The correct Answer is:

D) Treatment of uvulitis depends on the specific cause

Treatment varies due to the wide range of causes.<sup>3</sup> For patients with uvulitis and pharyngitis caused by Group A streptococcus, the first line treatment is oral penicillin V or amoxicillin.<sup>2,3,4</sup> High dose intravenous immunoglobulin and aspirin is the treatment of choice for Kawasaki Disease associated uvulitis.<sup>5</sup> Uvulitis suspected to be due to allergic reaction can be treated with corticosteroids, antihistamines and epinephrine if the clinical situation indicates.<sup>6</sup>

## DESCRIPTION

Uvulitis is an inflammatory condition of the uvula caused most often from either an infectious process or trauma.<sup>3</sup> It is an acute cellulitis from direct invasion of microbes or direct injury resulting in uvular edema and erythema.<sup>3</sup> It is typically found in children and adults with predominance in spring and winter.<sup>3</sup> Infectious causes include Group A streptococcus (GAS) most commonly, and Haemophilus influenzae type b (Hib) secondly, both of which are normal nasopharyngeal flora.<sup>3</sup> Less common organisms include Fusobacterium nucleatum, Prevotella intermedia, and Streptococcus pneumoniae.<sup>7,8</sup> In immunocompetent children, Candida albicans has also been reported as an etiology of uvulitis.<sup>3</sup> Noninfectious causes of uvulitis range from trauma, inhalation or ingestion of chemical irritants, vasculitis (Kawasaki disease), allergic reactions, or angioedema of the uvula.<sup>3,4,5,9,10</sup>

The presentation of uvulitis is often varied and dependent on the causative agent. Patients may present with fever, sore throat, difficult or painful swallowing, drooling, and/or respiratory distress.<sup>3,9</sup> Group A streptococcus uvulitis is often less severe with low-grade fever and sore throat in association with GAS pharyngitis.<sup>2,3,4</sup>

The clinician should have increased suspicion for uvulitis caused by Hib with presentations in younger children or non-immunized patients.<sup>3</sup> Hib uvulitis may be associated with potentially life-threatening epiglottitis.<sup>3</sup> Severe symptoms of drooling and/or respiratory distress are more commonly seen in patients with noninfectious causes such as trauma.<sup>11</sup>

Oropharynx examination may be challenging depending on the cause of uvulitis. If the patient is able to open their mouth adequately for a thorough exam, the uvula will be erythematous and edematous with or without purulent exudates.<sup>3</sup> Pharyngeal edema, tonsillar enlargement, and exudates may be observed if the patient has associated GAS pharyngitis.<sup>2,3</sup> Oral lesions and mucosal inflammation can be present in patients with uvulitis secondary to noninfectious causes due to allergic reactions, trauma, and inhalation of marijuana.<sup>4,12</sup> If there is a high suspicion of concomitant epiglottitis based on the patient’s presentation (anxious, drooling, respiratory distress) a physical exam should be avoided in order to not precipitate complete airway obstruction. An otolaryngologist or an anesthesiologist should be consulted for rapid direct laryngoscopy under anesthesia. If a patient is at high risk for epiglottitis (not vaccinated for Hib) and has less extreme symptoms but is unable to open their mouth adequately for a thorough oropharyngeal exam, a lateral neck radiograph or CT with contrast of the neck should be considered for evaluation to rule out subclinical epiglottitis.<sup>3,4,9,10</sup>

Laboratory workup should be guided by clinical presentation. The causative organism for uvulitis and pharyngitis is most commonly GAS.<sup>3</sup> Surface cultures of the uvula and/or rapid antigen detection tests for GAS are recommended to confirm the etiology.<sup>2,3</sup> In patients with isolated uvulitis without pharyngitis, surface cultures of the uvula and throat should be obtained if an infectious cause is suspected.<sup>7,13,14</sup> It is important to consider Hib in patients younger than 5 years old who have not received the Hib vaccine or are not properly vaccinated against this organism.<sup>2,3</sup>

Treatment varies due to the wide range of causes.<sup>3</sup> For patients with uvulitis and pharyngitis caused by Group A streptococcus, the first line treatment is oral penicillin V or amoxicillin.<sup>2,3,4</sup> A macrolide can be substituted for penicillin allergic patients.<sup>2</sup> An advanced generation cephalosporin such as cefotaxime or ceftriaxone should be the initial antibiotic of choice for uvulitis secondary to Hib.<sup>3</sup> In isolated uvulitis, empiric therapy should cover for both Hib and Streptococcus pneumoniae.<sup>2</sup> Uvulitis with epiglottitis is an emergent situation in which the airway must be secured and appropriate antimicrobial treatment started quickly.<sup>3,4,5,9,10</sup> High dose intravenous immunoglobulin and aspirin is the treatment of choice for Kawasaki Disease associated uvulitis.<sup>5</sup> Uvulitis suspected to be due to allergic reaction can be treated with corticosteroids, antihistamines and epinephrine if the clinical situation indicates.<sup>6</sup>

This patient was treated with diphenhydramine and methylprednisolone initially during her ED stay. Her laboratory workup did not indicate infection and she was afebrile in the ED. The case was discussed with otolaryngology who recommended empiric clindamycin and outpatient follow up. It is suspected that the uvulitis was initially infectious or allergic in etiology. However, the strep swab procedure was traumatic to the uvula and caused

the hemorrhagic uvulitis as depicted. The patient's symptoms improved during her ED stay and she was discharged home. Of note, previous records were reviewed and approximately one year prior to this presentation, the patient was seen in the ED for sore throat and foreign body sensation. She had a negative soft tissue neck x-ray, normal CBC and was sent home on antibiotics. She was diagnosed with uvulitis at that time as well.

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