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IMAGE

Visual diagnosis of retropharyngeal abscess

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A 13-year-old boy came to the Emergency Department (ED) complaining of cough and fever for 1 week. The patient is fully immunized and medically free. He starts with dry cough and subjective fever in progressing with neck pain and difficult swallowing. He has a new history of snoring at night and also mention a mild trauma to his neck by book. Denying any rhinorrhea, nausea, and vomiting or any change in a bowel motion. He has no history of content with sick and no history of fishbone choking. He was on ibuprofen and relaxon for 5 days from the previous visit to the ED but no improvement.

On examination, the boy was looking ill on tripod position maintain good oxygen saturation on room air, by mean of SpO_2: 99% and the temperature was 38.3°, pulse 101 BPM, blood pressure 128/80 mmHg. He has hoarseness of voice and trismus that he can't open the mouth completely together with plugging of posterior pharyngeal wall, especially on the right side accompany with limitation of movement on the neck and tenderness. The ear was full of wax and other systems examination are negative.

CBC, Differential, U&E, blood culture, and strep swab were sent, neck X-ray and CT scan of the neck are requested. Dexamethasone and antibiotic Tazocin are given, while the ENT, ICU teams informed. Cough and fever in a young boy are the most typical symptoms presenting in the ED with a wide differential diagnosis. Reverse our case within 1-week duration of these symptoms with hoarseness and potato muffled voice beside neck stiffness, increased our suspicions to do neck X-ray particularly in his age, updated vaccination plus mild neck trauma. Our concern as an emergency is close observation of the patient vitally and airway as upper respiratory complications are common in such a case.

The lab result was WBC 16.5 differential = Neutrophil% 80, Neut. Absolute 14.0, Lymphocyte% 12.RBC 4.78, Hemoglobin 12.5, Hematocrit 37.8, MCV 78.9, MCH 26.1, MCHC 33.1, RDW 13.2, Platelets 476, Mean platelet volume 9.0, Platelets Distribution 9.4. Electrolytes = Sodium 139, Potassium 4.4, Chloride 98, Carbon dioxide 25. Chem profile = Blood urea Nitrogen 8, Creatinine 0.4, Glucose 125. The X-ray shows an increase on pre vertebrae soft tissue in C1, C2, C3, and C4 (Image 1) and more clearly on CT image (Image 2 and 3). Diagnosis is Retropharyngeal Abscess.

Image 1. *An X-ray of lateral view of the boy.*

A retropharyngeal abscess is an otolaryngologic emergency causing airway obstruction, arise from deep cervical lymph node chain on retropharyngeal space by collection of purulent and abscesses as a complication of upper respiratory tract infection. The incidence common in children till age 4–5 years before the lymph nodes get regress and atrophied [1,2]. Other developing risk factors involve intubation, trauma, poor dentition, diabetes mellitus, and immunocompromised [1,3]. The causative organisms are manly aerobic like *Streptococcus pyrogens*, *Streptococcus viridans*, *Staphylococcus aureus*, *Klebsiella pneumoniae* with other respiratory

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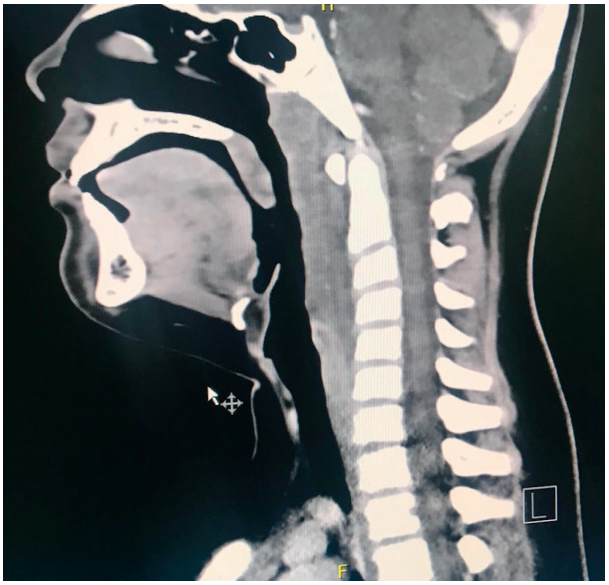

Image 2. *Sagittal view of neck CT scan.*

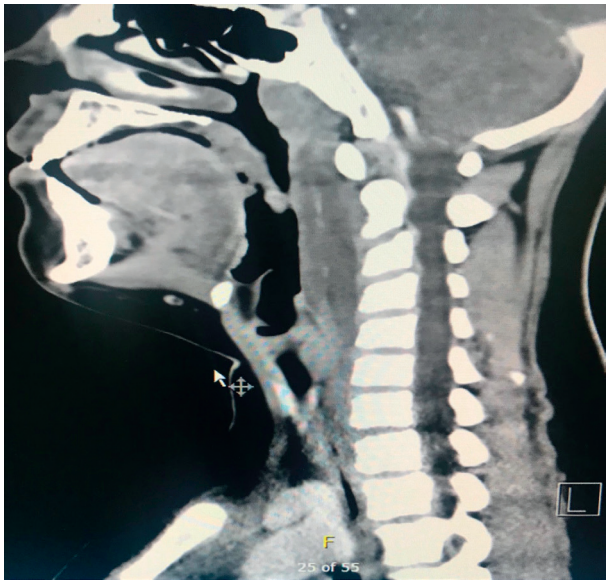

Image 3. *Sagittal view of neck CT scan.*

anaerobic organisms, such as Peptostreptococcus and Bacteroides [4,5]. The management care ranges from Antibiotic therapy to surgical drainage depends on the degree of airway patency and patient status [4,6].

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