Fuseform Bacteria Infections: A Case Series and Review of the Literature

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Case

(Patient 1): 21 year old male presenting with right lateral neck soreness, progressing to a neck mass over 48 hours. Evaluation showing a firm and tender right sided level IIA-III mass, measuring 5cm at greatest diameter without other cervical lymphadenopathy. Patient was then admitted to the hospital and started on unasyn and vancomycin. Labs obtained were generally negative to include CBC, CMV, HIV, ESR, Monospot; however CRP was elevated. Given no change, the patient was taken back to the OR for I&D and further cultures in order to identify etiology of neck mass.

(Patient 2): 23 year old male presenting with rapidly enlarging right neck mass for 2 weeks. No history of throat pain or other respiratory infection Evaluation showing a right level III/IV heterogenous mass with diameter of 8cm. Labs relevant for white count of 14 with neutrophilic predominance. Aspirated at presentation and sent for further cultures and evaluation.

Pathogenesis

Those identified with Lemierre’s syndrome are recommended to receive low molecular weight heparin with therapeutic aim of dissolving the previously identified jugular vein thrombosis[8]. However, given the increasing advancement of imaging and the availability of antibiotics, a wide clinical spectrum of patient presentations caused by fusobacterium infections has become most commonplace[8]. Because of the potential contribution to pharyngitis (up to 10%), recommendations for treatment include fever, tonsillar exudates, and cervical lymphadenopathy in order to potentially address underlying Fusobacterium infection[9].

Treatment

Those identified with Lemierre’s syndrome are recommended to receive low molecular weight heparin with therapeutic aim of dissolving the previously identified jugular vein thrombosis[8]. However, given the increasing advancement of imaging and the availability of antibiotics, a wide clinical spectrum of patient presentations caused by fusobacterium infections has become most commonplace[8]. Because of the potential contribution to pharyngitis (up to 10%), recommendations for treatment include fever, tonsillar exudates, and cervical lymphadenopathy in order to potentially address underlying Fusobacterium infection[9].

Discussion

Patient 1 underwent an I&D and cultures obtained, resulting in F. necrophorum. No venous complications were identified. The patient was transitioned from IV antibiotics to 21 days of oral Augmentin. The patient recovered without further sequelae.

Patient 2 was found to have pulmonary septic emboli, initiating heparin treatment and PICC placement for long term use of IV zosyn. Cultures obtained via aspiration showed Fusobacterium necrophorum. Patient continued longer term IV antibiotics for 6 weeks in addition to 6 months of xarelto.

Both patients recovered without issue, and while both were diagnosed with Fusobacterium infection, they both demonstrated the various progressions of disease and possible treatment algorithms.

Key Learning Points...

- Fusobacterium may cause pharyngitis in primarily young, healthy males
- Penicillin or cephalexin can be used for empirical treatment
- If associated neck swelling, a CT should be done to evaluate for possible external jugular thrombosis or impingement
- If venous involvement identified, blood thinner should be initiated
- Consult ENT and infectious disease

References


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