

A 3-year-old male is brought to the emergency department for evaluation of right neck swelling. His parents noticed a lump on his right neck yesterday, which has since increased in size and is now erythematous and tender. He has been previously healthy except for mild upper respiratory tract symptoms last week. His temperature is 38.0°C (100.4°F), pulse is 90/min, and respiratory rate is 25/min. On examination, he is non-toxic appearing. A 5-cm anterior cervical lymph node is palpated on the right side. It is poorly mobile, warm, erythematous, and tender to palpation. There is no fluctuance or induration. What is the most likely organism causing these symptoms?

- ☐ A. *Staphylococcus aureus*
- ☐ B. *Francisella tularensis*
- ☐ C. *Peptostreptococcus*
- ☐ D. Nontuberculous mycobacteria
- ☐ E. Epstein-Barr virus

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- ☒ A. *Staphylococcus aureus* [56%]
- ☐ B. *Francisella tularensis* [6%]
- ☐ C. *Peptostreptococcus* [12%]
- ☐ D. Nontuberculous mycobacteria [5%]
- ☐ E. Epstein-Barr virus [22%]

[Proceed to Next Item](#)**Explanation:**User Id: 

Cervical lymphadenopathy is common in children. Lymphadenitis is diagnosed when the lymph node becomes tender and erythematous in addition to being enlarged. Although there are multiple causes for lymphadenopathy in children, the differential diagnosis can be narrowed by determining if the lymphadenopathy is acute or subacute/chronic, and if it is unilateral or bilateral. Acute, unilateral lymphadenitis in children is usually caused by bacterial infection. *Staphylococcus aureus* is the most common pathogen isolated, followed by group A streptococcus. Patients with bacterial lymphadenitis are usually less than 5 years old and nontoxic appearing. The affected lymph node is tender, warm, erythematous, and usually 3 to 6 cm in size. In some cases, the infection can progress to induration and fluctuance.

(Choice B) Tularemia, caused by *Francisella tularensis*, can present with acute unilateral cervical lymphadenopathy. Affected children usually have fever, chills, headache, and malaise in addition to the lymphadenopathy. In addition, tularemia is a zoonosis and presents after contact with an infected animal (e.g., rabbits, hamsters, or blood-sucking arthropods).

(Choice C) *Peptostreptococcus* is an anaerobic bacteria that can cause acute, unilateral lymphadenitis. However, it is usually seen in older children with a history of periodontal

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(Choice C) *Peptostreptococcus* is an anaerobic bacteria that can cause acute, unilateral lymphadenitis. However, it is usually seen in older children with a history of periodontal disease.

(Choice D) Nontuberculous mycobacteria (most commonly *Mycobacterium avium-intracellulare*) are one cause of unilateral subacute-chronic lymphadenopathy. Affected children are usually less than 5 years old and present with firm, nontender lymphadenopathy that is usually less than 4 cm in size. The skin over the lymph node often thins and develops a violaceous color. Fever and tenderness are unusual with this infection.

(Choice E) Epstein-Barr virus usually presents with bilateral subacute-chronic lymphadenopathy along with systemic symptoms such as fever, pharyngitis, and hepatosplenomegaly.

Educational objective:

Acute, unilateral cervical lymphadenitis in children is usually caused by bacterial infection, and the most common pathogen is *Staphylococcus aureus*.

Time Spent: 3 seconds

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