

Week 1 Discussion Due Week 1

Scenario: A 16-year-old boy comes to clinic with chief complaint of sore throat for 3 days.

Denies fever or chills. PMH negative for recurrent colds, influenza, ear infections or pneumonias. NKDA or food allergies. Physical exam reveals temp of 99.6 F, pulse 78 and regular with respirations of 18. HEENT normal with exception of reddened posterior pharynx with white exudate on tonsils that are enlarged to 3+. Positive anterior and posterior cervical adenopathy. Rapid strep test performed in office was positive. His HCP wrote a prescription for amoxicillin 500 mg po q 12 hours x 10 days disp #20. He took the first capsule when he got home and immediately complained of swelling of his tongue and lips, difficulty breathing with audible wheezing. 911 was called and he was taken to the hospital, where he received emergency treatment for his allergic reaction.

Symptoms & Disease

Symptoms include a reddened posterior pharynx, indicative of an inflammatory response. Tonsils enlarged to 3+ with white exudate indicate an infection. White exudate is the presence of white blood cells and bacteria which means an infection is present (McCance & Huether, 2019, p. 210). Adenopathy is a normal response to a viral infection. Lymph nodes are part of our lymphatic system and are the immune system's response to fight off bacteria. A low-grade temperature is an early sign of infection. A fever occurs by the induction of cytokines. These cytokines act directly on the hypothalamus, the portion of the brain that controls body temperature (McCance & Huether, 2019, p191). The positive lab result of the Rapid Strep test is a good indicator of Group A Streptococcal (GAS) infection. According to the Centers for Disease Control and Prevention, *S. pyogenes* causes group A strep pharyngitis, an oropharynx infection. Gram-positive cocci called *S. pyogenes* grow in chains. On blood agar plates, they display complete hemolysis. They are called group A streptococci because they fall within the Lancefield categorization scheme for hemolytic *Streptococcus* (The Centers for Disease Control and Prevention., n.d.). The body will activate the inflammatory response if the natural barrier is infringed. When any foreign bacteria or virus enters the body, the first line of defense is the Epithelial Cells. These cells protect the body from tissue injury. The next response phase begins soon after. This phase includes the mast cells, granulocytes, macrophages, platelets, monocytes,