**Transcript for the Presentation:**

**Slide 1:**

**Topic: Diagnosis and Management of Group A. Streptococcal Pharyngitis**

**Name of the Presenter:**

**Learning Institution:**

**Date of Submission:**

**Slide 2: Disease & Background**

Identification of the Disease Condition

Strep Pharyngitis is a bacterial infection that causes inflammatory effects on the mucous membranes and underlying structures of the throat resulting in a sore and scratchy throat(Pearce et al., 2020). This can be represented as shown in figure 1 below.

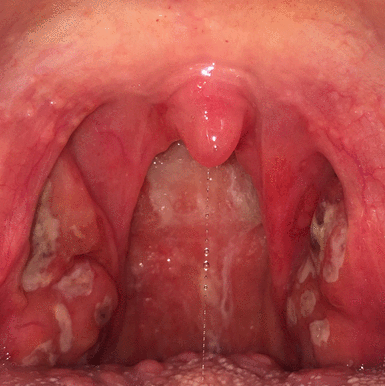


Figure 1: *Strep Pharyngitis(Pearce et al., 2020)*

The nasopharynx, uvula, soft palate, and tonsils are the most affected by the inflammatory effects of Strep Pharyngitis medical condition.

Incidence and Prevalence in the U.S.

Approximately 11 million people in the U.S are diagnosed with Strep Pharyngitis every year. Children from 30% of the cases of Strep Pharyngitis reported while adults form up to 20% of the patient diagnosed(Mustafa, &Ghaffari, 2020). Recent meta-analyses indicate that GAS pharyngitis has an incidence of 10.8% per 100 child-years and a prevalence of 37% in the United States.

Pathophysiology of the Disease

Pathophysiology of Group A Strep Pharyngitis can be discussed by examining the mode of transmission, its incubation period as well as its pathogenesis.

Transmission

Direct person-to-person transmission of saliva or other nasal secretion from an infected person is the most common mode of transmission for the disease. GAS may also be transmitted through contaminated food such as milk.

Incubation Period

Group A strep pharyngitis is estimated to take 2 to 5 years to incubate.

Pathogenesis

The adhesins on the surface of the bacteria aids in the adhesion of bacteria to pharyngeal mucosa. This results in the development of the scarlatiniform exanthema from the exotoxins and proteases released by the streptococcal pharyngitis (Oliver et al., 2020). The inflammatory effects on the mucous membranes and underlying structures of the throat area are due to the proteases and cytolysins produced by the bacteria. The pathogenesis of rheumatic fever is aided by the M protein on the surface of group A streptococcal infection.

Clinical Presentation of the Disease

The disease presents itself in different ways. According to Luo et al. (2019), patients with Group A Strep Pharyngitis experience redness and swelling of the throat, extremely sore throat, especially during swallowing. Such patients may also experience slight fever, swelling of the lymph nodes(Norton et al., 2018). Abdominal pain, nausea, headache, and irritability are also evident in children.

**Slide 3: Publication & Applicability in Primary Care**

Stanford T. Shulman, Alan L. Bisno, Herbert W. Clegg, among others, are the authors who developed the CPG. The guidelines of the Group A streptococcal (GAS) pharyngitis was originally published in 2002. The CPG is applicable in the primary care setting as it provides recommendations on the management of Group A streptococcal (GAS) pharyngitis in terms of its diagnosis and treatment. The CPG is also applicable to the primary care setting as it targets both adult and pediatric patients.

**Slide 4: Key Action statements and Body of Evidence**

Recommendations for the Diagnosis of GAS pharyngitis

For successful diagnosis, the CPG recommends swabbing of the throat and testing for GAS pharyngitis using a rapid antigen detection test (RADT). To discriminate between GAS and viral pharyngitis, the CPG recommends the performance of culture to back up negative RADTs (strong, high).

Due to a low incidence of GAS Pharyngitis in adults, the CPG does not recommend the use of backup throat cultures among adults with negative RADT (strong, moderate).

Group of Patients that should be Tested for GAS Pharyngitis

Children or adults with acute pharyngitis are not recommended for testing for GAS pharyngitis (Strong, High).

Treatment of Patients with Gas Pharyngitis

The CPG strongly recommends the use of a 10-day dosage of penicillin or amoxicillin in the treatment of patients with GAS Pharyngitis due to their spectrum of activity, the infrequency of adverse reactions, and modest cost (strong, high). The patients should, however, not be allergic to penicillin or amoxicillin.

A first-generation cephalosporin should be used in the treatment of patients infected with GAS pharyngitis and who are allergic to either amoxicillin or penicillin for 10 days (strong, moderate).

The use of Adjunctive Therapy in the Management of GAS Pharyngitis

The CPG recommends the use of adjunctive therapy in the treatment of strep pharyngitis (strong, high).

**Slide 5: Application in your Clinical Rotation**

Example from Clinical Rotation

A 19-year-old male tested positive for Strep Pharyngitis in my clinic. It was diagnosed after a rapid strep test. The patient has been treated with Amoxicillin 500mg twice a day for 10 days.

Comparison of the above Diagnosis and Treatment

The use of rapid strep test in diagnosis, as evident in the example above, is consistent with the recommendations given in the guidelines. Based on the CPG, a rapid antigen detection test (RADT) should be used in swabbing the throat and testing for GAS pharyngitis. The treatment process involving the use of Amoxicillin 500mg twice a day for 10 days is consistent with recommendations given in the guidelines. Based on the guidelines, a 10-day dosage of penicillin or amoxicillin should be used in the treatment of patients with GAS Pharyngitis due to their spectrum of activity, the infrequency of adverse reactions, and modest cost(Shulman et al., 2012). However, there was also a need to also employ the use of adjunctive therapy based on Nonsteroidal Anti-inflammatory Drugs (NSAIDs), Acetaminophen in the treatment of strep pharyngitis as strongly recommended by the CPG guidelines.

**Slide 6: References**

Luo, R., Sickler, J., Vahidnia, F., Lee, Y. C., Frogner, B., & Thompson, M. (2019). Diagnosis and management of group A streptococcal pharyngitis in the United States, 2011–2015. *BMC infectious diseases*, *19*(1), 1-9.

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