

A 7-year-old boy is brought to the office with sore throat, poor appetite, and malaise for the last 2 days. He has no cough, rhinorrhea, or nasal congestion. The patient takes no medications and has no known allergies, and his immunizations are up to date. Temperature is 38.9 C (102 F), blood pressure is 110/70 mm Hg, pulse is 130/min, and respirations are 16/min. On examination, the patient's tonsils are swollen and covered with thin white exudates. Small, tender anterior cervical lymph nodes are palpated. What is the most appropriate next step in management of this patient?

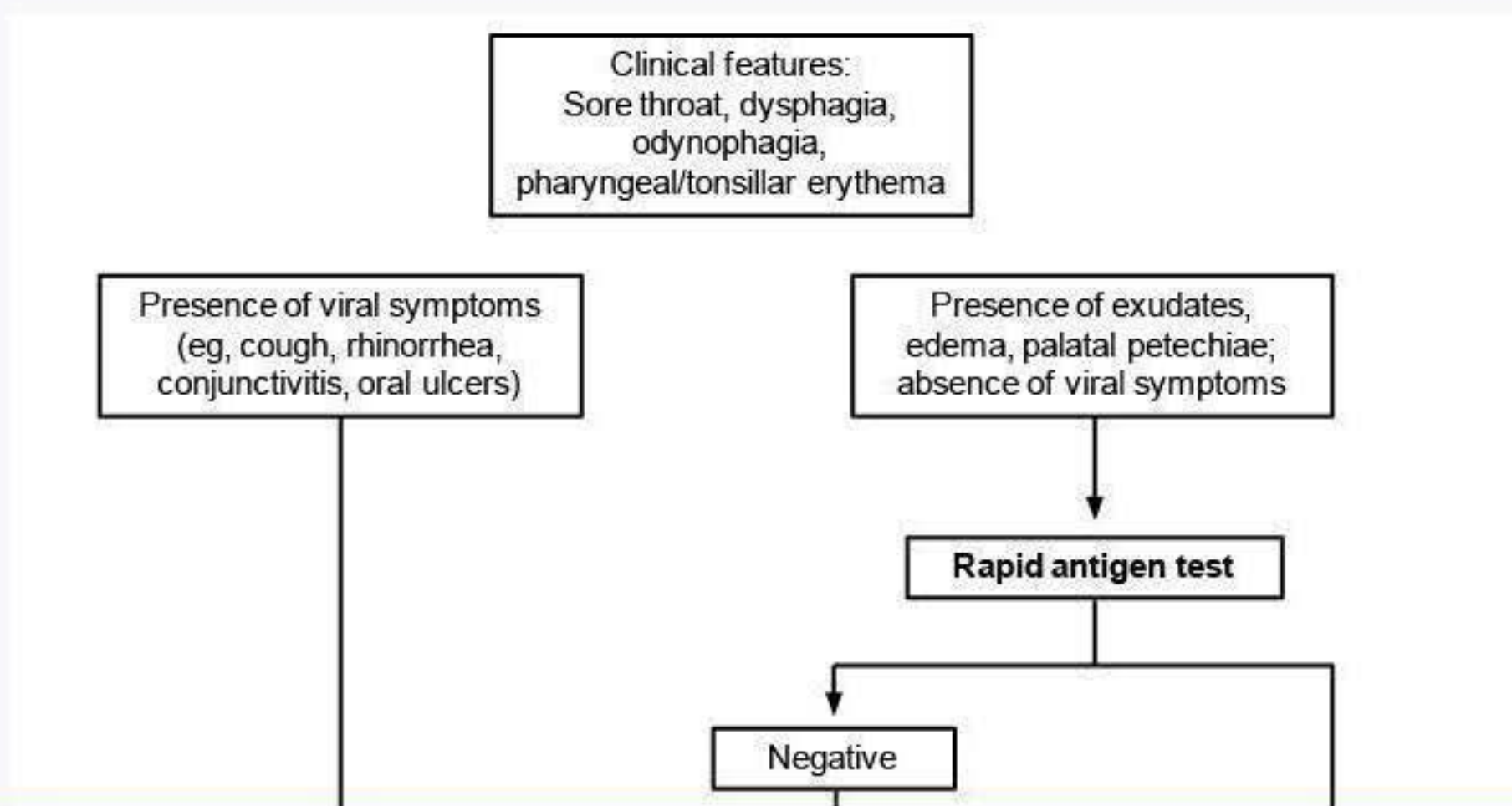
- ☐ A. Amoxicillin
- ☐ B. Antistreptolysin O antibody testing
- ☐ C. Azithromycin
- ☐ D. Heterophile antibody testing
- ☐ E. Rapid influenza testing
- ☐ F. Rapid streptococcal antigen testing
- ☐ G. Symptomatic treatment only

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- ☐ A. Amoxicillin [27%]
- ☐ B. Antistreptolysin O antibody testing [3%]
- ☐ C. Azithromycin [2%]
- ☐ D. Heterophile antibody testing [4%]
- ☐ E. Rapid influenza testing [0%]
- ☒ F. **Rapid streptococcal antigen testing** [63%]
- ☐ G. Symptomatic treatment only [2%]

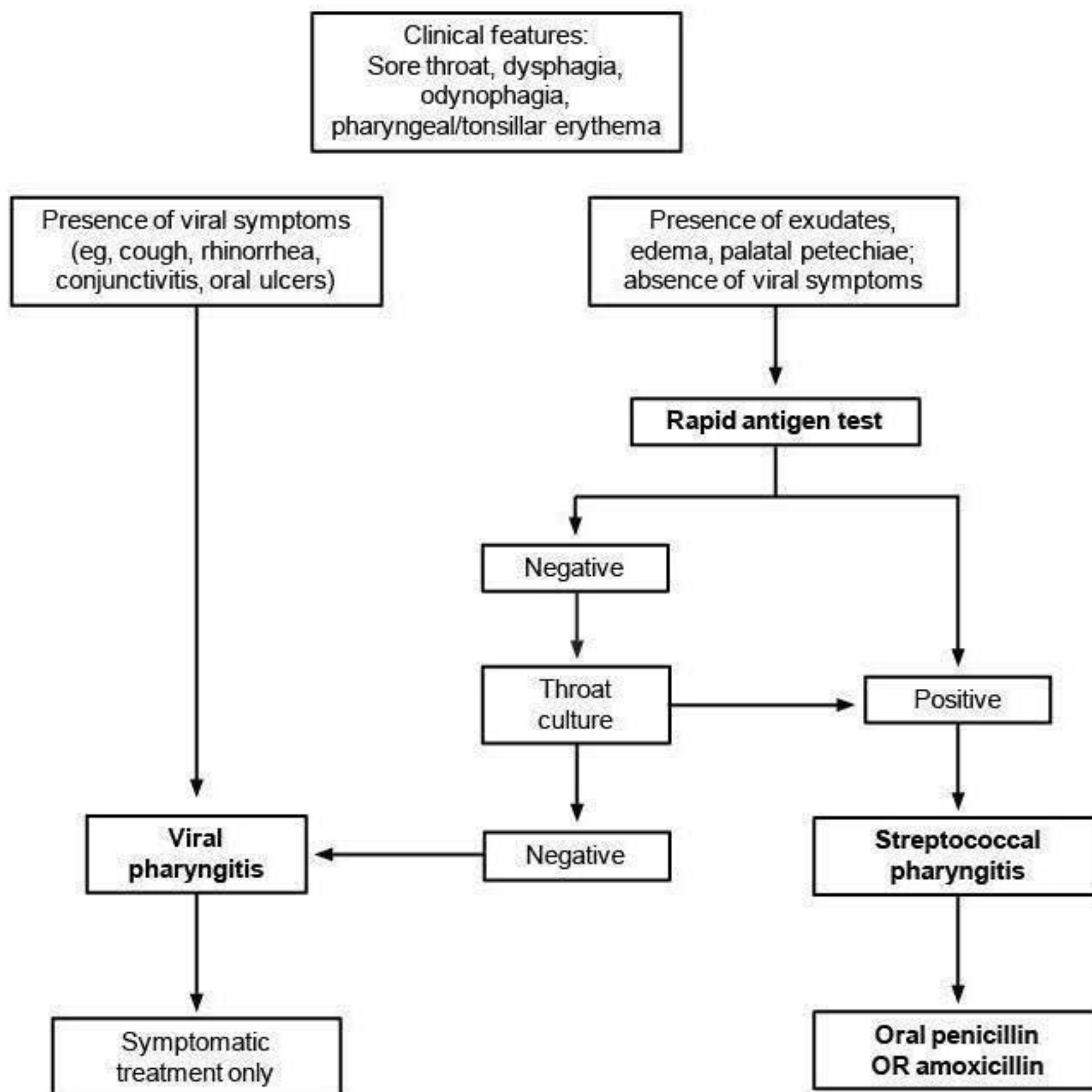
[Proceed to Next Item](#)**Explanation:**

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Explanation:

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This patient has signs/symptoms consistent with pharyngitis, which can be caused by both viral and bacterial pathogens. Bacterial pharyngitis in children and adolescents is most commonly caused by group A *Streptococcus* (GAS). GAS pharyngitis is most common in children age 5-15. It presents with an abrupt onset of sore throat, fever, poor oral intake, and malaise. Characteristic findings include **tonsillar erythema and exudates, tender anterior cervical nodes, and palatal petechiae**.

Symptomatic
treatment only

OR amoxicillin

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This patient has signs/symptoms consistent with pharyngitis, which can be caused by both viral and bacterial pathogens. Bacterial pharyngitis in children and adolescents is most commonly caused by group A *Streptococcus* (GAS). GAS pharyngitis is most common in children age 5-15. It presents with an abrupt onset of sore throat, fever, poor oral intake, and malaise. Characteristic findings include **tonsillar erythema and exudates**, **tender anterior cervical nodes**, and palatal petechiae.

The diagnosis of bacterial pharyngitis in children should be confirmed prior to treatment to avoid unnecessary antibiotic prescription for viral pharyngitis. Options include **rapid streptococcal antigen testing (RSAT)** or **throat culture**. Although RSAT is quick, widely available, and highly specific, it has limited sensitivity (70%-90%). Therefore, although positive RSAT testing is sufficient for diagnosis, all negative RSAT results in children must be confirmed with follow-up throat culture. Throat culture is the gold standard due to its high sensitivity (90%-95%). Penicillin and amoxicillin are the antibiotics of choice for GAS pharyngitis as they hasten recovery, prevent transmission, and reduce the risk of rheumatic fever.

Clinical features, including prediction rules and scoring systems, do not reliably distinguish bacterial from viral pharyngitis in children except when obvious viral manifestations (eg, conjunctivitis, rhinorrhea, cough, exanthem, oral ulcers) are present. Therefore, the approach to pharyngitis in children is different from that in adults due to the high incidence of viral pharyngitis in children. Adults who meet all **Centor criteria** can receive empiric antibiotic treatment without testing. However, Centor criteria are **not reliable in preadolescents**; neither the American Academy of Pediatrics nor the Infectious Diseases Society of America recommends using these criteria for children.

(Choices A and C) Antibiotic therapy in children should be reserved for proven cases of GAS pharyngitis. Empiric therapy for highly suspected cases is reasonable once appropriate cultures have been obtained. GAS pharyngitis should be treated with amoxicillin or penicillin. Macrolides (eg, azithromycin) should be reserved for patients allergic to penicillin.

(Choice B) Antistreptolysin O antibodies peak approximately a month after a streptococcal infection and are not helpful in diagnosing acute pharyngitis.

(Choice D) Heterophile antibody testing is used to diagnose infectious mononucleosis (IM) due to Epstein-Barr viral infections. Although IM can also cause fever and exudative tonsillitis, it is most common in adolescents and is accompanied by diffuse cervical lymphadenopathy and, sometimes, splenomegaly. This patient's age and anterior cervical lymphadenopathy make IM less likely.

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(Choice E) Rapid influenza testing, which has high specificity and low to moderate sensitivity, can be performed in high-risk children in whom treatment would be indicated (eg, age <2, history of pulmonary/cardiac disease, need for hospitalization). Influenza typically presents with fever, cough, and rhinitis rather than pharyngitis.

(Choice G) Symptomatic treatment (eg, antipyretics, hydration) can be provided for both viral and bacterial pharyngitis. Testing for GAS is unnecessary when pharyngitis is accompanied by classic viral symptoms. This patient has no viral symptoms and should undergo testing.

Educational objective:

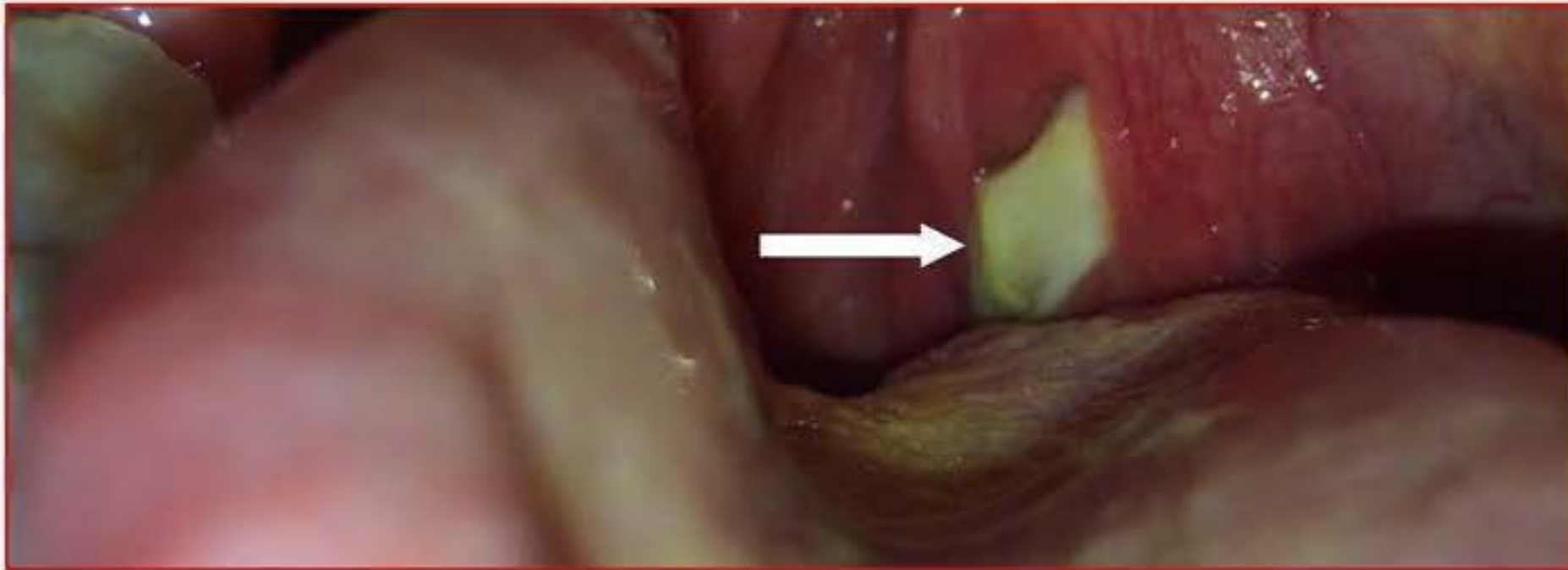
Group A *Streptococcus* (GAS) pharyngitis presents with fever, tonsillar exudates, and tender anterior cervical lymphadenopathy. Unlike in adults, GAS pharyngitis in children should always be confirmed by rapid streptococcal antigen testing or throat culture prior to initiation of antibiotics. Penicillin and amoxicillin are the preferred treatment options.

References:

1. [Principles of judicious antibiotic prescribing for upper respiratory tract infections in pediatrics.](#)
2. [Centor criteria in children in a paediatric emergency department: for what it is worth.](#)
3. [Accuracy and precision of the signs and symptoms of streptococcal pharyngitis in children: a systematic review.](#)
4. [Clinical practice guideline for the diagnosis and management of group A streptococcal pharyngitis: 2012 update by the Infectious Diseases Society of America.](#)

Media Exhibit

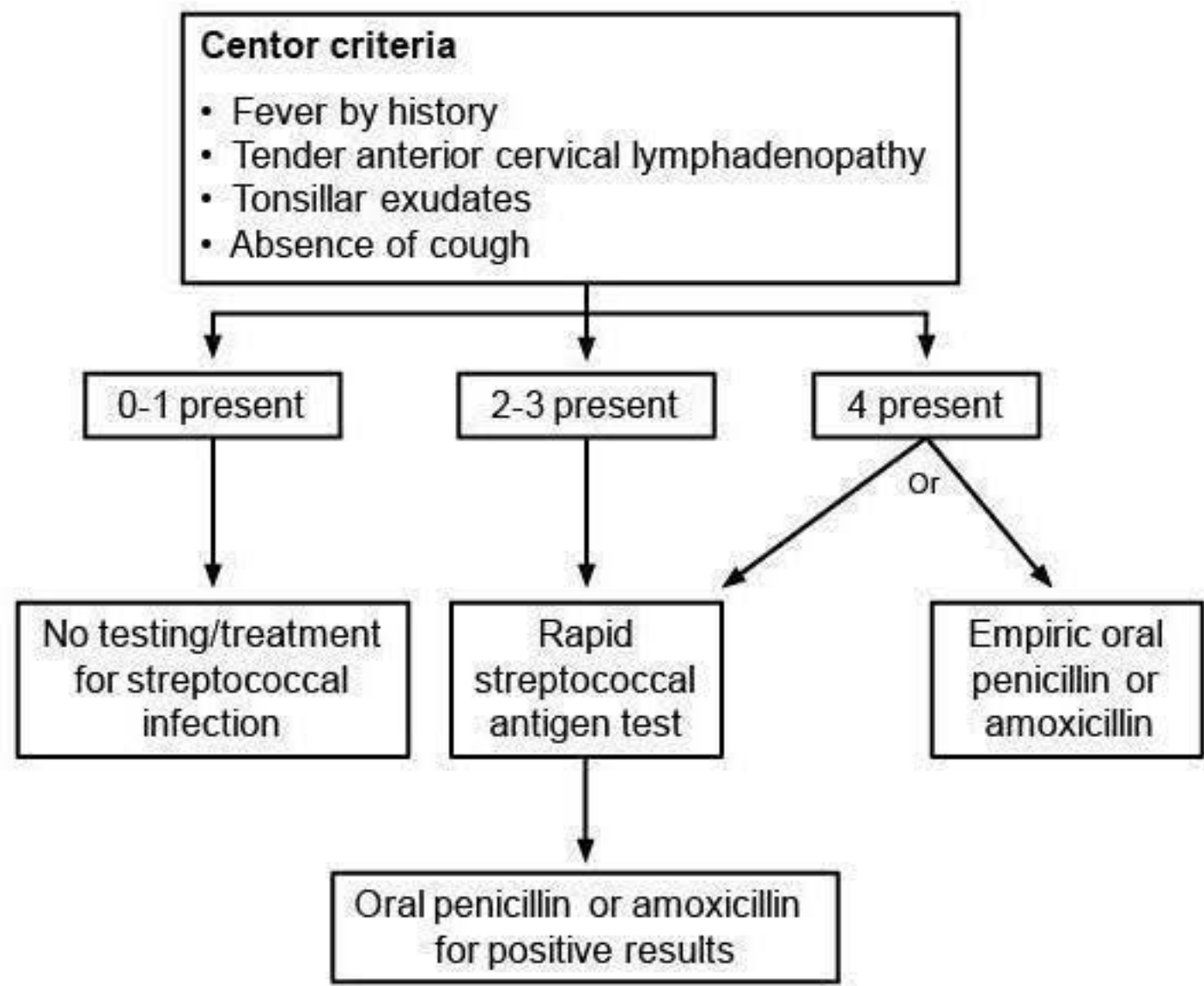
Streptococcal pharyngitis



Media Exhibit

tion and management of pharyngitis

Evaluation & management of pharyngitis



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