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Should you treat a symptomatic patient by phone when his child has confirmed strep throat?

Evidence-based answer

Although no studies specifically evaluate this question, treatment for Group A beta-hemolytic streptococcal (GABHS) pharyngitis without laboratory confirmation in the general population is not advisable (strength of recommendation [SOR]: **C**, based on consensus guidelines) due to poor diagnostic accuracy.

When you suspect GABHS pharyngitis either clinically or epidemiologically, confirm the diagnosis of pharyngitis by a laboratory test. Patients with a positive throat culture or a rapid antigen detection test should receive appropriate treatment with antimicrobial therapy (SOR: **A**, based on clinical trials).

Clinical commentary

When a family member calls with symptoms, ask him or her to come in

Education is the best tool to manage patients with sore throats. Remind patients that strep accounts for <20% of all cases of acute pharyngitis, and that diagnosis without a complete clinical assessment can often be inaccurate. When a symptomatic family member calls, I ask the patient to come into the office to (1) rule out a viral cause for which antibiotics would be useless and increase resistance, (2) ensure that there are no complications such as a peritonsillar abscess, and (3) test when appropriate. In addition, I suggest symptomatic relief measures with saline gargles, analgesics, antipyretics and fluids. While you should see the patient with a sore throat in a timely manner, studies indicate that delaying treatment for as many as 9 days from onset of symptoms does not increase the risk of rheumatic fever, an infrequent but serious sequela.

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FAST TRACK

Treating group A strep without lab confirmation is not advisable

Evidence summary

Only 5% to 10% of adults and 20% to 25% of children presenting in an office setting with acute pharyngitis actually have GABHS pharyngitis.[1] The prevalence of GABHS pharyngitis is higher for patients presenting to urgent care centers or emergency rooms than office practices.

Clinical prediction rules can help

Useful and well-validated clinical prediction rules (such as the Centor score) can help you make more informed decisions about testing. According to 1 meta-analysis, a history of exposure to strep in the previous 2 weeks had a sensitivity of 19%, with a specificity ranging from 87% to 94%.[1] This results in a likelihood

ratio (LR) of 1.9 if the patient has an exposure (eg, the patient's odds of having strep are 1.9 times higher than baseline), and a patient without an exposure has an LR of 0.94. (Typically, LRs of 0.5 to 2.0 are not helpful for diagnostic testing.) In a population at a 10% risk of GABHS as the cause of pharyngitis, the positive predictive value of streptococcal exposure was 17%, and the negative predictive value of no known exposure was 91%.

Of the primary clinical prediction rules for pharyngitis, only the Walsh Diagnostic Algorithm explicitly includes a history of streptococcal exposure. In that algorithm, only patients with tender or enlarged cervical lymph nodes who either had exudative pharyngitis or a recent exposure were in the highest risk category (23% prevalence of GABHS).[1]

Since no clinical prediction rules have been validated for telephone management of pharyngitis, the diagnosis of GABHS pharyngitis by telephone is inherently less accurate than clinical (nonlaboratory) diagnosis in the office setting, since the pharynx and cervical lymph nodes cannot be physically examined. Moreover, while patients may report their sore throat symptoms reliably, they have a tendency to over-report physical signs.[2]

Diagnosis won't be accurate without a physical exam

All of the clinical prediction rules were derived from an in-person encounter, and relied partially on the physician's findings. It is unlikely the accuracy of the clinical prediction rules would be maintained in the absence of a physician's exam. The lack of clinical confirmation of physical signs potentially reduces the precision of the clinical prediction rules to the point that they become nearly useless.

For example, an adult patient (with a 10% baseline risk of GABHS) who presents with a fever but no cough could have a pretest probability for GABHS pharyngitis ranging from 8% to 41%, depending on the presence of exudates and adenopathy.

The number needed to treat (NNT) for antibiotics given to GABHS-positive patients is 3.5 for resolution of symptoms by day 3; for GABHS-negative patients it is 5.5, and for patients who did not have a culture, it is 14.5. When properly prescribed, antibiotics decrease communicability of GABHS to 24 hours, and symptoms by 1 day (NNT=5 patients to decrease symptoms).

Antibiotics also decrease the incidence of rheumatic heart disease (NNT=100) and peritonsillar abscesses. Due to the decreased incidence of glomerulonephritis, the evidence is inadequate to determine the role of antibiotics in preventing this complication.[3]

Recommendations from others

Although guidelines do not specifically address the treatment of symptomatic family members over the phone, the Infectious Disease Society of America states that the diagnosis of GABHS pharyngitis be confirmed by appropriate laboratory testing after clinical and epidemiological suspicion.[4] The American College of Physicians state that a positive confirmatory laboratory test or Centor score of 4 could reasonably warrant treatment.[3] ■

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Ask the patient to come into the office to rule out a viral cause and complications such as a peritonsillar abscess

References

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