I have recently heard PAs complaining that they were told that they had to order a strep culture on everyone who has a negative rapid strep, even if they have been treated with an antibiotic effective against strep. A good example is an adolescent or young adult with three or more Centor criteria, who is at risk for Fusobacterium necrophorum, which is not only worse than strep in terms of complications, but in Centor’s recent study, was actually more common than strep:


Current guidelines and review articles emphasize that clinicians should consider group A beta-hemolytic streptococcus in the diagnosis and management of patients with acute pharyngitis. Recent data suggest that in adolescents and young adults (persons aged 15 to 24 years), Fusobacterium necrophorum causes endemic pharyngitis at a rate similar to that of group A beta-hemolytic streptococcus. On the basis of published epidemiologic data, F. necrophorum is estimated to cause the Lemierre syndrome—a life-threatening suppurative complication—at a higher incidence than that at which group A streptococcus causes acute rheumatic fever. Moreover, these estimates suggest greater morbidity and mortality from the Lemierre syndrome. The diagnostic paradigm for adolescent pharyngitis should therefore be expanded to consider F. necrophorum in addition to group A streptococcus. Expanding the pharyngitis paradigm will have several important implications. Further epidemiologic research is needed on both F. necrophorum pharyngitis (especially clinical presentation) and the Lemierre syndrome. Clinicians need reliable diagnostic techniques for F. necrophorum pharyngitis. In the meantime, adolescents and young adults who develop bacteremic symptoms should be aggressively treated with antibiotics for F. necrophorum infection. Physicians should avoid macrolides if they choose to treat streptococcal pharyngitis empirically. Finally, pediatricians, internists, family physicians, and emergency department physicians should know the red flags for adolescent and young adult pharyngitis: worsening symptoms or neck swelling (especially unilateral neck swelling). Adolescent and young adult pharyngitis is more complicated than previously considered.


BACKGROUND: Pharyngitis guidelines focus solely on group A beta-hemolytic streptococcal infection. European data suggest that in patients aged 15 to 30 years, Fusobacterium necrophorum causes at least 10% of cases of pharyngitis; however, few U.S. data exist. OBJECTIVE: To estimate the prevalence of F. necrophorum; Mycoplasma pneumoniae; and group A and C/G beta-hemolytic streptococcal pharyngitis and to determine whether F. necrophorum pharyngitis clinically resembles group A beta-hemolytic streptococcal pharyngitis. DESIGN: Cross-sectional. SETTING: University student health clinic. PATIENTS: 312 students aged 15 to 30 years presenting to a student health clinic with an acute sore throat and 180 asymptomatic students. MEASUREMENTS: Polymerase chain reaction testing from throat swabs to detect 4 species of bacteria and signs and symptoms used to calculate the Centor score. RESULTS: Fusobacterium necrophorum was detected in 20.5% of patients and 9.4% of asymptomatic students. Group A beta-hemolytic streptococcus was detected in 10.3% of patients and 1.1% of asymptomatic students. Group C/G beta-hemolytic streptococcus was detected in 9.0% of patients and 3.9% of asymptomatic students. Mycoplasma pneumoniae was detected in 1.9% of patients and 0 asymptomatic students. Infection rates with F. necrophorum, group A streptococcus, and group C/G streptococcus increased with higher Centor scores (P < 0.001). LIMITATIONS: The study focused on a limited age group and took place at a single institution. Asymptomatic students—rather than seasonal control participants—and a convenience sample were used. CONCLUSION: Fusobacterium necrophorum-positive pharyngitis occurs more frequently than group A beta-hemolytic streptococcal-positive pharyngitis in a student population, and F. necrophorum-positive pharyngitis clinically resembles streptococcal pharyngitis. PRIMARY FUNDING SOURCE: University of Alabama at Birmingham and the Justin E. Rodgers Foundation.

You can also argue that, for anyone over age 3 but not an adolescent or young adult, and with three or more Centor criteria, Mycoplasma and TWAR Chlamydia (and a false-negative rapid strep) should be covered with a macrolide such as azithromycin.

In neither of these cases is a strep culture appropriate.
I suspect this whole thing is a misinterpretation of your brief article in the 6/1 MedExpress Journal. It even states right in your article "At MedExpress- for suspected Strep Pharyngitis:" If the PAs don't suspect strep, then they don't need to follow the recommendations in your article.

Part of the problem is probably also that clinical staff say they have been instructed to do a rapid strep on anyone with a chief complaint of a sore throat. However, the IDSA 2012 guidelines, which are linked from the CDC page you linked in the article, clearly state this practice is not recommended:

I. How Should the Diagnosis of GAS Pharyngitis Be Established?
Recommendations

1. **Swabbing the throat and testing for GAS pharyngitis by rapid antigen detection test (RADT) and/or culture should be performed because the clinical features alone do not reliably discriminate between GAS and viral pharyngitis except when overt viral features like rhinorrhea, cough, oral ulcers, and/or hoarseness are present. In children and adolescents, negative RADT tests should be backed up by a throat culture (strong, high). Positive RADTs do not necessitate a back-up culture because they are highly specific (strong, high).**

2. **Routine use of back-up throat cultures for those with a negative RADT is not necessary for adults in usual circumstances, because of the low incidence of GAS pharyngitis in adults and because the risk of subsequent acute rheumatic fever is generally exceptionally low in adults with acute pharyngitis (strong, moderate). Physicians who wish to ensure they are achieving maximal sensitivity in diagnosis may continue to use conventional throat culture or to back up negative RADTs with a culture.**

3. **Anti-streptococcal antibody titers are not recommended in the routine diagnosis of acute pharyngitis as they reflect past but not current events; strong, high).**

II. Who Should Undergo Testing for GAS Pharyngitis?
Recommendations

4. **Testing for GAS pharyngitis usually is not recommended for children or adults with acute pharyngitis with clinical and epidemiological features that strongly suggest a viral etiology (eg, cough, rhinorrhea, hoarseness, and oral ulcers; strong, high).**

5. Diagnostic studies for GAS pharyngitis are not indicated for children <3 years old because acute rheumatic fever is rare in children <3 years old and the incidence of streptococcal pharyngitis and the classic presentation of streptococcal pharyngitis are uncommon in this age group. **Selected children <3 years old who have other risk factors, such as an older sibling with GAS infection, may be considered for testing (strong, moderate).**

6. **Follow-up posttreatment throat cultures or RADT are not recommended routinely but may be considered in special circumstances (strong, high).**

7. **Diagnostic testing or empiric treatment of asymptomatic household contacts of patients with acute streptococcal pharyngitis is not routinely recommended (strong, moderate).**

This results in a lot of rapid streps on people who have colds and a bit of a sore throat, many of whom have no Centor criteria at all. For such people, a reflex culture is not indicated as the rapid strep was inappropriate by IDSA criteria, and the CDC and IDSA recommendations for reflex cultures only apply to those who had appropriately-ordered rapid strep tests, as opposed to the larger population who, at MedExpress, have had rapid strep tests performed, often inappropriately.

I am trying to calm down the PAs using the above explanations.

Perhaps another article with more details about sore throat in general is in order at some point?

Thanks for listening (reading).

-- Keith Conover, M.D., FACEP