

*These two studies were reviewed recently in the Infectious Diseases Journal Club (7-11-06). Both address the value of commonly used (or misused) tests. The first clearly documents the superiority of the Rapid Strep test and the second documents the lack of value for the C reactive protein. -- DG*

1. Humair JP, Revaz SA, Bovier P, Stalder H. **Management of acute pharyngitis in adults: reliability of rapid streptococcal tests and clinical findings.** Arch Intern Med 2006; 166(6):640-4.

BACKGROUND: How to use clinical score, the rapid streptococcal antigen test (RSAT), and culture results is uncertain for efficient management of acute pharyngitis in adults. METHODS: This prospective cohort study included 372 adult patients with pharyngitis treated at a Swiss university-based primary care clinic. In eligible patients with 2 to 4 clinical symptoms and signs (temperature  $\geq 38$  degrees C, tonsillar exudate, tender cervical adenopathy, and no cough or rhinitis), we performed an RSAT and obtained a throat culture. We measured sensitivity and specificity of RSAT with culture as a gold standard and compared appropriate antibiotic use with cost per patient appropriately treated for the following 5 strategies: symptomatic treatment, systematic RSAT, selective RSAT, empirical antibiotic treatment, and systematic culture. RESULTS: RSAT had high sensitivity (91%) and specificity (95%) for the diagnosis of streptococcal pharyngitis. Systematic RSAT was more cost-effective than strategies based on empirical treatment or culture: 15.00 dollars, 26.00 dollars, and 32.00 dollars, respectively, per patient appropriately treated. CONCLUSIONS: A clinical approach combining this RSAT and clinical findings efficiently reduces inappropriate antibiotic prescription in adult patients.

2. van der Meer V, Neven AK, van den Broek PJ, Assendelft WJ. **Diagnostic value of C reactive protein in infections of the lower respiratory tract:** systematic review. BMJ 2005; 331(7507):26.

OBJECTIVES: To evaluate the diagnostic accuracy of C reactive protein in detecting radiologically proved pneumonia and to evaluate how well it can discriminate between bacterial and viral infections of the lower respiratory tract. DATA SOURCES: Medline and Embase (January 1966 to April 2004), with reference checking. STUDY SELECTION: We included articles comparing C reactive protein with a chest radiograph or with microbiological work-up as a reference test. Two authors independently assessed methodological items. RESULTS: None of the studies met all validity criteria. Six studies used an infiltrate on chest radiograph as reference test. Sensitivities ranged from 10% to 98%, specificities from 44% to 99%. For adults, the relation of C reactive protein with an infiltrate (in a subgroup analysis of five studies) showed an area under the curve of 0.80 (95% confidence interval 0.75 to 0.85). In 12 studies, the relation of C reactive protein with a bacterial aetiology of infection of the lower respiratory tract was studied. Sensitivities ranged from 8% to 99%, specificities from 27% to 95%. These data were epidemiologically and statistically heterogeneous, so overall outcomes could not be calculated. CONCLUSION: **Testing for C reactive protein is neither sufficiently sensitive to rule out nor sufficiently specific to rule in an infiltrate on chest radiograph and bacterial aetiology** of lower respiratory tract infection. The methodological quality of the diagnostic studies is generally poor. The evidence not consistently and sufficiently supports a wide introduction of C reactive protein as a rapid test to guide antibiotics prescription.