Rapid Tests Not Fully Reliable for Diagnosing Strep

**BY JANE SALODOF MECONIEL**
Southwest Bureau

**Aspen, Colo. —** Rapid antigen detection tests have a high false-negative rate, and cannot be relied upon to diagnose strep throat without a confirmatory culture test, according to S. Michael Marcy, M.D.

"Many people are using antigen detection tests alone. This is not what is recommended yet," he said, urging caution in adopting the new tests. Dr. Marcy was speaking at a conference on pediatric infectious diseases sponsored by Children’s Hospital, Denver.

Throat culture is still the preferred method, advised Dr. Marcy of the University of Southern California and the University of California, Los Angeles.

In nearly all cases, he said antibiotics should not be prescribed until group A streptococcal infection is confirmed. One exception to that approach would be in the case of a very sick child presenting with doughnut-like papules that have white centers. "These are diagnostic," Dr. Marcy explained.

The Centers for Disease Control and Prevention and the American Academy of Pediatrics say antibiotics may be prescribed without a culture if an antigen detection test is positive, according to Dr. Marcy. If it is negative, both recommend the results be confirmed by a throat culture.

"The problem with antigen detection tests, in my opinion, is unless you get the answer immediately, you don’t have a huge advantage," he said.

In pediatric practices where tests are processed in a batch, Dr. Marcy said the results typically arrive after the parent has taken the child home. Then the family has to be called back for the confirmatory culture test or sent to the pharmacy.

In his own medical practice at Kaiser Permanente Hospital in Panorama City, Calif., Dr. Marcy said he does not bother giving the rapid test at all. Instead, he does a culture if strep is suspected and the clinical picture does not strongly suggest a viral etiology.

While waiting for the results from the throat culture, Dr. Marcy prescribes Tylenol to prevent fever and pain. "I tell parents about preventing rather than chasing the symptoms," he said, calling Tylenol "as good as penicillin" during the wait.

He also posts a chart in his clinic that found a viral infection in 42% of children with febrile exudative pharyngitis; no pathogen was detected in 37%. While 37% had bacterial infections, just 12% of pathogens were group A streptococci (Pediatrics 1987;80:6-12). Coinfections brought the total above 100%.

Current recommendations call for physicians to take throat cultures with two swabs, Dr. Marcy noted. He further explained that the samples must be taken from the patient’s right and left tonsils. "If you only touch one side, you will get a false negative 30% of the time. Three separate papers show that. You must touch them both," he said.

If group A strep is confirmed, amoxicillin is the treatment of choice, Dr. Marcy said. He recommended prescribing 750 mg once a day for 5 days.

"Compliance is better" than it is with the twice-a-day option, he said, dismissing controversy over the efficacy of cefalexin vs. penicillin as dated: "What needs to be done at this time is [a trial comparing] cefalexin versus amoxicillin. This has to be done."

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**Standard Vaccines Don’t Appear to Promote Nontargeted Infections**

**BY HEIDI SPLETE**
Senior Writer

No significant relationship was found between routine childhood vaccinations and hospitalizations for nontargeted infections in a population-based study of 805,206 children younger than 5 years, said Anders Hviid, M.Sc., and colleagues at the Statens Serum Institut in Copenhagen.

The complex nature of current routine vaccinations has prompted concern that children who receive multiple antigen vaccines might suffer immune dysfunction and become vulnerable to diseases not targeted by the vaccines (JAMA 2005;294:699-705).

The population-based study examined six vaccines and seven infectious disease categories for a total of 42 possible associations.

There was one adverse association during 2,990,463 person-years of follow-up that occurred between the Haemophilus influenzae type b vaccine and acute upper respiratory tract infections, with an incident rate ratio of 1.05.

There was also one adverse association of the incident rate ratios for vaccinated children within the 14-day lag period relative to unvaccinated children that occurred between the MMR vaccine and acute upper respiratory tract infections, with an incident rate ratio of 1.10; this was not significant. None of the incident rate ratios increased by more than 10% between vaccinated and unvaccinated children during the lag period.

The increase in the incident rate of hospitalizations per dose of vaccine was calculated, and yielded an incident rate ratio of 0.94 for viral pneumonia, 0.86 for bacterial pneumonia, 0.98 for septicaemia, 0.99 for viral CNS infections, 0.99 for diarrhoea, 0.99 for acute upper respiratory tract infections, and 1.00 for bacterial meningitis.

The other four vaccines studied were diphtheria-tetanus inactivated poliovirus, diphtheria-tetanus-acellular pertussis-inactivated poliovirus, white-cell pertussis, and oral poliovirus.