

Rapid Tests Not Fully Reliable for Diagnosing Strep

BY JANE SALODOF MACNEIL
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 throat culture, 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.



'The problem with antigen detection tests ... is unless you get the answer immediately, you don't have a huge advantage.'

DR. MARCY

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 or sent to the pharmacy.

In his own medical practice at Kaiser Foundation 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 signs do 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 published in this newspaper in June 2002 that illustrates how long cold and flu symptoms, including sore throat, persist. The chart explains that these are viral illnesses for which antibiotics will not work.

"Parents look at it and say, 'I don't need to see you,'" Dr. Marcy recounted, calling the chart on cold and flu symptoms "very useful."

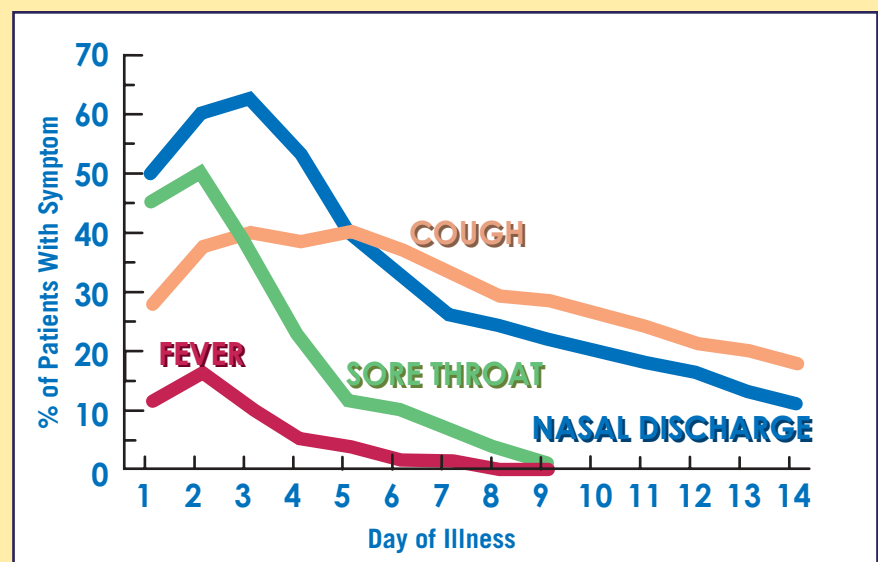
Only about 20% of throat cultures are positive for strep, according to Dr. Marcy. He cited a Finnish study that found a viral infection in 42% of children with febrile exudative pharyngitis; no pathogen was detected in 37%. While 37% had bacterial infections, just 12% of pathogens were group A streptococci (*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

HOW LONG Will Cold & Flu Symptoms LAST?

Fever and sore throat generally improve within
4 DAYS.

Cough and nasal discharge may last
2 WEEKS or MORE.



Cold and flu are caused by viruses, not bacteria.
Antibiotics DO NOT work for viruses.

Adapted from a poster developed by Dr. S. Michael Marcy and Kaiser Permanente from data presented in *JAMA* (202[6]:494-500, 1967).

Standard Vaccines Don't Appear to Promote Nontargeted Infections

BY HEIDI SPLETE
Senior Writer

No significant relationship was found between routine childhood vaccines 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 popu-

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

There was one adverse association during 2,900,463 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 also was 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, 0.96 for bacterial pneumonia, 0.98 for septicemia, 0.99 for viral CNS infections, 0.99 for diarrhea, 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, whole-cell pertussis, and oral poliovirus. ■

show that. You must touch them both."

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 cephalosporin vs. penicillin as dated. "What needs to be done at this time is [a trial comparing] cephalosporin versus amoxicillin. This has to be done." ■

Prenatal GBS Screening: Less Likely in Hispanic Women, Others

Hispanic women and those who receive prenatal care at a hospital or clinic were less likely to be screened for group B streptococcus in North Carolina during 2002-2003, the Centers for Disease Control and Prevention reported. In 2002, the CDC began analyzing rates of universal prenatal screening for vaginal and rectal group B streptococcus (GBS) colonization at 35-37 weeks' gestation in the North Carolina Pregnancy Risk Assessment Monitoring System (PRAMS), a population-based monthly mail/telephone survey of randomly selected women in the state who have recently delivered a live-born infant.

The data comprise responses from 3,027 women who were included in the sample. In 2002, 70%

reported having been tested for GBS during their most recent pregnancy, 11% said they had not been tested, and 19% did not know whether they had been tested. In 2003, those proportions were 74%, 8%, and 18%, respectively, the CDC reported (*MMWR* 2005;54:700-3).

Among the women who knew their GBS status, the factors significantly associated with lack of prenatal screening on multivariate analysis were Hispanic ethnicity, receipt of prenatal care primarily at a hospital clinic or health department, and lack of prenatal HIV testing. Those same factors also were associated with lack of knowledge of GBS screening, along with black race, other race, and Medicaid payment of delivery.

—Miriam E. Tucker