Immunochromatographic Test for Rapid Detection of *Streptococcus pneumoniae* in the Nasopharynx

Faden et al. recently reported the use of the NOW immunochromatographic test to rapidly detect nasopharyngeal colonization with *Streptococcus pneumoniae* (1). While the specificity of the test in this study was relatively high (97.7%), it is important to be aware that oropharyngeal colonizing bacteria other than *S. pneumoniae* may also produce positive results with this test. Specifically, *Streptococcus mitis* shares the antigen against which the NOW test is directed. This cross-reaction is recorded by the manufacturer in the product instructions and is supported by the findings from our own research.

We noted a relatively high rate of positive results when evaluating the NOW test as an alternative method for rapidly identifying *S. pneumoniae* isolates. We tested 96 *S. pneumoniae* isolates and 83 alpha-hemolytic nonpneumococcal streptococcal isolates obtained mainly from blood cultures and respiratory samples. All *S. pneumoniae* isolates were positive by the NOW test, as well as 20 of the nonpneumococcal isolates. The latter isolates were all bile insoluble and optochin resistant and were identified to species level by the API 20 Strep identification system (bioMerieux Vitek, Inc., Hazelwood, Mo.), supplemented by conventional test procedures. Eighteen of these isolates were identified as belonging to the *S. mitis* group, and the remaining two isolates were identified as *Gemella morbillorum* and *Gemella haemolysans*.

When the NOW test is used to detect *S. pneumoniae* antigen in urine from patients with pneumonia, this cross-reaction with *S. mitis* is unlikely to be important. In contrast, anyone using the NOW test to detect nasopharyngeal colonization should be aware of this possible source of false-positive results. Indeed, it is perhaps surprising that the false-positive rate was not higher in the study by Faden et al.

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**Author’s Reply**

I thank Drs. Murdoch and Reller for their timely comments. We were aware of the potential for cross-reactivity with *S. mitis* when we began the study, and we were very surprised at the lack of false-positive results. All of our specimens were collected from the nasopharynx as opposed to the oropharynx or throat. It is quite possible that *S. mitis* may have been relatively uncommon in our population in comparison to *S. pneumoniae*. It is also quite possible that *S. mitis* is found relatively less frequently in the nasopharynx than in the oropharynx. I think that the test deserves further clinical study as a rapid test for *S. pneumoniae* in the airway to validate the high sensitivity and specificity demonstrated in our study.

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