Homely Respiratory Diseases Revisited

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In 1986, Harold Williamson challenged family physician researchers to direct their attention to the "homely diseases."[1] He defined these as the common problems and complaints of our patients to which serious medical center researchers and the National Institutes of Health have devoted little attention. Bronchitis, sinusitis, pharyngitis, and upper respiratory tract infections are prototype "homely diseases." Judging from this issue of *The Journal of Family Practice*, which includes four articles on homely respiratory diseases, researchers are finally taking this challenge seriously.

Mainous and colleagues[2] report a high rate of penicillin and trimethoprim-sulfamethoxazole resistance of *Streptococcus pneumoniae* in isolates from nasopharyngeal secretions of children in day-care centers in central Kentucky; 54% and 40%, respectively. The clear implication of this and other reports of increasing antibiotic resistance throughout the world is that judicious use of antibiotics for all infections, especially infections with little morbidity, is essential for the health of our populations. The most prevalent overuse of antibiotics in outpatient settings is for upper respiratory tract infections (URIs). Using data from the 1992 National Ambulatory Medical Care Survey, Gonzales et al[3] found that antibiotics were prescribed for 51% of patients whose conditions were diagnosed as colds, 52% of those with URIs, and 66% of patients with bronchitis. There is minimal evidence to support use of antibiotics for acute bronchitis and no evidence to support their use for nonspecific upper respiratory infections.

Why, then, do we continue to prescribe antibiotics for upper respiratory infections? The usual argument includes patient expectations. Although family doctors are somewhat accurate in surmising which patients with respiratory infections want an antibiotic, Hamm and coworkers[4] found that patient satisfaction was not associated with receiving an antibiotic. Satisfaction was most highly associated with a patient's report of understanding his illness and with spending adequate time with the physician. Bergh's study[5] of unpredictable concerns in visits for acute cough, published in this issue of the *Journal*, carries Hamm's work one step farther. Seventeen patients identified a mean of 6.5 diagnostic possibilities for their cough. Their doctors identified a mean of 7.6 possibilities, but only 2.8 were common to both doctors and patients. Patients' perspectives, even for such a mundane issue as cough, may be much different than we suspect. A full discussion of the patients' concerns may be more therapeutic than a prescription.

David Hahn, a family physician from Wisconsin who, with his colleagues, described the association between *Chlamydia pneumoniae* and adult-onset asthma, believes his patients are not necessarily looking for an antibiotic prescription.[6] In fact, some are aware of the problem of increasing antibiotic resistance in the community. Patients want to know what they have, how to get over it, and what they should do to feel better in the meantime. When a physician takes the time to discuss these issues, patients with URIs often leave the office satisfied, and without an antibiotic.

But, let's be honest: Some patients do demand an antibiotic for their cough or runny nose. These challenging patients are simply doing what we all do; they are relying on past experience. "Your partner prescribed cefakillemall for me the last time I felt like this, and it worked really well." For these patients, the challenge is to reeducate them. Maybe that is the same challenge for us. Two quick examples: Is sinus percussion a useful clinical finding in diagnosis of acute bacterial sinusitis? Does purulence of nasal secretions indicate bacterial infection? The answer to both questions is no, but many of us would answer yes.

To banish all prescriptions for URIs, however, may move the pendulum too far in the opposite direction according to members of the North American Respiratory Infection Study Group (NARIS), a loose collaboration of family practice researchers with interest in respiratory infections. Antibiotic-responsive URIs may exist; it is possible

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that the problem lies in identifying which patients have them. The questions begging for scientific answers include: Of patients presenting with purulent nasal discharge, what symptoms, signs, and risk factors identify those who would benefit from an antibiotic? Does any combination of signs and symptoms predict a good response to antibiotics in patients with upper respiratory infections?

Trying to determine the clinical predictors of antibiotic-responsive URIs may be like looking for the Holy Grail. Kreher and coworkers[7] were disappointed in their search of the GI system for new clinical predictors of streptococcal pharyngitis. On the other hand, several investigators have looked hard for clinical predictors of sinusitis and the science has been improved somewhat.[8,9] The study by Little[10] in this issue of the *Journal* on family physician diagnosis of sinusitis is encouraging; we are more likely to diagnose sinusitis and use antibiotics for sinusitis when more clinical signs and symptoms of sinusitis are present, a practice that is supported by research evidence.[8] Nonetheless, if the seemingly futile search for accurate clinical predictors of streptococcal pharyngitis is any example, in the end we may have to be satisfied with "high probability/medium probability/low probability" in our search for antibiotic-responsive URIs, if such infections do exist.

Perhaps widespread availability of rapid user-friendly assays for identification of "the bugs" will provide a more satisfying solution. While we wait for better diagnostic methods, we clinicians must use antibiotics judiciously for outpatient treatment of URIs. The recent statements from the CDC on appropriate antibiotic treatment of upper respiratory infections in children are helpful.[11]

Upper respiratory infections, though "homely," are a ripe area for family practice researchers. Many blame family physicians for the misuse of antibiotics in the outpatient setting. If we are part of the problem, we must also be part of the solution.

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