Antibiotics do not Shorten the Duration of the Cough That Comes with Bronchitis

The idea that antibiotics should be prescribed for bronchitis is pretty well accepted – both among physicians and the general public. But a new study, the first to explore this conventional wisdom, found no benefit to the practice. The drugs did not make people feel better faster or provide any other noticeable advantage.

The emergence of drug-resistant strains of bacteria due to the overuse of antibiotics has alarmed researchers and encouraged some to determine the appropriate role of these drugs. Most cases of bronchitis, a cold in the chest, are caused by a virus, and antibiotics are useless against viral infections.

The new study included 562 British children and adults who went to their primary care physicians over a five-year period because of symptoms of acute infection of the lower respiratory tract (bronchitis). The study was led by Paul Little, MD, University of Southampton, England, and published last month in the Journal of the American Medical Association (JAMA, 5/22-29/05).

Most of the participants had an acute cough with sputum. (Potential participants were excluded from this study if they had chronic lung disease, asthma, heart disease, or cancer.) Each participant had been randomly assigned to one of six groups (no antibiotics, delayed antibiotics, immediate antibiotics, an information leaflet about antibiotics, and no information leaflet). The antibiotics given were amoxicillin, or if a participant was allergic, erythromycin.

Here are the findings:

- The duration of an acute cough was not shortened with immediate or delayed antibiotics;

- the cough will likely last about three weeks, and for at least 25% of all people with bronchitis, it will last nearly a month;

- antibiotics provided little or no benefit to people whose cough produced colored sputum;

- if pneumonia is suspected, antibiotics should be prescribed;

- one person in the no-antibiotic group was later diagnosed with pneumonia, treated with antibiotics, and did well (Dr. Little and colleagues are not certain whether treating this participant earlier with antibiotics would have prevented the pneumonia or would it have just led to the development of resistant organisms);

- and educating consumers with leaflets about appropriate antibiotics usage had no impact.

This study showed that physicians who want to prescribe appropriately will have to work against the prevailing enthusiasm about antibiotics as a magic cure-all for bronchitis. The people not given antibiotics were more likely to return to their physicians for reevaluation than those who had (one in five vs one in nine). Dr. Little and colleagues believe that this can be rectified by physicians taking the time to explain that the normal course of a bronchitis-related cough can be nearly a month and that antibiotics are ineffective in shortening its duration.

In another example of unwarranted enthusiasm for antibiotics, the participants given the drugs were more satisfied with their care than everyone else, though they were not better off.

This was noted in the accompanying editorial written by Mark H. Ebell, MD, MS, Department of Family Medicine, College of Human Medicine, Michigan State University, Lansing. “In the current market-based health care system, it is tempting to confuse patient satisfaction with better outcomes, and to confuse more care with better quality care. Physicians have a duty to listen carefully to patients’ symptoms, to examine them carefully, and to take the time to explain their illness to them. However, physicians have no duty to fulfill patients’ expectations for inappropriate care, such as prescribing antibiotics when they are not indicated, and must be mindful of the duty to the larger community that suffers financially and medically when antibiotics are overused.”