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Editor-in-Chief

What to do when the evidence is not conclusive

Family physicians try to base treatment decisions on the very best available evidence from randomized trials and other high-quality studies. Very often, however, the evidence is not conclusive. Family physicians are confronted with questions about a wide variety of treatments that may or may not be effective. The classic example for me is the use of chondroitin sulfate/glucosamine for knee osteoarthritis. The preponderance of evidence tells us it is not effective, but one long-term clinical trial did find some benefit.¹ And some patients swear by it!

Why don't we have conclusive evidence? Because the right studies have not been done.

In this issue of *JFP*, we have 2 articles that fall into this category: 1 by Hahn about the treatment of asthma with macrolides (page 536) and the other by Sorsby et al about use of positive airway pressure (PAP) for obstructive sleep apnea (OSA; page 557).

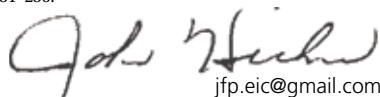
The article by Hahn is an extensive literature review regarding the effectiveness of macrolides for asthma. Despite 2 meta-analyses and many clinical trials, the results are not conclusive; but they are highly suggestive that macrolides may benefit patients with new-onset asthma and severe asthma that does not respond completely to mainstream treatments. Why don't we have conclusive evidence? Because the right studies have not been done. Most studies of macrolides for asthma have not focused on these 2 groups, so any treatment effect may have been diluted by including patients not likely to respond.

The issue with PAP, also known as CPAP (or continuous positive airway pressure), for the treatment of OSA is different. In this case, the question is: What conditions and outcomes are improved by use of PAP? Studies strongly support that PAP is effective in reducing daytime sleepiness and motor vehicle accidents associated with OSA. Most of us had high hopes that PAP also would reduce the adverse cardiovascular outcomes associated with OSA. But the results of large randomized trials have not found a protective effective.

Enthusiasts argue that the studies have not been of sufficient duration and that the participants did not use their PAP devices long enough each night. Some follow-up studies have suggested a protective effective when the device is used for many years, but those studies have the major flaw of volunteer bias, meaning those who adhere to any treatment have better health outcomes than those who do not adhere.

What should you do when there is uncertainty regarding effectiveness? Use shared decision making: What does the patient want to do after you have explained the possible benefits and harms?

1. Reginster JY, Deroisy R, Rovati LC, et al. Long-term effects of glucosamine sulphate on osteoarthritis progression: a randomised, placebo-controlled clinical trial. *Lancet*. 2001;357:251-256.


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