

The Importance of New Technology and Evidence-Based Medicine

Embracing new technology makes me a better clinician while improving my efficiency.

BY ERIC D. DONNENFELD, MD

My colleagues and I at Ophthalmic Consultants of Long Island firmly believe in providing our patients with access to the best and latest technology, which is why we make an effort to participate in clinical trials designed to evaluate new modalities. We then offer these technologies in our practice if doing so is in the best interest of our patients. Often, the technologies are in their infancy, so we learn about them as they are being developed. Our commitment to patients' care and access to new diagnostic and treatment options is one of the keys to our success. Patients know they will receive the latest and most advanced treatment options pertinent to their ocular needs. What differentiates a practice is not necessarily its doctors but the technology that it has to offer patients.

BEST PRACTICES

The best care draws from evidence-based medicine. Clinical diagnoses based on the physical examination always have weak spots that can prevent physicians from making effective treatment choices.

One example of how evidence-based medicine is changing our approach can be found in how our practice manages patients with acute conjunctivitis. Historically, this condition has been extraordinarily difficult to identify; a diagnosis of adenoviral conjunctivitis is made correctly less than 50% of the time and is not based solely on a simple physical examination.¹⁻³ Whether viral, bacterial, or allergic, the signs and symptoms of acute conjunctivitis can be indistinguishable. As a result, patients who present with red eyes are mistreated on a routine basis.

In our practice, we have employed the red eye protocol for conjunctivitis built around the AdenoPlus test (Nicox, Inc.), which confirms or rules out the presence of adenovirus quickly and accurately.⁴ Patients who present to our

practice with red eyes are immediately triaged to an isolated examination room, where a technician performs a clinical evaluation, takes the history, and determines if they have conjunctivitis or a red eye from another cause like a foreign body or trauma. Once the diagnosis of conjunctivitis is confirmed, the technician performs the 2-minute test. Ruling in or out adenovirus allows us to institute therapy with greater confidence. The patient leaves the office in less time and has a better outcome without putting our other patients at risk.

CONCLUSION

Often, ophthalmologists fixate on the costs associated with in-office tests. The most expensive aspect of my practice is my time. A new technology that allows me to decrease my time with patients but give them higher-quality care and a better diagnosis is a gift, and it represents an enormous cost savings to my practice. More importantly, I am amazed at how often I would have been wrong in my diagnosis based on my clinical findings. Embracing new technology not only makes me a better clinician; it also improves my efficiency. ■

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1. O'Brien TP, Jeng BH, McDonald M, et al. Acute conjunctivitis: truth and misconceptions. *Curr Med Res Opin.* 2009;25(8):1953-1961.

2. Leibowitz HM, Pratt MV, Flagstad JJ, et al. Human conjunctivitis. *Arch Ophthalmol.* 1976;94:1747-1749.

3. Stenson S, Newman R, Fedukowicz H. Laboratory studies in acute conjunctivitis. *Arch Ophthalmol.* 1982;100:1275-1277.

4. Sambursky R, Trattler W, Tauber S, et al. Sensitivity and specificity of the AdenoPlus test for diagnosing adenoviral conjunctivitis. *JAMA Ophthalmol.* 2013;131(1):17-22.