

Gonioscopy Renaissance

Gonioscopy has long been considered one of the key elements of an ophthalmic examination for glaucoma patients. Regrettably, recently published studies indicate that the practice of gonioscopy has become something of a forgotten art.¹ With the advances in imaging technologies such as anterior segment optical coherence tomography, many physicians perform gonioscopy infrequently, and some have sadly gone so far as to abandon the practice altogether.

Unfortunately, no imaging technology can replace the knowledge that can be gained from gonioscopy. Techniques for examining difficult anterior chamber angles such as indentation gonioscopy, over-the-hill evaluation, inferior angle inspection, and parallelepiped and pre- and postdilation methods provide clinical information that is not routinely detectable with current imaging modalities. Gonioscopic findings such as neovascularization, pseudoexfoliative material, keratic precipitates, angle recession, cyclodialysis clefts, and peripheral anterior synechiae currently require gonioscopy lenses for adequate visualization.

With the recent increase in interest in devices for microinvasive glaucoma surgery (MIGS) such as the currently available Trabectome (NeoMedix Corporation) and iStent Trabecular Micro-Bypass Stent (Glaukos Corporation), surgeons are quickly learning how important it is to be skilled at gonioscopy to perform successful angle surgery. Without being able to properly identify the angle's landmarks before surgery, the risks of poor outcomes and surgical complications of angle procedures increase dramatically. Consequently, clinical training for both the iStent and Trabectome generally involves reacquainting surgeons unaccustomed to regu-

larly examining the anterior chamber angle with gonioscopy in the office setting.

In the OR, many novice MIGS surgeons are performing gonioscopy on routine cataract surgery patients simply to gain confidence in their gonioscopic skills prior to embarking on their MIGS adventure. Presently, angle surgery commonly involves tilting the operating microscope and patient's head to obtain adequate visualization of the angle, resulting in a longer working distance that forces the surgeon to alter arm and hand positioning around the patient's eye. As expected, a significant interest in improving current gonioscopic lenses and operating microscope approaches to the angle has ensued. Several new gonioscopic lenses have recently been introduced on the market with several other potential technological advances on the horizon as well. It is to be hoped that these new products will enhance

both the surgeons' experience and patients' outcomes.

This issue of *Glaucoma Today* focuses on the role of cataract surgery in glaucoma patients. Gonioscopy is especially critical to determining how to best treat patients with both glaucoma and cataract. This examination helps surgeons decide whether cataract surgery alone versus goniosynechialysis combined with cataract surgery may be indicated in eyes with angle closure. Careful gonioscopy has definitely not gone the way of the dinosaur. In fact, it likely is becoming more important to ophthalmic surgeons than ever before. The website www.gonioscopy.org is an excellent resource for clinicians wishing to brush up on their gonioscopic skills. Eyetube.net also has numerous educational videos that may be helpful to inexperienced MIGS surgeons. Welcome to the gonioscopy renaissance! ■



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1. Coleman AL, Yu F, Evans SJ. Use of gonioscopy in Medicare beneficiaries before glaucoma surgery. *J Glaucoma*. 2006;15(6):486-493.