

Educational Resources Available to Residents

A trainee evaluates a variety of didactic tools for ophthalmology.

BY TH. L. PONSIOEN, MD, PhD

CRST Europe asked David F. Chang, MD, a Clinical Professor at the University of California, San Francisco, to provide a list of the top 10 educational resources that he advises residents to use. In this article, resident Th. L. Ponsioen, MD, PhD, takes a tour of Dr. Chang's top-10 list (Table 1) and discusses the pros and cons of these resources.

In August 2005, after 3 years of scientific research, I began my residency in the Ophthalmology Department at the University Medical Center Groningen (UMCG), the Netherlands. I finished my thesis (*Remodeling of the adult human vitreous and vitreo-retinal interface—a dynamic process*) and received my doctorate in 2008. Given my experience as a senior resident and the extensive research that I conducted for my thesis, I am familiar with PubMed and other databases and resources. Thus, when I was asked to comment on the pros and cons of the educational resources recommended to residents by Dr. Chang, I was happy to oblige.

When I received Dr. Chang's list, I was surprised that almost every resource was new to me. I learned that many of my colleagues were also largely unfamiliar with these interesting resources. In our current training program at UMCG, first-year residents are required to study general ophthalmology from *Clinical Ophthalmology*, by Jack Kanski, MD, MS, FRCS, FRCOphth (Butterworth-Heinemann, Oxford, United Kingdom; 2007). All ophthalmology residents are also tested annually on two or three of the latest editions of the *Basic and Clinical Science Course (BCSC)* published by the American Academy of Ophthalmology (AAO; San Francisco). Additionally, we consult *The Wills Eye Manual* (Lipincott Williams & Wilkins, Philadelphia; 4th ed., 2004) in daily practice. Sometimes I search for ocular surgery videos on www.youtube.com. At the UMCG, we are encouraged to practice various steps in cataract surgery on the Eyesi Ophthalmic Surgical Simulator (VRmagic GmbH, Mannheim, Germany) in our skills center before we are trained in live cataract surgery in the fourth year. Each of

TABLE 1. DR. CHANG'S TOP 10 EDUCATIONAL RESOURCES FOR RESIDENTS

Web-based resources:

- EyeTube (www.eyetube.net)
- CRST (www.crstoday.com and www.crstodayeurope.com)
- EyeSpaceMD (www.eyespacemd.org)
- AAO ONE network (www.one.aao.org)

Videos:

- DVD series on phacoemulsification by Brian Little, MA, DO, FRCS, FRCOphth
- DVD on IOL complications by the AAO
- DVD series on complications by Robert H. Osher, MD

Textbooks:

- *Mastering Refractive IOLs: The Art and Science*, David F. Chang (Thorofare, New Jersey; Slack, Inc.; 2008)
- *Achieving Excellence in Cataract Surgery, A Step-by-Step Approach*; Michael Colvard (published under an educational grant)
- *Phacodynamics: Mastering the Tools and Techniques of Phacoemulsification Surgery*, 4th edition; Barry S. Seibel (Thorofare, New Jersey; Slack, Inc.; 2005)

the resources I mentioned here are useful to the ophthalmic resident and ophthalmologist.

WEB-BASED RESOURCES

I visited www.eyetube.net and watched many—maybe too many—videos of a variety of surgical techniques for the anterior and posterior segments. The quality of the videos was mostly satisfying, and the breadth of subjects was vast, ranging from basic skills such as creating the capsulorrhexis, to the removal of a worm from the anterior segment, to enucleation of a globe, to placing a membrane in Descemet's stripping automated endothelial keratoplasty. The surgeons' narrations were easy to

follow and guided me through most video clips. The music accompanying some videos was diverse, and I found myself wondering if it actually had been played in the OR at the time of surgery. The interactive banner ads on the homepage were distracting. Overall, this resource was a real eye-opener and much easier to search compared with www.youtube.com.

I used information and links on the home page of *Cataract & Refractive Surgery Today* (www.crstoday.com) as a guide. In addition to viewing the journal's content and recent articles, I followed a link to the most popular video on www.eyetube.net. I enjoyed the step-by-step approach to cataract surgery as demonstrated by D. Michael Colvard, MD, FACS, of Encino, California and others. The CRST Web site offers a plethora of information. Without a defined subject to search, the Web site is a large haystack. By using the search button, you are able to find the needles of interest.

EyeSpaceMD (www.eyespacemd.org) is an ophthalmology-specific Web site produced by the American Society of Cataract and Refractive Surgery (ASCRS). Branded as the global ophthalmic classroom, EyeSpaceMD provides extensive educational possibilities for users including podcasts, a resource library, information about international ophthalmic meetings, and the message board eyeConnect. I learned that with a (free) login account, users can save searches, favorite videos, and presentations and can share documents with other account members. Like PubMed, EyeSpaceMD account holders can receive information of interest, such as symposia dates, images, and conferences through the notify me option. This feature is a definite bonus for busy residents.

The AAO's Ophthalmic News & Education Network (ONE; <http://one.aao.org>) Web site also required that I register for an account. Once registered, I was guided to an academic store where I could purchase ophthalmology textbooks and more. From the ONE home page, visitors can learn about resources such as educational content, online learning plans, continuing medical education, maintenance of certification requirements, and the Resident Education Center. The home page also features access to the Media Library and a lengthy list of useful resources for general reference.

TAKE-HOME MESSAGE

- Web-based resources offer educational tools including media libraries, podcasts, message boards, and online learning modules.
- Videos and textbooks demonstrate how to manage complications and various surgical issues.
- Residents should record their cataract surgery procedures for learning and teaching purposes.

VIDEOS

I do not own any of the DVDs on Dr. Chang's list. However, I am familiar with some of the videos on phacoemulsification by Brian Little, MA, DO, FRCS, FRCOphth, as he showed some of them during the Netherlands Intraocular Implant Club (NIOIC) meeting in December 2009. For the purposes of this article, I viewed approximately 20 1-minute previews of Dr. Little's videos on <http://www.eyemovies.co.uk>. I found the previews to be filled with excellent tips, and I plan on viewing more in the future. Dr. Little addresses several problems, such as incision- and capsulorrhexis-related issues that are common for the beginning surgeon. Dr. Little also explains strategies to avoid these problems and how to manage them as they occur, and he uses 3D animations to emphasize elements of his technique. Unfortunately, I was unable to preview the AAO DVD on IOL complications or the video series by Robert H. Osher, MD. Based on the high-quality resources that I now know about thanks to Dr. Chang, I am positive that these videos are valuable resources for residents, and I encourage my colleagues to explore them.

TEXTBOOKS

Textbooks are useful tools to gain knowledge about new subjects. In my opinion, the table of contents and abstracts of the books on Dr. Chang's list are promising. As previously mentioned, I used *Clinical Ophthalmology* and the 2005 to 2009 editions of the BCSC course in the initial years of my residency. Dutch residents in their fourth and fifth years are eligible to participate in interactive phacoemulsification courses designed by Khiun F. Tjia, MD, of the Isala Clinics, Zwolle, Netherlands. Interactive courses and videos such as these provide valuable insight to the various steps of cataract surgery. Learning how to perform cataract surgery on the Eyesi Ophthalmic Surgical Simulator before doing real-life surgery was a privilege and an invaluable learning experience.

I would like to add that it is important for residents to record their cataract surgery procedures for learning and teaching purposes. In retrospect, reviewing my own surgeries has been an additional learning experience.

Finally, I would like to thank Dr. Chang for creating his list of useful resources. ■

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