Jody R. Piltz-Seymour, MD

Dr. Piltz-Seymour offers advice to those contemplating a career as a glaucoma subspecialist and discusses balancing work and family life.

What is the current thinking on disc hemorrhages and glaucoma, and do you have any tips on how not to miss the former?

Disc hemorrhages (DHs) indicate that glaucoma may be progressing. Although we still have much to learn about their etiology, there is strong evidence, most recently from the Ocular Hypertension Treatment Study (OHTS), demonstrating the negative prognostic significance of DHs.

Our initial report from the OHTS on the subject found a 3.7-fold increased risk of developing a glaucoma endpoint in ocular hypertensive eyes with DHs versus those without DHs (multivariate analysis).[1] In the more recent OHTS report, eyes with DHs displayed visual field progression at more than twice the rate of eyes without DHs.[2] The increased risk of DHs may be best understood by comparison: the increased risk of having DHs is equivalent to that of being 10.5 years older, having an IOP 11 mm Hg higher, having a corneal thickness that is 23 µm lower, or having a vertical cup-to-disc ratio that is 0.1 unit higher.[2] Progressive glaucomatous changes typically occur 1 to 3 years from the initial detection of the DH.

The biggest obstacle to incorporating DHs into the risk analysis for glaucoma is that they can be quite subtle and are easily missed. In the OHTS, of all DHs detected photographically, only 16% were found on clinical examination.[1] This is an abysmal statistic. How can we do better? The more we look, the more we see. When examining the optic nerve, we must pause and say to ourselves, "Now, I am going to look for DHs." Clinicians' undivided attention is needed to detect these stealthy hemorrhages. Evaluating magnified digital photographs is an excellent method of seeing DHs.

Do you believe that the measurement of ocular hemodynamics will become a part of the clinical management of patients with glaucoma?

I hope so. None of the available technologies is perfectly suited to measuring perfusion in a clinically meaningful way in glaucoma. Therapeutic studies that show improvements in flow in one vascular bed may cause unmeasured deleterious effects in another bed. Moreover, diminished perfusion in glaucomatous eyes may reflect decreased tissue oxygenation requirements secondary to a loss of optic nerve fibers—the chicken, not the egg.

The literature on systemic perfusion and dementia offers many parallels to perfusion in glaucoma. There is compelling evidence that midlife hypertension con-

FAST FACTS

- Director, Glaucoma Care Center, PC, in Philadelphia, Bristol, Langhorne, and Ardmore, Pennsylvania, 2008 to present
- Clinical professor (2013-present; faculty positions held since 1999), Perelman School of Medicine, University of Pennsylvania, Philadelphia
- Director, Glaucoma Fellowship, University of Pennsylvania, Philadelphia, 1992 to 2004
- Principal investigator, University of Pennsylvania and Keystone sites, for the Ocular Hypertension Treatment Study (OHTS) sponsored by the National Eye Institute, 1994 to 2008
- Principal investigator, University of Pennsylvania site, for the Collaborative Initial Glaucoma Treatment Study (CIGTS) sponsored by the National Eye Institute, 1995 to 2002
- Principal investigator, University of Pennsylvania and Keystone sites, for the Memantine Treatment Trial, 1999 to 2004
- Recipient of the American Academy of Ophthalmology's Achievement Award (1999) and Senior Achievement Award (2005)
- Founder of Women in Ophthalmology Luncheon at the American Glaucoma Society Annual Meeting, 2006 to present
- Listed in *Best Doctors in America*, 1997 to present
- Founding member, editorial board, of the American Academy of Ophthalmology EyeWiki, Glaucoma Section, 2010 to present

tributes to an increased risk of dementia later in life, but many longitudinal studies have shown that, in the elderly, low diastolic blood pressure increases the risk of vascular dementia, particularly in patients taking antihypertensive therapy. Sounds familiar!

The ophthalmic literature is replete with studies documenting an increased risk of glaucomatous progression in patients with very low blood pressure, particularly low diastolic perfusion pressure, but the medical community still seems to believe, the lower the blood pressure, the better. Certainly, one small way of addressing ocular hemodynamics is to check patients' systemic blood pressure and alert primary care doctors and cardiologists to the potential risks of overtreating systemic hypertension, particularly in elderly patients with advanced glaucoma.

What was your most memorable medical mission?

I am relatively new to volunteering abroad, but during the past few years, I have had the opportunity to travel to Ethiopia and Vietnam with Orbis. This past summer, my 16-year-old daughter, Emma, and I traveled to Ghana with Unite for Sight (UFS). We chose UFS because they work at a grassroots level and actively recruit students to participate in daily outreach to mostly rural communities. Despite often uncomfortable situations, difficult travel for hours each day, and challenges in terms of hygiene and food (Emma is a strict vegetarian), we had not a single moment of regret. Emma worked independently from morning to night, treated the Ghanaian patients with compassion and respect, and collaborated easily with the Ghanaian optometrists, UFS staff, and other international volunteers. What a gift to spend so much time with my daughter and to watch her interact with everyone with calm and grace! Looks like this mother-daughter team is headed to Honduras with UFS this summer.

Is there any advice you would give specifically to women contemplating a career as a glaucoma subspecialist?

I can address this advice to women, but it is really universal: live your life on your own terms. Doing so may not put you on the fast track to becoming a professor or partner, but balance your career, family, and other interests in the way that suits you best. (*Balance* may not be the right word, because most of the time, I teeter to one side or the other.) For some, working 80 hours a week and focusing their energy on a career are the right path. I preferred to work a nontraditional schedule in order to have some daytime hours for my kids when they were small and some time to pursue my creative interests.

Remember that life is fluid. Needs and demands change over time. If you are raising kids, the paradigm might shift toward family when your children are small and toward your career and other interests when they grow up and move away.

Nourish your own interests. I take ballet classes regularly, act in local indie films (some good, some very bad, but all fun), and ski with my family. Now, I am facilitating a collaborative research group looking at canine and artificial olfaction in the detection of ovarian cancer. Working outside my comfort zone can be very invigorating.

Get help with the chores you do not like to do. You will have more quality time for your family and yourself.

After more than 20 years, I still think glaucoma is a fantastic career. As subspecialists, we can swoop in to save the day or at least stabilize the situation. We have the honor and privilege to care for some individuals over their lifetime and share in their joys and challenges. In addition, despite the economic recession and the current state of reimbursement, doctors still make more than a comfortable living.

What are the greatest challenges and rewards of raising two daughters?

The biggest challenge in raising my daughters, now teenagers, became the greatest reward. My 19-year-old daughter, Sofie, has been strong-willed from the moment she was born. It did not take long for my husband and me to realize that, as parents, our job was not to try to steer our kids in any specific direction but rather to offer them opportunities and to support them on the paths that they chose. The challenge for me was to let go of my preconceived expectations for my children (like mastering a musical instrument) and instead help them excel at what interests them and brings them joy. For Sofie, a sophomore at Harvard University, this has been dance, theater, and choreography. For Emma, a high school junior in the International Baccalaureate Programme, it has been costume design and working with children. Allowed to choose their paths, my kids have excelled in their studies, and they work creatively with gusto.

I raised my kids with the motto, "Do a little good, and have a little fun." My greatest reward is seeing my girls grow up to be happy, smart, strong, big-hearted, ethical souls. What more could a mother ask for? ■

1. Budenz DL, Anderson DR, Feuer WJ, et al; Ocular Hypertension Treatment Study Group. Detection and prognostic significance of optic disc hemorrhages during the Ocular Hypertension Treatment Study. *Ophthalmology*. 2006;113(12):2137-2143.
2. De Moraes CG, Demirel S, Gardiner SK, et al; Ocular Hypertension Treatment Study Group. Rate of visual field progression in eyes with optic disc hemorrhages in the Ocular Hypertension Treatment Study. *Arch Ophthalmol*. 2012;130(12):1541-1546.