This agrees with other investigators[1-3] who have demonstrated that decentration of the object, alteration of the eye to camera distance, and increasing ametropia can cause a large variation in the measured from the calculated magnification. This may have contributed to the difference in the measurements obtained. However, all the photographs were taken by the same observer, who took care to center the optic disc within the photograph to minimize this effect.

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Influence of Cerebrospinal Fluid Pressure on the Lamina Cribrosa Tissue Pressure Gradient

To the Editor:

In the May 1995 issue of *IOVS,* Morgan et al[1] described that retrolaminar tissue pressure was largely dependent on the surrounding cerebrospinal fluid pressure, and they further speculated on the potential importance of the pressure gradient between the intraocular space and the retrolaminar tissue across the lamina cribrosa in humans.

I would like to point out to the authors that we also theorized on the potential importance of the translaminar pressure gradient in the intraocular, pressure-dependent dynamic changes of optic disc cupping[2] and intraocular pressure-related pattern of optic disc cupping in adult patients with glaucoma.[3] "The IOP-dependent anterior-posterior displacement of the lamina cribrosa may reflect, in addition to the plasticity of the lamina cribrosa itself, an IOP-change induced shift in the balance between the pre-lamina pressure, that is, IOP, plus any prelamina tissue resistance and the retrolaminar intraoptic nerve pressure plus any retrolamina tissue resistance."[3]

It is hoped that the potential importance of the translaminar pressure gradient in the pathophysiology of glaucoma underscored in this correspondence will help to generate the interest of others engaged in similar research. Morgan and his colleagues deserve to be commended for what I consider to be an important contribution toward the understanding of the pathophysiology of glaucoma.

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The authors reply:

We would like to thank Dr. Shin for his very positive comments regarding our article.[1] We agree that the translaminar pressure gradient has potential importance regarding the pathophysiology of glaucoma as postulated by Volkov,[2] Shin,[3] and Morgan.[1] We acknowledge the valuable contribution by Dr. Shin[3] showing that changing intraocular pressure causes optic disc movement and alters the translaminar pressure gradient.

Pressure gradients across structures cause movement in the direction of, and stresses transverse to, the gradient (LaPlace's law). A pressure gradient is the change in pressure per unit distance, which, in the case of the optic disc, we have shown to be approximated by (IOP − RLTp)/LAW, where RLTp is retrolaminar tissue pressure and LAW is lamina axial width. Cerebrospinal fluid pressure seems to be the major determinant of retrolaminar tissue pressure. It is perhaps worth considering the role not only of retrolaminar tissue pressure and its effect on the translaminar pressure gradient, but also the axial width of the lamina cribrosa itself. A small axial width, which probably occurs in myopia, will tend to increase the translaminar pressure gradient and may be part of the reason for the predilection toward glaucoma in persons with myopia (personal communication, R. Brubaker, Mayo Clinic). The magnitude of the translaminar pressure gradient may have significant effects on axonal transport, lamina connective tissue stresses, and blood flow down the central retinal vein and its laminar tributaries. Further consideration of factors affecting retro-

laminar tissue pressure and laminar cribrosa connective tissue load bearing, as well as IOP, should enhance our understanding of mechanical factors acting in glaucoma and other optic neuropathies.

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Announcements

Notice of Intent

The Glaucoma Panel of the American Academy of Ophthalmology's Preferred Practice Patterns (PPPs) Committee is planning to revise its PPPs on primary open-angle glaucoma and primary angle-closure glaucoma. In addition, the PPP Committee is planning to revise its PPPs on comprehensive adult eye evaluation. PPPs identify characteristics and components of quality eye care and are based on the best available evidence-based scientific data. The PPPs are developed and revised by panels usually comprised of subspecialty and general ophthalmologists, a patient representative, a family physician, and a methodologist. PPPs are reviewed by and receive input from the Academy's education committees, practicing general ophthalmologists, the board of trustees, the council, and legal counsel, as well as national medical and subspecialty societies.

If you are interested in bringing to the attention of the panel pertinent, scientifically sound, and evidence-based reports, references, and articles (other than those readily available in the scientific literature), please forward this information to Becky Anderson, Quality and Clinical Care Department, American Academy of Ophthalmology, 655 Beach Street, San Francisco, CA 94109. The Academy requests receipt of any information by October 31, 1995, for timely consideration by the Panel.