onset of primary open-angle glaucoma. Arch Ophthalmol 2002;120:720–720; discussion 829–830.

Can Patients Guess Their Intraocular Pressure?

William C. Stewart, MD, Angi L. Jackson, and Jessica N. Jenkins

PURPOSE: To determine whether patients can guess their intraocular pressure (IOP).

DESIGN: Patient survey.

METHODS: We asked consecutive patients to guess their IOP and then indicate the IOP and the symptoms that allowed them to guess.

RESULTS: Of 132 patients, 22 (17%) believed they could guess their IOP, usually based on a periocular symptom (n = 20, 91%). Nine of these patients (45%) correctly identified whether they were below or above the pressure indicated by the symptom. In two patients who required no symptoms to guess and in nine whose IOP was above their symptom threshold, the mean difference of the guessed IOP from the actual IOP did not differ (± 3.3 mm Hg) from that of control patients (± 2.1 mm Hg, n = 50; r = .19).

CONCLUSIONS: Patients who believe they can guess their IOP appear as often inaccurate as accurate in assessing their IOP related to a symptom threshold and as accurate as patients who claim they cannot guess their IOP. (Am J Ophthalmol 2004;137:350–351. © 2004 by Elsevier Inc. All rights reserved.)

Accepted for publication July 15, 2003.

InternetAdvance publication at ajo.com July 16, 2003.

From the Pharmaceutical Research Network, LLC (W.C.S, J.N.J), Charleston, South Carolina, the Carolina Eye Institute (W.C.S.), University of South Carolina School of Medicine, Columbia, South Carolina, and the Charleston Research Company (A.L.J.), Charleston, South Carolina.

Inquiries to William C. Stewart, MD, Pharmaceutical Research Network, LLC, 1639 Tatum St, Charleston, SC 29412-2464; fax: (843) 762-7444; e-mail: prnc@bellsouth.net

GENERALLY, PATIENTS ARE NOT BELIEVED TO FEEL PAIN associated with intraocular pressure until the level is markedly elevated, as in acute angle closure.[1] Nonetheless, a physician may encounter patients who believe they can guess their intraocular pressure. Little is known, however, about a patient's ability to sense his or her own pressure level.

We asked consecutive glaucoma and ocular hypertensive patients if they thought they could guess their intraocular pressure level. For patients who believed they could guess their intraocular pressure, we also asked at what pressure level, and based on what symptoms, they could guess. We then requested these patients to guess their pressure just before their routine Goldmann applanation tonometer measurement. The first 50 patients, who said they could not guess their intraocular pressure, were asked to guess as well and served as a control group.

This study showed that 22 of 132 (17%) of queried patients stated they could guess their pressure. Twenty of the 22 patients (91%) stated they required symptoms to guess their intraocular pressure. The most frequent symptom stated to detect the intraocular pressure was pressure sensation behind the eye (n = 16).

Of these 20, 11 patients (55%) had pressures below the level they believed would cause symptoms. Accordingly, eight of these patients (73%) were not having

TABLE 1. Intraocular Pressure Results

Group	IOP Guess	IOP Actual	Mean Difference	Absolute Difference
	[mm Hg ± SD (n)]			
1	17.1 ± 2.1 (7)	15.9 ± 3.4 (8)	1.2 ± 3.4 (7)	±2.9 ± 1.7
2	22.3 ± 5.1 (8)	24.7 ± 8.3 (8)	−2.4 ± 4.9 (8)	±3.7 ± 3.9
3	18.5 ± 2.5 (3)	19.7 ± 3.7 (3)	−1.2 ± 1.5 (3)	±1.5 ± 1.0
4	16.5 (1)	19.5 (1)	−3 (1)	±3
5	20.5 ± 2.8 (2)	25.8 ± 12.3 (2)	1.8 ± 1.1 (2)	±1.8 ± 1.1
Control	18.2 ± 3.8 (50)	18.6 ± 4.1 (50)	−0.4 ± 3.0 (50)	±2.1 ± 2.2

IOP = intraocular pressure; SD = standard deviation.

Group 1: no symptoms, IOP below threshold level, unable to guess. Group 2: no symptoms, IOP above threshold level, should have been able to guess. Group 3: had symptoms, IOP below threshold level, unable to guess. Group 4: had symptoms, IOP above threshold level, able to guess. Group 5: no symptoms required to guess. Control group: first 50 patients who stated they could not guess accurately.

TABLE 2. Percent of Patients in Each Group Whose Guess Fell Within Various Levels of Pressure From the Actual

	Group 1 (n = 8)	Group 2 (n = 8)	Group 3 (n = 3)	Group 4 (n = 1)	Group 5 (n = 2)	Group Control (n = 0)
1 mm Hg or less	14.3%	25%	33.3%	0%	50%	52%
2 mm Hg or less	28.6%	37.5%	66.7%	0%	50%	64%
3 mm Hg or less	71.4%	75%	100%	100%	100%	78%
4 mm Hg or less	85.7%	87.5%	100%	100%	100%	82%

Group 1: no symptoms, IOP below threshold level, unable to guess. Group 2: no symptoms, IOP above threshold level, should have been able to guess. Group 3: had symptoms, IOP below threshold level, unable to guess. Group 4: had symptoms, IOP above threshold level, able to guess. Group 5: no symptoms required to guess. Control group: first 50 patients who stated they could not guess accurately.

symptoms indicating a high pressure. In contrast, in nine patients the pressure was above the level that they believed would cause their symptoms, and one of these patients (11%) was having symptoms. Consequently, nine of 20 patients (45%) who based their guess upon symptoms guessed correctly in regard to the presence or absence of elevated pressure. The average level, when indicated, of pressure that patients believed caused symptoms was 22.4 ± 6.0 mm Hg (n = 16). Table 1 shows the average difference from the actual pressures. The nine patients who had pressures above their symptom threshold should have been able to guess accurately (groups 2 and 4) and the two patients who stated they required no symptoms to guess (group 5), together (n = 11) demonstrated little mean absolute difference in mean intraocular pressure from the actual (± 3.3 mm Hg) vs the control group (± 2.1 mm Hg, n = 50; $r > .19$). Table 2 shows the percent of patients in each group whose guess fell within various levels of pressure from the actual.

In our study, slightly fewer than one fifth of patients believed they could guess their own intraocular pressure, mostly based on a pressure sensation around the eye. The patients' ability to guess whether their intraocular pressure was above or below a level thought to cause their symptoms, however, appeared only as good as random chance. This information may be valuable to physicians in educating patients who are concerned about symptoms they believe indicate a high pressure. In addition, it may help physicians to encourage patients to be compliant if they take their glaucoma medication only when they have symptoms.

REFERENCE

1. Stewart WC, Brindley GO, Shields MB. Cyclodestructive procedures. In: Ritch R, Shields MB, Krupin T, editors. The glaucomas, 2nd ed. St. Louis: CV Mosby, 1995:822.

Optical Coherence Tomography of Chronic Solar Retinopathy

Sunir J. Garg, MD, Adam Martidis, MD, Mark L. Nelson, and Arunan Sivalingam, MD

PURPOSE: To describe the optical coherence tomographic findings in eight eyes of four patients with chronic solar retinopathy. All patients had a history of sun gazing months to years prior to presentation.

DESIGN: Retrospective case series.

METHODS: Patients were examined using biomicroscopy performed by two or more experienced vitreoretinal specialists. All eight eyes had optical coherence tomography performed at the time of initial examination.

RESULTS: All patients had a history of sun gazing and decreased vision in both eyes. On biomicroscopy, all eyes had a small, irregularly-shaped lamellar defect in the foveal center. No posterior vitreous detachment was present in any eye. Optical coherence tomography revealed a hyporeflective space at the level of the outer neurosensory retina and retinal pigment epithelium in all eyes.

CONCLUSION: Optical coherence tomography demonstrates a characteristic hyporeflective space in the outer retina in patients with chronic solar retinopathy. These findings correlate with the histopathology of this condition and may be a useful clinical tool in confirming its

Accepted for publication July 17, 2003.

From the Retina Service of Wills Eye Hospital, Philadelphia, Pennsylvania.

Supported by the Eye Research Institute and the Retina Service of Wills Eye Hospital.

Inquiries to Sunir J. Garg, MD, Retina Service, Wills Eye Hospital, 840 Walnut St, Suite1020, Philadelphia PA 19107; fax (215) 825-2443; e-mail: sunirgarg@yahoo.com