$$I_D = I_0 \Gamma e^{-2\alpha z}$$

where Γ is the reflectivity of the target layer.[1] Assuming a retinal thickness change from z_1 to z_2, the intensity of the light reaching the OCT detector would be altered from $I_0 \Gamma e^{-2\alpha z1}$ to $I_0 \Gamma e^{-2\alpha z2}$, the ratio of which is constant ($e^{-\alpha(z2-z1)}$). As this ratio is independent of the target layer, its value would be the same in the ELM and EZ. Therefore, as the ganglion cell and nerve fiber layer thickness decreases, the intensity in the EZ and ELM would increase proportionally.

This modeling is based on the assumption that the wavelength of light that is reflected from the ELM and EZ is exactly the same. Also, we neglected the depth difference between the ELM and EZ. Obviously, the optical effects of the loss of the ganglion cell and nerve fiber layer on the intensity of the EZ should be investigated in future studies. However, we do not think that the findings would change the core message of our study.

We hope that our study will foster further and lively discussion on photoreceptor changes in glaucoma as well as continued evaluation of its clinical significance. We thank Mahroo and associates again for their thoughtful suggestions, and we do look forward to comparing the results obtained using different methods and references on EZ intensity analysis.

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CONFLICT OF INTEREST DISCLOSURES: SEE THE ORIGINAL article for any disclosures of the authors.

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Randomized, Controlled, Phase 2 Trial of Povidone-Iodine/ Dexamethasone Ophthalmic Suspension for Treatment of Adenoviral Conjunctivitis

EDITOR:

I HAVE READ THE MANUSCRIPT ENTITLED "RANDOMIZED, Controlled, Phase 2 Trial of Povidone-Iodine/ Dexamethasone Ophthalmic Suspension for Treatment of Adenoviral Conjunctivitis" by Pepose and associates, published in your journal.[1] The authors use a novel drug combination in the treatment of adenoviral conjunctivitis and they suggest that this combination is safe and effective clinically in humans. After reading the paper, I want to add a comment regarding exclusion criteria of the study. Hyperthyroiditis is a hormone and iodine metabolism disorder. Hyperthyroiditis patients should be limited as to consumption of and contact with iodine compounds for preventing aggravation or reactivation of the diseases. For that purpose the patients should use salt without iodine in foods, and health workers should use disinfectants without iodine components during any medical intervention or surgery. In the current study, a combination eye drop is used 4 times a day for 5 days that contains 0.6% iodine. Eye drops may be absorbed via the conjunctival and lacrimal system after instillation and may affect the patient systemically. For this reason, I believe that the exclusion criteria should include hyperthyroiditis disease in the study. Doctors who will use this combination in their patients' treatment for adenoviral conjunctivitis should ask the patients about hyperthyroiditis. Thank you very much.

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REPLY

WE WOULD LIKE TO THANK DR CINAL FOR HIS INTEREST IN our article and welcome the opportunity to respond to the points made in his letter.

In our study,[1] patients with hyperthyroidism were not excluded as the risk of systemic exposure to iodine following topical ophthalmic administration of povidone-iodine (PVP-I) 0.6%/dexamethasone 0.1% is expected to be minimal. We should note that the formulation used in our study contained 0.6% PVP-I and not 0.6% iodine as stated by Dr Cinal. Most of the iodine in PVP-I is complexed with the povidone carrier, whereas a small amount of free iodine is released in equilibrium with the complex.[2]

Two studies have evaluated the exposure to iodine after single topical ocular administration of PVP-I in adult patients being prepared for cataract surgery.[3,4] In a study in which the ocular surface of 19 cataract patients was

exposed to 4 mL of 1.25% PVP-I for 2 minutes, there was no significant difference in detectable iodide in the aqueous humor (median: 24.0 μg/dL) compared with control samples (median: 28.9 μg/dL) from 8 patients.[3] A second study in 241 cataract patients measured urinary iodine excretion after exposure to conjunctival and/or periorbital PVP-I at 1.25% and 10% concentrations compared with an iodine-free antiseptic.[4] In this study, there was no significant increase in urinary iodine excretion after 24 hours and 48 hours in patients exposed to conjunctival or periorbital PVP-I at the 1.25% concentration or in the control group at both time points. However, in patients exposed to conjunctival 10% PVP-I, a statistically significant increase in urinary iodine excretion was demonstrated after 24 hours but not at the 48 hour time point.[4]

In a third study, conducted in 69 healthy term newborns who received 1.25% PVP-I eye drops, urinary iodine excretion and thyroid-stimulating hormone levels were within physiological levels.[5]

The results from these studies suggest that the risk of systemic exposure to iodine is low with ophthalmic PVP-I concentrations below 1.25%.

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