On the other hand, the authors use CH and CRF to evaluate the corneal biomechanical properties in both groups. Again, the presumable enrollment of pregnant women at different gestational stages may have severely influenced the results, masking the true impact of late-stage pregnancy on corneal biomechanics. Moreover, it is well known that CH and CRF are descriptive metrics that reflect a rough estimation of high-magnitude biomechanical changes, but they cannot depict more subtle biomechanical variations. In our opinion, sophisticated dynamic bidirectional applanation device signal analysis by evaluating fundamental dynamic bidirectional applanation device-derived parameters, which are more sensitive to small-scale biomechanical changes, is the key to unraveling the complex corneal biomechanical alterations during pregnancy.

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Reply: As we reported, our observations showed that pregnancy is associated with changes in corneal curvature and IOP. We did not observe statistically significant changes in corneal biomechanics as assessed by a dynamic bidirectional applanation device and presented by CH and CRF. Similar observations were recently reported by others.

In a previous study, we followed a cohort of young healthy women through their menstrual cycle. We reported that hormonal changes that occurred during menstrual cycles are associated with statistically significant changes in corneal biomechanical parameters and corneal thickness. Ideally, similar methodology should be used for the studies evaluating changes occurring through human pregnancy. Following 1 large cohort from conception through all stages of pregnancy and after delivery would undoubtedly provide us with the best scientific results. Unfortunately, in practice, such a project is difficult to accomplish. That is why we compared 2 different groups, pregnant and nonpregnant, and assumed that observed differences in the studied parameters originated from being or not being pregnant. As we reported in our study, most of the pregnant women were in their third trimester with a mean gestational age of 31.2 weeks. Therefore, our conclusions regarding an association between pregnancy and ocular changes can be interpreted as associated with the third trimester of pregnancy.

We used the CH and the CRF as parameters characterizing corneal biomechanical properties as they are presented in the data output of the dynamic bidirectional applanation device. No additional manipulations with the device-derived signals were performed as this was not the primary aim of our study and because their scientific validity and relationship to corneal elasticity and rigidity are not yet understood.

—Yakov Goldich, MD

REFERENCES

Supplementary attachable IOL as a viable optical alternative to the light-adjustable IOL

This letter is in response to a recent review of adjustable intraocular lens (IOL) power technology. While the light-adjustable IOL technology may be beneficial in many cases with an undesirable refractive outcome, it raises some unanswered questions.