

Author Response: In Vivo Goblet Cell Density as a Potential Indicator of Glaucoma Filtration Surgery Outcome

We appreciate the valuable comments of Huang and Zhang¹ about our recent article entitled “In Vivo Goblet Cell Density as a Potential Indicator of Glaucoma Filtration Surgery Outcome.” Based on the results of a previous study,² which found a significant negative correlation between goblet cell density (GCD) and age, Huang and Zhang¹ questioned the role of GCs in the bleb filtration ability, given that the success rate of surgery is known to be higher in older than in younger patients.³ Though a reduction of the GCD during aging is hypothesizable because of the physiological tissue involution, this is still a debated and unsolved topic. In fact, Zhu et al.⁴ reported similar GCD in differently aged healthy subjects (9.9–79.1 years). Given the increasing rates of conjunctival microcysts (interpreted as degenerating GCs) found in older subjects, the authors proposed that the cellular dysfunction, rather the reduction of GCs, seems the main modification involving this cell population during aging. Surprisingly, in a different study Villani et al.⁵ found that GCD was significantly greater in healthy older subjects than in the younger subjects. These conflicting results could depend on the high interindividual variability in the number of GCs.²

After performing a Spearman correlation analysis between GCD and age in the entire sample of patients at baseline, we did not find a significant correlation between these two variables ($Rho = 0.044$; $P = ns$). Based on this evidence it seems that older glaucomatous subjects may preserve a significant number of GCs, favorably affecting the surgical outcome.

Nevertheless, we agree with you that several other factors may affect surgical outcome aside from GCD. However, this was beyond the scope of this study that was designed to evaluate

the role GCD plays in the filtration ability of the bleb. What the reader asks is very interesting and, given the potential importance the argument we think that this topic merits a specifically designed study.

We thank you for this opportunity to deepen our discussion for our study.

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