Descemet stripping automated endothelial keratoplasty using corneas from elderly donors

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Dear Editor,

We read with interest the recent paper by Nakatani et al. [1] evaluating the outcomes of Descemet stripping automated endothelial keratoplasty (DSAEK) using corneas from elderly donors. While the study is indeed interesting, there are certain points we wish to highlight. First, according to the study, the rate of endothelial cell loss at 2 years after surgery was similar regardless of donor age (≥ 80 vs. ≤ 79 years). Donor age and diabetic status have been identified as factors affecting corneal endothelial cell count. With every year increase in age (after adjusting for diabetic status), the cell count decreases by 6.4 cells [95 % confidence interval (CI), -8.3 to -4.5]; likewise, in those with diabetes (after adjusting for age), the cell count is lower by 66 cells (95 % CI, 6.3 – 125.9) compared with controls [2]. However, there is no significant difference in the endothelial count between groups in the present study; we believe that corneas from donors ≥ 80 years over a longer period of follow-up might eventually have a poorer endothelial cell count. Moreover, we wonder whether the authors took into consideration the presence or absence of diabetes mellitus in the two groups, since a higher prevalence of diabetes in group 2 could have reduced the endothelial count despite having included younger donors. Second, cigarette smoking reduces endothelial cell count [3]. Smoking history should also have been considered in comparing the endothelial counts between groups. Moreover, advanced nuclear cataract and chronic pulmonary

disease are significant risk factors for reduced endothelial density. Although the mechanisms are unknown, patients with these risk factors may have a poor endothelial reserve [4]. The authors should therefore rule out all the aforementioned factors before analyzing the results.

Compliance with ethical standards

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Conflict of interest All authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements) or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

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