

# A reasonable option in vitrectomized eyes: manual small incision cataract surgery

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Dear Sir,

It is known that cataract surgery is challenging in vitrectomized eyes. Cataract surgeons may have encountered with posterior capsular complications and nucleus drop events even with minimal ocular manipulations and low irrigation bottle height. Inadvertent damage to the zonular fibers, posterior or peripheral lens capsule with ocutome or microvitrectomy (MVR) blade in previous surgery(es) are possible causes for those complications and in vast majority of cases, the surgeon is not aware of those situations before the cataract surgery. In this paper, we aimed to notice that issue and to share our experience with manual small incision cataract surgery (MSICS) in vitrectomized eyes. In case of lack of vitreous tamponade, anterior chamber deepens too much and iridolenticular diaphragm shows significant fluctuation which compromises the capsular integration and may facilitate the rupture of posterior capsule or zonular fibers causing nucleus drop events during phacoemulsification. In the literature, some articles reported no nucleus drop cases in their phacoemulsification series on vitrectomized eyes (no any nucleus drop case in totally 320 phacoemulsification surgeries) [1-3]. Only, Biro and Kovacs [4] reported 3 nucleus drop cases in 41 phacoemulsification surgeries. But, our personal communications with other colleagues having an experience about the phacoemulsification on vitrectomized eyes have been showing that some cataract surgeons have encountered with nucleus drop complications during phacoemulsification on vitrectomized eyes, as we have. We have just experienced 7 nucleus drop cases at different times during our phacoemulsification surgeries on vitrectomized eyes (3 cases at hydrodissection and 4 cases just at the beginning of the phacoemulsification).

Manual small incision cataract surgery offers self sealing incision advantages and avoids the disadvantages of higher pressure of balanced salt solution. The surgeon does not encounter with too deep anterior chamber during MSICS. Phacoemulsification and MSICS techniques differ from each other mainly at nucleus removal. In MSICS, the maneuvers using for nucleus removal do not forced and compromised the capsulolenticular integrity as in phacoemulsification. The nucleus is just delivered to the anterior chamber and then extracted from the eye using sandwich or phacotri-section techniques [5-6]. Although soft cataracts may not be easily removed with MSICS, removing a hard cataract is not a big issue with this technique in vitrectomized eyes.

Though we actually intended to conduct a study comparing the capsular complications and/or nucleus drop between phacoemulsification and MSICS techniques in vitrectomized eyes, we could not performed it yet because that type of study would be much time requiring. On the other hand, since the vast majority of the ophthalmic surgeons do not use MSICS, we thought that it was not logical to conduct a survey study asking the phacoemulsification and MSICS surgeons to report their nucleus drop rate.

In a case of nucleus drop, nuclear fragments or whole nucleus itself are more troublemaker than cortical material. In our hands, MSICS warrants the safety of nucleus extraction in vitrectomized eyes reducing the possibility of nucleus drop, and, we believe that it is a reasonable choice of cataract surgery in vitrectomized eyes.

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