

A Multicenter Retrospective Study on Gamma-irradiated Sterile Cornea for Glaucoma Drainage Device Surgery

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Purpose: To evaluate the safety and efficacy of a new gamma-irradiated sterile cornea (GISC) as a graft in glaucoma drainage device (GDD) surgery.

Methods: A multicenter retrospective study of 319 eyes (295 patients) between April 2009 and October 2012 was conducted. The primary outcome was graft-related tube erosion/exposure (GRTE).

Results: The mean follow-up was 15.8 ± 10.0 (SD) months. There were 8 (2.5%) out of 319 eyes experienced GRTE with a median time of 13.3 ± 7.2 (SD) months after surgery. All eyes tolerated the GISC graft well with no clinical evidence of graft-related infection and inflammation. All GISC grafts stayed transparent during the follow-up.

Conclusion: GISC appears to be an effective and safe alternative in GDD surgery. It offers ease of availability and sterility advantages, as well as improved cosmesis because of its clarity.

Précis

The current multicenter retrospective analysis presents data evaluating the efficacy of gamma-irradiated sterile corneal tissue as a patch graft in glaucoma drainage device surgery. Eight out of 319 eyes (2.5%) experienced graft-related tube erosion/exposure with a median time of 13.3 months after surgery. There were no graft-related infection or inflammation episodes during a median follow up of 15.8 months.

Background Statement

Transparent gamma-irradiated sterile cornea, offering high tensile strength and rigidity, has recently become available for glaucoma shunt coverage. The current study assesses some outcomes of use of this novel graft in GDD surgery.