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Abstract Information

Abstract Title:

Surgical Outcome of Nonpenetrating Deep Sclerectomy with Mitomycin C in Primary Open-angle Glaucoma in Japanese Patients

Purpose:

To evaluate the efficacy and safety of nonpenetrating deep sclerectomy with mitomycin-C (MMC) in primary open-angle glaucoma (POAG).

Design:

Retrospective cohort analysis

Participants:

Sixty patients(60 eyes) with POAG who underwent nonpenetrating deep sclerectomy with MMC as an initial surgery during 1998-2000

Main Outcome Measures:

Evaluate the complications shortly after surgery and maneuvers needed to maintain the lower IOP during follow-up. Evaluate the long-term IOP control rate by a life-table method.

Methods:

YAG laser goniopuncture was performed to maintain a lower IOP when IOP exceeded 15mmHg, and laser iridoplasty or synechiolysis was performed to release the peripheral anterior synechia (PAS) at the surgical site.

Results:

The average follow-up period was 58 months. There were no complications shortly after surgery except for one case with choroidal detachment. During the follow-up, 87% of cases needed maneuvers (YAG laser goniopuncture, needling revision and/or laser iridoplasty or synechiolysis) to maintain the lower IOP. After goniopuncture in 50 eyes, 22 eyes needed needling revision to obtain the lower IOP. PAS formed at the surgical site in 22 eyes after goniopuncture or needling

revision and IOP elevated in 14 of these eyes. In 7 of the 14 eyes IOP control was obtained after iridoplasty or synechiolysis to release the PAS. The successful (IOP<18 or 15mmHg without antiglaucoma medication) rates were calculated as 51% or 41% at 60 months by a life-table method. Mean IOP in successful cases (IOP<18mmHg) was kept at 12mmHg during the follow-up.

Conclusion:

Even though the nonpenetrating deep sclerectomy with MMC may provide sufficient IOP reduction with fewer complications in the management of primary open-angle glaucoma, meticulous care and complicated interventions after surgery would be required.