INTRODUCTION

Juvenile glaucoma is challenging to control and surgical approaches have been limited to aqueous shunts with a variable success rate associated with high rates of failure. This case report proposes an alternative approach utilizing canaloplasty.

What is canaloplasty?
Canaloplasty is a procedure whereby a scleral dissection is used to cut down to the Canal of Schlemm.

The catheter serves as an introducer for a prolene suture that is attached to the tip and is withdrawn back through the Canal. The suture is then cut from the catheter and tightened over a 500 micron size Descemet's window.

Contraindicated in:
- Narrow, occludable angles without a peripheral iridotomy
- Neovascular glaucoma (vessels in the canal preclude passage of catheter)

Retropective review of a 13yr old male with juvenile glaucoma.
Patient intolerant of maximal medical therapy.

Pre-operative base-line testing included visual acuity, visual fields, OCT, Cirrus anterior segment imaging, gonioscopy and fundus photography. The patient underwent bilateral sequential canaloplasty with retentive stent with subsequent follow-up greater than 22 months.

CASE PRESENTATION

20/20 OU
TA: OD 28mmHg & OS 50 mmHg
Goldmann VF(GVF): OD superior & inferior Bjerrum scotomas; OS profound constriction
Cupping 0.7 and 0.9

OD OS

OCT—Cirrus Pre-Op
Fundus Pre-Op
HRT immediately Post-Op

Patient Results pre-op & post-op:
Presentation
20/20 OU
TA: OD 28mmHg & OS 50 mmHg
Goldmann VF(GVF): OD superior & inferior Bjerrum scotomas; OS profound constriction
Cupping: 0.7 and 0.9
Medications: Latanoprost, Cosopt, Alphagan-P

Post-op appearance Day 1
20/15 OU
TA 14mmHg OU
GVF full OD; OS improved with inferior altitudinal constriction
Cupping: 0.6 and 0.8
Medications: none

Humphrey Visual Fields Post-Op
Goldmann Visual fields

OD OS

Pre-Op 6 months Post Op 20 months Post Op

UBM Imaging
Pentacam Images Pre-Op

Fltral Anterior Segment Post-Op
RFNL and ONH Post-Op
Anterior Segment Imaging Post-Op

References


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