



Lower lid elevation with tarsal spacer for lower eyelid retraction in Graves Disease

Prof. Michael P. Schittkowski, MD, FEBO

University Medicine Goettingen, Department of Ophthalmology
Section for Strabismus, Neuroophthalmology and Oculoplastic Surgery



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Background - lower lid retraction



- is of less functional concern than optic neuropathy or diplopia
- can lead to corneal exposure
- symptoms: dryness, burning, foreign body sensation, blurred vision
- aesthetic impairment

Method



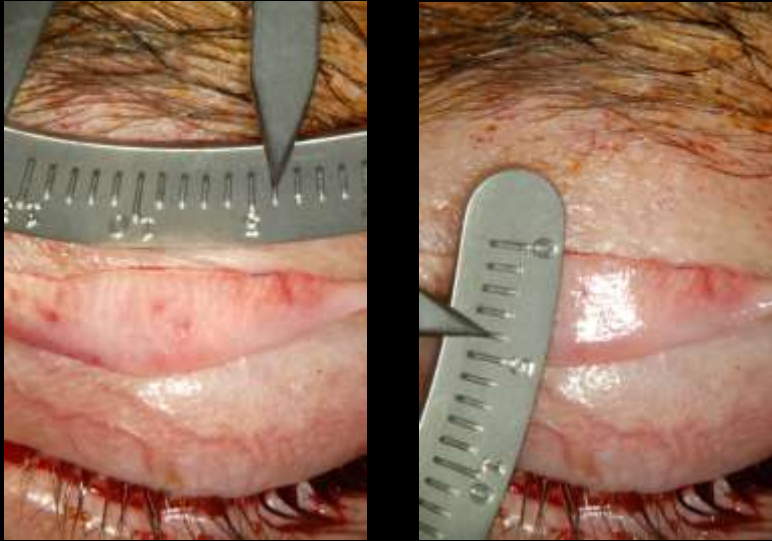
upper lid everted, incision max. 4mm above inferior border of the tarsus

Method



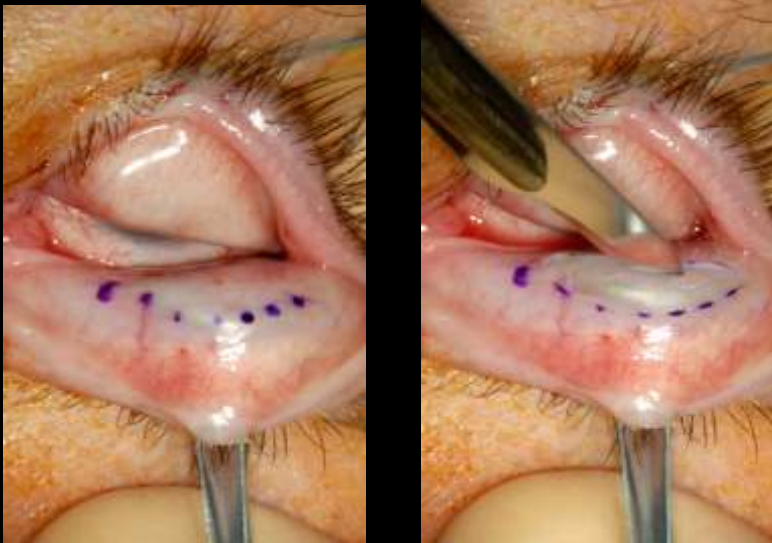
incision with no. 15 blade, completed and dissected with scissors

Method



elliptical graft complete tarsal width, height up to 5 mm

Method



lower lid everted, incision below inferior border of the tarsus

Method



conjunctiva dissected, then lower lid retractors disinserted

Method



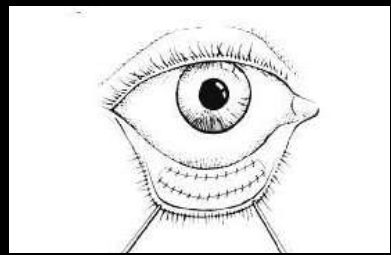
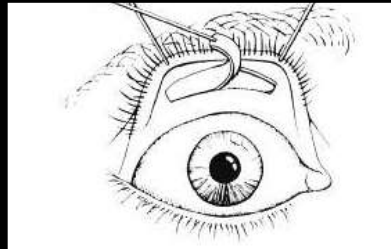
retractors recessed, preparation until skin is seen

Method



transplant sutured between tarsus and conjunctiva / lower lid retractors

Method



completed suture (7x0 Vicryl running stitch)

Method



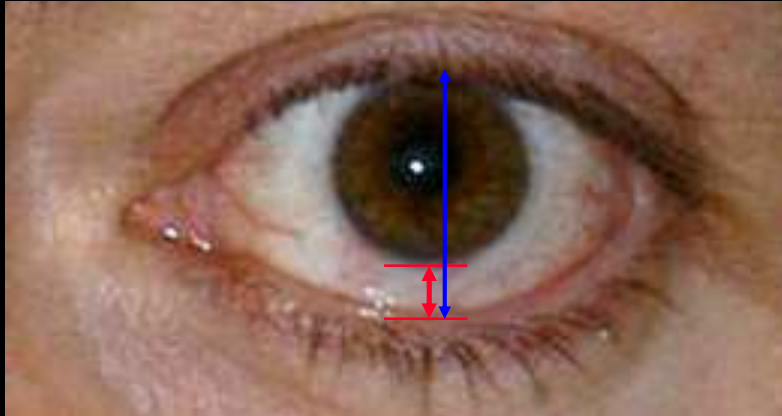
- Frost suture for postoperative lower lid elevation (removed next day)
- 1 - 2 mm overcorrection is aspired for the first days

Patients - example



- 43 year old patient, after bilateral bony decompression for proptosis reduction, after bilateral inferior rectus recession
- 12 months after bilateral lower lid enhancement (spacer tarsus)

Patients



measurements:

- inferior scleral show
(distance from lid margin to the lower limbus)
- lid fissure width

Patients

- 12 patients with Grave's disease (8 female, 4 male)
- 16 eyes (8 unilateral, 4 bilateral)
- age 23 - 67 years (mean 50 years)
- 7 have had lateral decompression 2 - 18 (mean 10) months ago
- 5 under local and 7 under general anaesthesia (GA)
- GA mostly if bilateral or combined with levator recession
- if bilateral always operated in one session
- combined with:
 - lateral tarsal strip: 1
 - ipsilateral levator lengthening: 3

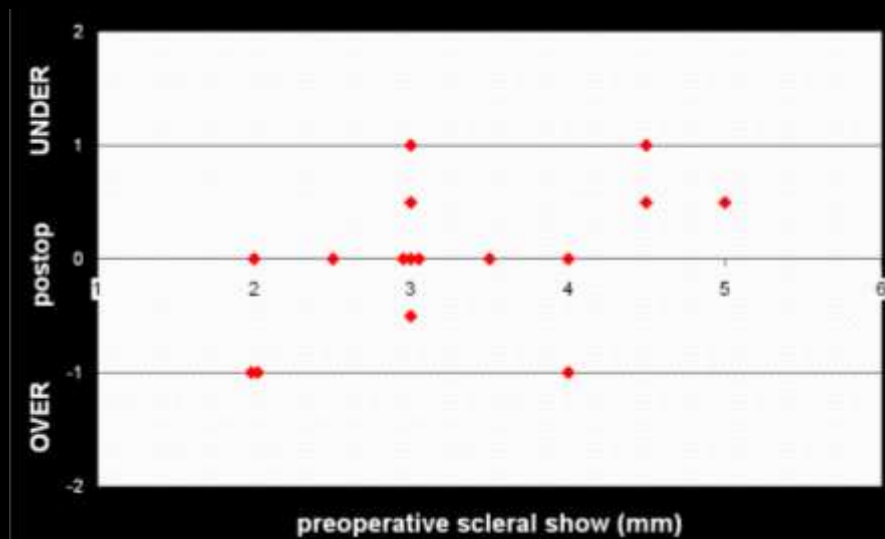
Results

- 12 patients with Grave's disease (8 female, 4 male)
- 8 unilateral, 4 bilateral (16 eyes)
- follow up: 1 - 23 (Ø 7) months

	preoperative	postoperative (≥ 3 m.)
• lid fissure	10 - 16 (Ø 13) mm	7 - 13 (Ø 10) mm
• scleral show	2 - 5 (Ø 3.3) mm	-1 - 1 (Ø 0) mm
• lid closure deficit	0 - 3 (Ø 1) mm	0 - 1 (Ø 0.1) mm
• asymmetry		-1 - 1 (Ø 0) mm

Schittkowski MP, Fichter N, Guthoff RF. Autogenous tarsus transplant as spacer for treatment of lower lid retraction in Grave's disease. Klin Monbl Augenheilkd. 2008 Aug;225(8):708-12.

Results (≥ 3 months postoperative)



(1 patient needed secondary surgery in 1 eye due to 2mm undercorrection)

Schittkowski MP, Fichter N, Guthoff RF. Autogenous tarsus transplant as spacer for treatment of lower lid retraction in Grave's disease. Klin Monbl Augenheilkd. 2008 Aug;225(8):708-12.

Patients - example



- 65 year old patient, after left side bony decompression for proptosis reduction, after unilateral inferior rectus recession



- 6 months after bilateral lower lid enhancement (spacer tarsus)

Patients - example

to camouflage proptosis if orbital decompression is declined ?



→ decompression is the better option! (vector not adressed!)

Conclusions

- no allogen or alloplastic spacer (avoiding slow virus infection/ extrusion)
- simple and quick procedure, conjunctiva comes with the transplant
- so far good long term stability (no spacer shrinkage) → long term study needed
- no complications (e.g. cornea, wound healing, foreign body sensation) – only 1 displacement of the transplant → easily corrected
- up to 4 - 5 mm scleral show can be corrected
- effect dosage dependent ? → so far not (possible mechanism: tarsal implant is a spacer only, it does not push the lower lid up, gravity might become stronger than the elevating effect)
- functional and aesthetical satisfying results

Thank You for Your kind attention!



Technique described before

- Sislec (Arch Ophthalmol 1982): Fasanella-Servat with transplantation of the excised specimen into lower lid to correct upper lid ptosis and lower lid retraction
- Stephenson and Brown (Oph Plast Reconstr Surg 1985): similar technique

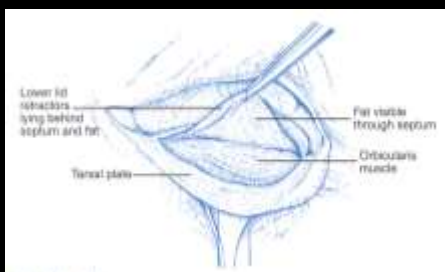
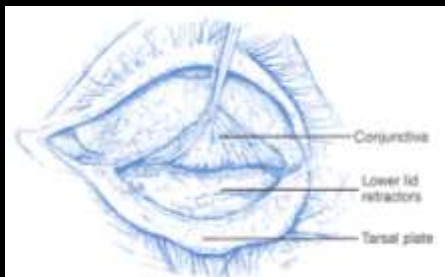
- Gardner, Kenerdell, Buerger (1992)
- 55 procedures in 38 patients

- upper lid donor side heals with fibrous tissue covered with conjunctiva
- no upper lid retraction induced
- lower lid implant heals within 2 weeks
- implant does not shrink

- effect was not depending from tranplant size !
(up to 5mm tarsus, never more than 2mm effect)



Method



Collin JRO, Lidsurgery

