

Glaucoma post intervento di cataratta congenita

Marco Mazza

S.C. Oculistica Pediatrica

Ospedale Niguarda Cà granda Milano

Direttore E. Piozzi

The Infant Aphakia Treatment Study: Design and Clinical Measures at Enrollment

The Infant Aphakia Treatment Study Group*

Abstract

Objective—To compare contact lenses and intraocular lenses (IOLs) for the optical correction of unilateral aphakia during infancy.

Methods—In a randomized, multicenter (12 sites) clinical trial, 114 infants with a unilateral congenital cataract were assigned to undergo cataract surgery either with or without IOL implantation. Children randomized to IOL treatment had their residual refractive error corrected with spectacles. Children randomized to no IOL had their aphakia treated with a contact lens

Main Outcome Measures—Grating acuity at 12 months of age and HOTV visual acuity at 4.5 years of age

Results—Enrollment began in December 2004 and was completed in January 2009. The median age at the time of cataract surgery was 1.8 months. Fifty patients were 4–6 weeks of age at the time of enrollment, 32 patients were between 49 days and 3 months of age and the remaining 32 children were 3 to 7 months of age. Fifty-seven children were randomized to each treatment group with either IOL placement or aphakia. The eyes with cataracts had shorter axial lengths and steeper corneas on average than the fellow eyes.

Conclusions—The optimal optical treatment of aphakia in infants is unknown. IATS was designed to provide empirical evidence whether optical treatment with an IOL or a contact lens following unilateral cataract surgery during infancy is associated with a better visual outcome.

Glaucoma-related adverse events in the first five years after unilateral cataract removal in the Infant Aphakia Treatment Study

Sharon F. Freedman, MD¹, Michael J. Lynn, MS², Allen D. Beck, MD³, Erick D. Bothun, MD⁴, Faruk H. Orge, MD⁵, Scott R. Lambert, MD³, and for The Infant Aphakia Treatment Study Group*

Results—Product limit estimates of the risk of glaucoma and glaucoma+glaucoma suspect at 4.8 years after surgery were 17% (95%CI=11%–25%) and 31% (95%CI=24%–41%), respectively. The CL and IOL groups were not significantly different for either outcome: glaucoma (hazard ratio(HR)=0.8[95%CI=0.3–2.0], $p=0.62$); glaucoma+glaucoma suspect: (HR=1.3[95%CI=0.6–2.5], $p=0.58$). Younger (versus older) age at surgery conferred increased risk of glaucoma (26% versus 9%, respectively at 4.8 years after surgery (HR=3.2[95%CI=1.2–8.3]), and smaller (versus larger) corneal diameter showed increased risk for glaucoma+glaucoma suspect (HR=2.5[95%CI=1.3–5.0]). Age and corneal diameter were significantly positively correlated. Glaucoma was predominantly open angle (19/20 cases, 95%), most eyes received medication (19/20, 95%), and 8/20 (40%) eyes had surgery.

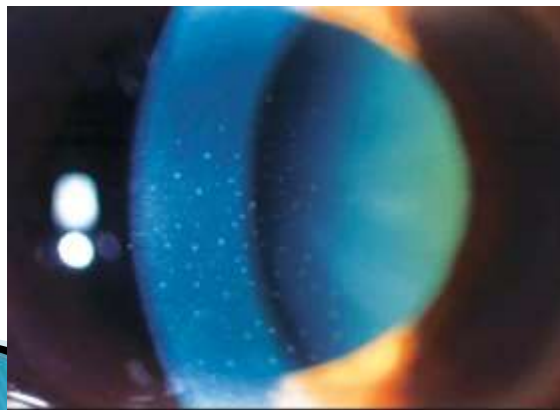
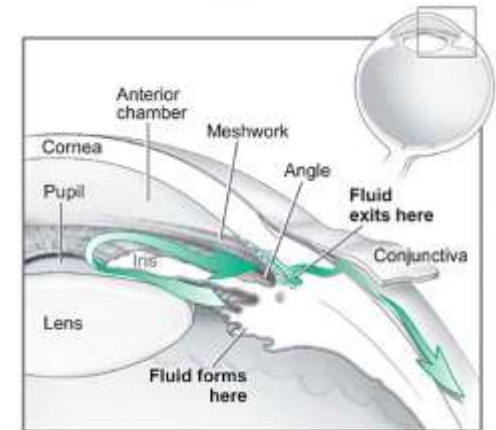
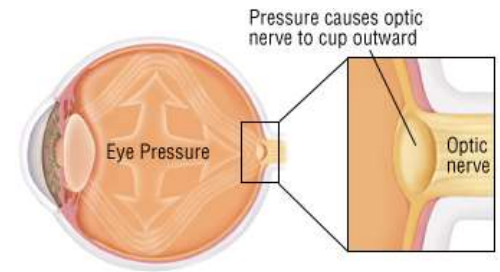
Conclusions and Relevance—These results suggest that glaucoma-related adverse events are common and increase between one and five years in infants after unilateral cataract removal at 1–6 months of age; primary IOL placement does not mitigate their risk, but surgery at a younger age increases the risk. Longer follow-up of these children may further characterize risk factors, long-term outcomes, potential differences between eyes having primary IOL vs. aphakia, and optimal timing of unilateral congenital cataract removal.

Glaucoma post intervento

Glaucoma

Teoria chimica:

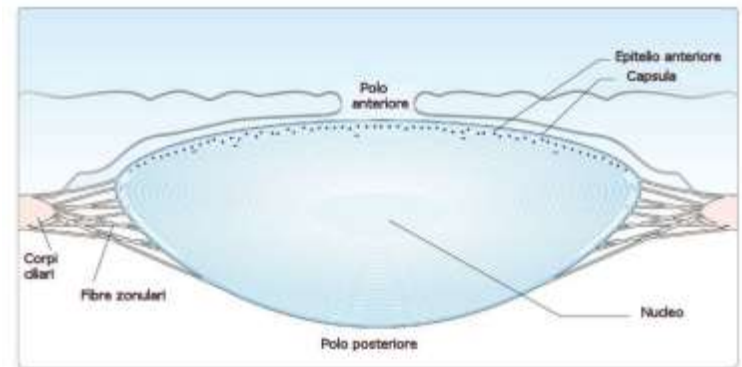
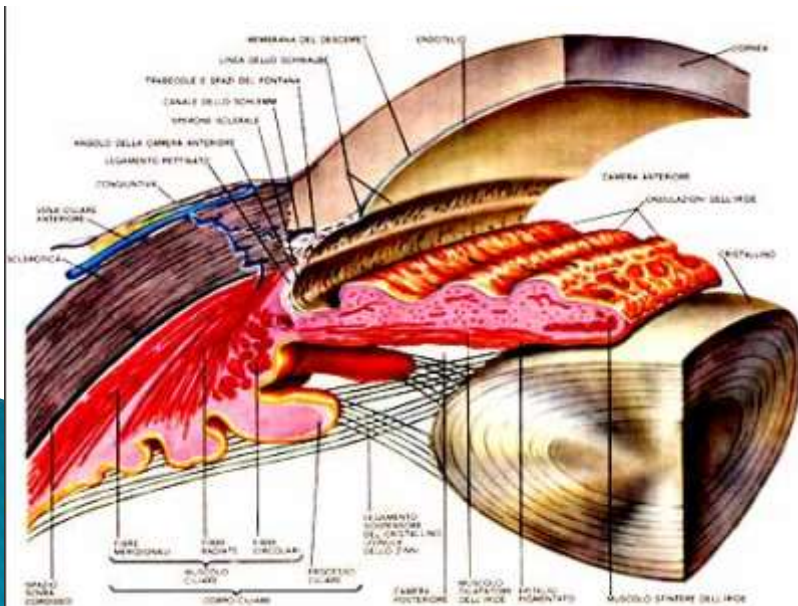
- ▶ Infiammazione
- ▶ Fattori derivanti dal vitreo



Glaucoma post intervento

Teoria meccanica:

- ▶ Alterazione dei corpi ciliari
- ▶ Alterazione del trabecolato
- ▶ Mancanza di supporto da parte del cristallino
- ▶ Fattori predisponenti



Glaucoma post intervento

Come fare diagnosi?

Tonometria:

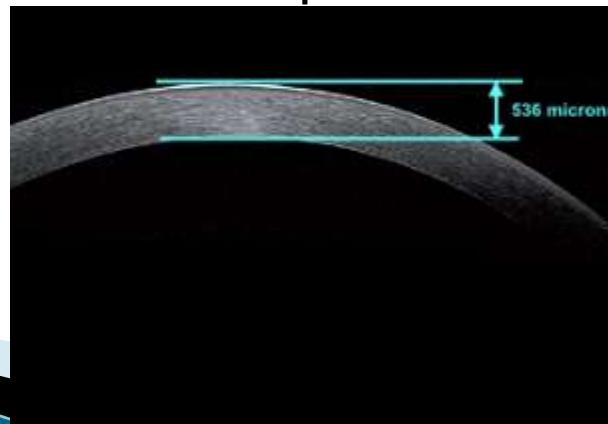
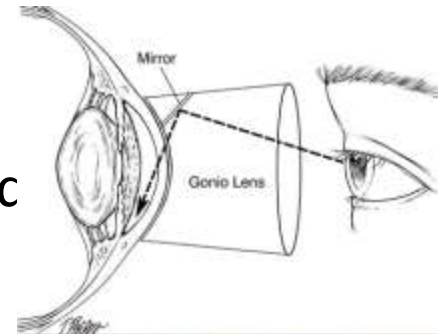
- ▶ preferibilmente ad applanatio da effettuare per anni
- ▶ gli altri metodi tendono a sovrastimare (iCare , Perkins, Tonopen)

Pachimetria:

- ▶ ruolo incerto, in atto non è standardizzata per le cornee dei bambini

Gonioscopia

- ▶ in alcuni casi per impostare terapia secondo il tipo c



Glaucoma post intervento

Come fare diagnosi?

Studio della papilla ottica

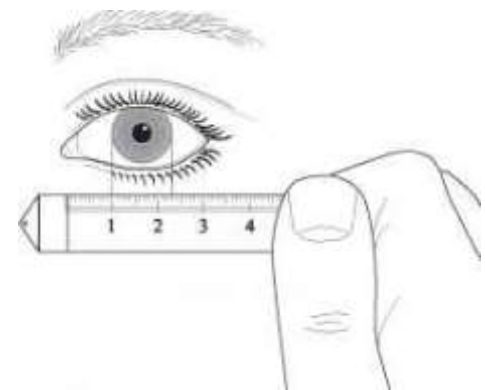
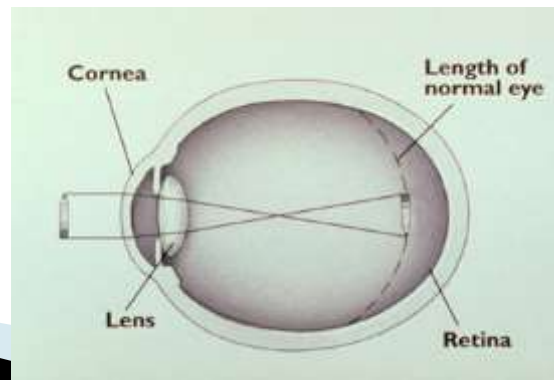
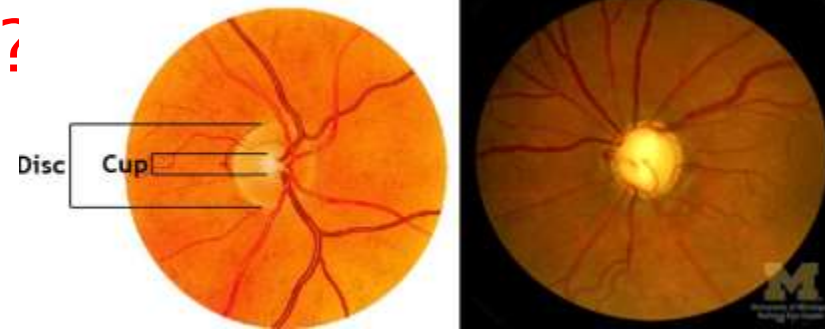
- ▶ cupping spesso reversibile

Misurazione del diametro corneale:

- ▶ fino a 3 anni di età può avere modificazioni dipendenti dalla IOP

Allungamento del bulbo o un rapido shift miopico

- ▶ fino a 10 anni



Glaucoma post intervento

- ▶ Alcuni casi sono refrattari ai trattamenti
- ▶ Non c'è un trattamento standard:
la terapia va impostata da caso a caso

Trattamento medico: 50% di risposta

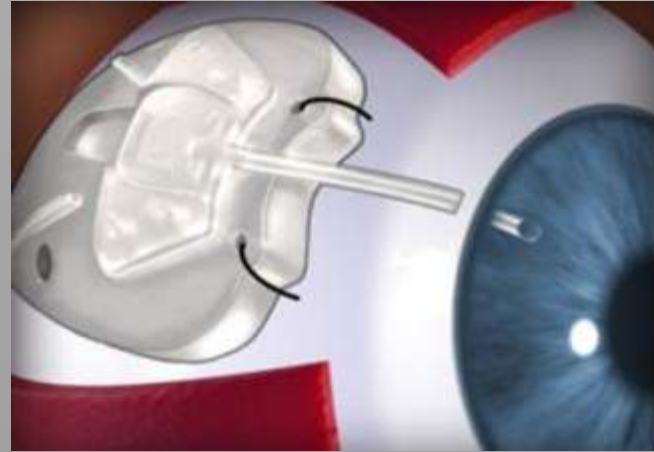
- Beta-bloccanti e Prostaglandine sono la prima scelta terapeutica

Chirurgia filtrante con MMC o senza

- Può rendere difficile l'utilizzo di LAC

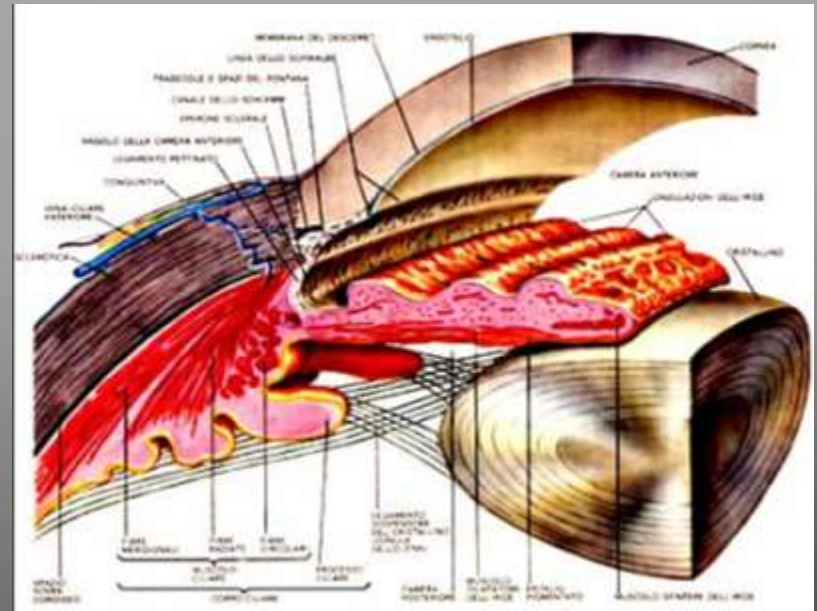
The Safety and Efficacy of Glaucoma Medication in the Pediatric Population

- gli impianti di Molteno, Baerveldt, e Ahmed sono oggi comunemente utilizzati nei bambini soprattutto nel glaucoma in afachico



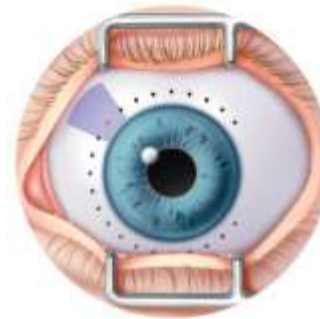
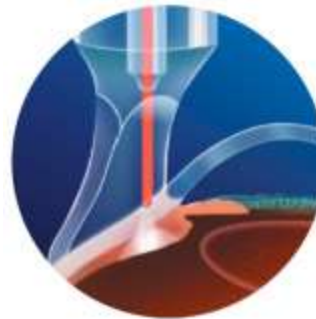
Procedure Ciclodistruttive

- ▶ ablazione del corpo ciliare con conseguente riduzione della produzione acquosa
- ▶ sono riservate ai casi dove hanno fallito multiple e più conservative procedure

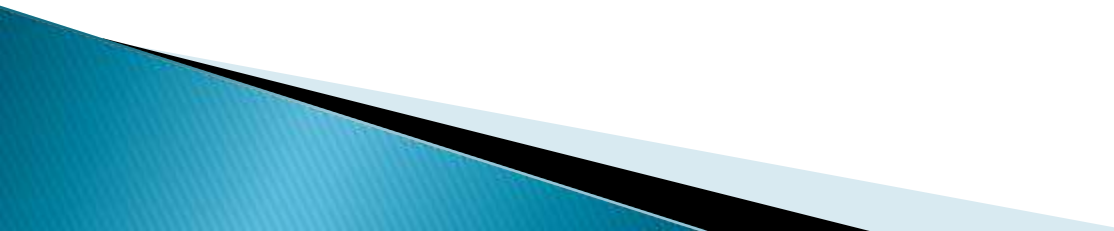


ciclofotocoagulazione laser transclerale

- ▶ difficile effettuare una localizzazione accurata del corpo ciliare in occhi con caratteristiche anatomiche anomale
- ▶ è fondamentale la Transilluminazione con sonda in fibra ottica
- ▶ Un nuovo innalzamento della pressione intraoculare è frequente



Take Home Messages

- ▶ Problematica che arriva ad interessare quasi il 30% degli occhi operati
 - ▶ Può insorgere a distanza dall'intervento
 - ▶ Monitoraggio pressorio periodico (narcosi)
 - ▶ Terapia medica\chirurgica\associata
 - ▶ Possibili forme refrattarie alle terapie
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Grazie per l'attenzione