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IOL in children: When, what, how and who?

Roundtable by the senior delegates

Dr Wagih ACLIMANDOS (London, Great Britain), Dr Pascal DUREAU (Paris, France), Dr Michele FORTUNATO (Roma, Italy), Dr Wolf LAGREZE (Freiburg, Germany), Dr Empar SANZ. (Manises, Spain)

Epidemiology

How many cases in each European country?

Probably about 3/10000 births, meaning some hundreds/country each year

Paediatric counselling

Metabolic or molecular-genetic screening?

If bilateral: metabolic screening (galactosemia, ...). Importance of clinical paediatric examination. Molecular genetics (NGS...) in some groups (UK).

Screening techniques for early identification of patients

Role of Brückner Test

Widely used by paediatricians, or ophthalmologists (Italy). Photoscreeners for the future?

Timing of surgery

Rather amblyopia or glaucoma?

Consensus to postpone surgery after the first month of life, thus reducing the risk of glaucoma. The visual results seem to be the same for surgery delayed after two months (Germany).

Surgical techniques

• Corneal or scleral (i.e. 23G) incision?

Clear corneal incision and pars plana approach for posterior capsule opening and anterior vitrectomy. Or full corneal approach (France).

IOLs after which age (IATS, PEDIG data)?

IOL after 1-2 years in most countries, meaning secondary IOL in some cases. Primary implantation whenever possible (France).

What type of IOL?

3 pieces or monobloc hydrophobic acrylic IOLs

Bilateral simultaneous surgery safe?

Bilateral surgery when anaesthesia is difficult.

Contact lenses for aphakia

• Silicone vs. rigid gas permeable

Rather silicone

Secondary IOLs

• When to implant

Only when necessary since surgery can be difficult

Technique

Sulcus implantation if sufficient capsular support remaining. Iris claw, iris- or scleral- sutured IOLs

Type of IOL

For sulcus 3 pieces or monobloc hydrophobic acrylic IOLs

Amblyopia therapy and predictors of visual outcomes

• Patching regimens

6 hours or half of awake time. 2 hours (Germany)

When to stop patching

Not before 8 years

Managing complications

Visual axis opacities

23 G pars plana vitrectomy

Glaucoma

Combination of trabeculotomy, trabeculectomy, valves, cyclodestruction

About the Nature paper by Lin et al on Lens regeneration after emptying the lens through a 1 mm capsulorhexis, the participants approve the following comments by W Lagrèze:

- They report only data from 12 children with only 6 months follow-up.
- The reported functional outcomes are rather bad: 0,11 Snellen acuity by Teller acuity, which is not what we all are aiming at.
- They actually disregard how important it is to have a perfect refraction after surgical clearing of the lens opacity (by contact lens fitting and tight control of proper refraction)

- The authors describe it as a "new technique" - however the first description of a peripheral puncture of the capsule (via pars plicata) in the European literature dates back to 1987 (Witschel H et al.)

Honestly, I am still struck by how bold this group actually claims a surgical complication (secondary cataract) as a new stem cell therapy. Theoretically their idea is fascinating but on the other hand probably unrealistic.