

# On cataract surgery in uveitis – management and outcome in pediatric and adult patients

## Akademisk avhandling

som för avläggande av medicine doktorsexamen vid Sahlgrenska akademien,  
Göteborgs universitet kommer att offentlig försvaras i R-aulan, Hus R, Sahlgrenska  
Universitetssjukhuset, Länsmansgatan 28, Mölndal, fredagen den 6 maj, klockan 09:00  
av

**Sara Pålsson**

Fakultetsopponent: Professor Liv Drolsum,  
Institutt for klinisk medisin, Universitetet i Oslo, Norge

## Avhandlingen baseras på följande delarbeten

- I. **Pålsson S**, Nyström A, Sjödell L, Jakobsson G, Byhr E, Andersson Grönlund M, Zetterberg M. Combined phacoemulsification, primary intraocular lens implantation, and pars plana vitrectomy in children with uveitis. *Ocul Immunol Inflamm.* 2015 Apr;23(2): 144–151.
- II. **Pålsson S**, Andersson Grönlund M, Skiljic D, Zetterberg M. Phacoemulsification with primary implantation of an intraocular lens in patients with uveitis. *Clin Ophthalmol.* 2017 Aug 22;11:1549–1555.
- III. **Pålsson S**, Schuborg C, Sterner B, Andersson Grönlund M, Zetterberg M. Hydrophobic and hydrophilic IOLs in patients with uveitis – a randomised controlled trial. *Submitted manuscript.*
- IV. **Pålsson S**, Pivodic A, Andersson Grönlund M, Lundström M, Viberg A, Behndig A, Zetterberg M. Cataract surgery in patients with uveitis: Data from the Swedish National Cataract Register. *Submitted manuscript.*

# On cataract surgery in uveitis – management and outcome in pediatric and adult patients

**Sara Pålsson**

Sektionen för klinisk neurovetenskap, Institutionen för neurovetenskap och fysiologi, Sahlgrenska akademien, Göteborgs universitet, Sverige.

## Abstract

**Aims:** To evaluate surgical procedures and outcomes in cataract surgery in adults and children with uveitis. To compare the results of implantation of two different intraocular lenses (IOLs).

**Methods:** Retrospective reviews of medical charts of children and adults with cataract and uveitis were performed (papers I and II). A randomized controlled trial to compare a hydrophobic and a hydrophilic IOL was conducted (paper III). Data from the National Cataract Register was analyzed (paper IV).

**Results:** *Paper I:* In total, 21 pediatric eyes, treated with phacoemulsification, primary IOL implantation and pars plana vitrectomy, were included. Best corrected visual acuity (BCVA) improved in all except one eye. Glaucoma was the most common postoperative complication. *Paper II:* Altogether 58 uveitic eyes were included. Mechanical pupil dilation was more commonly needed in eyes with uveitis. Poor improvement in visual acuity was related to posterior segment abnormalities. *Paper III:* The study included 52 eyes with and 38 eyes without uveitis. Mechanical pupil dilation was more frequently used in eyes with uveitis. Flare measurements were higher in patients with uveitis, but no significant difference in flare or cystoid macular edema (CME) postoperatively related to IOL type was seen. *Paper IV:* Core registrations included 719 eyes with uveitis; 52 uveitic eyes were included in registrations of surgical outcome. Difficulties, e.g., with mechanical pupil dilation, capsular staining, and hooks at the rhexis margin, were more common in eyes with uveitis as well as posterior capsule rupture/zonulolysis. Oral steroids as well as subconjunctival steroids were more frequently used in uveitis. Improvement in BCVA was slightly better in uveitic eyes.

**Conclusion:** This thesis demonstrates that challenges remain in cataract surgery in uveitis. Despite more challenging surgery and intraoperative difficulties, patients with uveitis showed satisfactory improvement in visual acuity. We did not find support for either hydrophilic or hydrophobic IOLs being advantageous over the other. Children with uveitis constitute a group with particular difficulties.

**Keywords:** Cataract, uveitis, intraocular lens, register