

Do non-steroidal anti-inflammatory drugs added to steroid treatment lower the number of unplanned postoperative visits after phacoemulsification?

A two-centre comparative cohort study

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Jan Gärdin

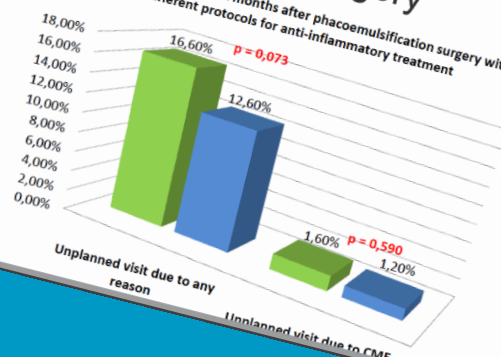
MD, PhD student
Department of Ophthalmology
Linköping University Hospital
Financial disclosure: None

Björn Johansson

MD PhD Associate professor
Department of Ophthalmology
Division of Neuro and Inflammation
Sciences (NIV)
Linköping University
Financial disclosure: **Alcon, Bausch+Lomb,**
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Unplanned visits within six months after phacoemulsification surgery with two different protocols for anti-inflammatory treatment



Aim of study

- To examine the incidence and causes of unplanned extra visits after phacoemulsification surgery in an unselected clinical population

and
- To compare outcomes in two clinics with different protocols for postoperative anti-inflammatory treatment

Setting



- The county of Östergötland, Sweden:
- Two public financed hospitals with eye clinics
 - Vrinnevi Hospital, Norrköping (≈ 1800 operations annually)
 - Linköping University Hospital (≈ 2400 operations annually)
- Same regional clinical center and same electronic patient record system (but work independently)



Material and Methods



- Retrospective study of Electronic Medical Record (EMR) data for **500** consecutive phacoemulsification surgeries at the two departments of ophthalmology in Region of Östergötland, Sweden
- Group 1 - The eye clinic at Vrinnevi Hospital, Norrköping.
 - Postoperative topical treatment: **NSAID + steroid** for 3 weeks
- Group 2 - The eye clinic at Linköping University Hospital.
 - Postoperative topical treatment: **Steroid** for 3 weeks





Material and Methods

- Inclusion criteria:
 - Phacoemulsification surgery recorded in EMR from January 1st 2015 and forward
 - Patients aged ≥ 20 years
- Exclusion criteria:
 - Posterior capsular rupture and/or zonular damage preventing in-the-bag intraocular lens placement
 - Deviation from the clinic's standard protocol for topical treatment regarding use or non-use of NSAID
 - Pre-existing ocular malformation



Material and Methods

Summary of collected per/postoperative data:

- IOL model
- Peroperative difficulties/deviations from standard surgery procedures
- Postoperative treatment with steroids/NSAIDS
- BCVA and IOP
- **Unplanned extra visit** within 6 months after surgery due to:
 - CME
 - Elevated IOP
 - Prolonged/increased iridocyclitis
 - Corneal edema
 - Other causes

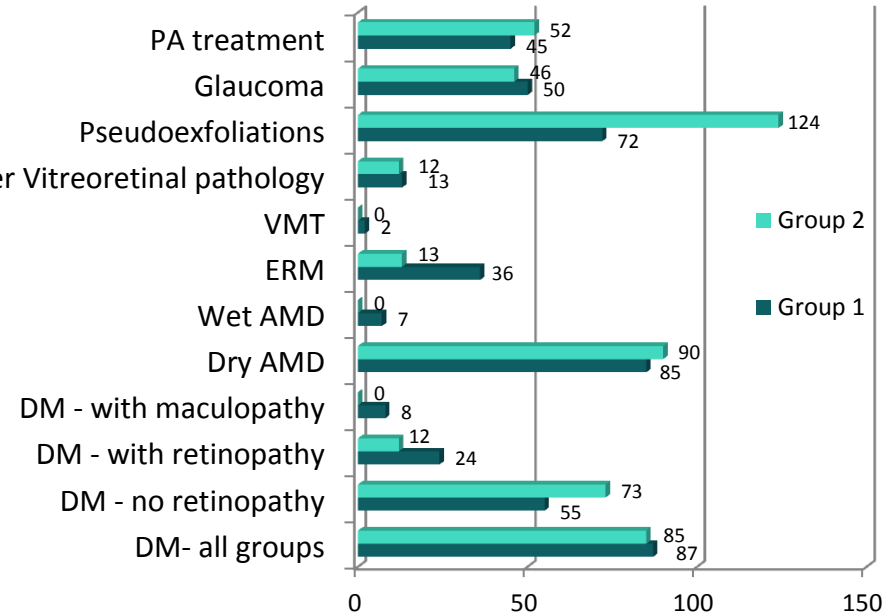


Results

Characteristics of patient material (n=500 group 1, 500 group 2)

- Females/males: **58%/42%** (Group 1), **56%/44%** (Group 2)
- OD/OS: **55%/45%** (Group 1), **52%/48%** (Group 2)
- Mean age females: **74y11mo** SD 8y10mo (Group 1), **75y1mo** SD 9y2mo (Group 2)
- Mean age males: **75y6mo** SD 7y10mo (Group 1), **74y4mo** SD 9y6mo (Group 2)

Comorbidities





Results

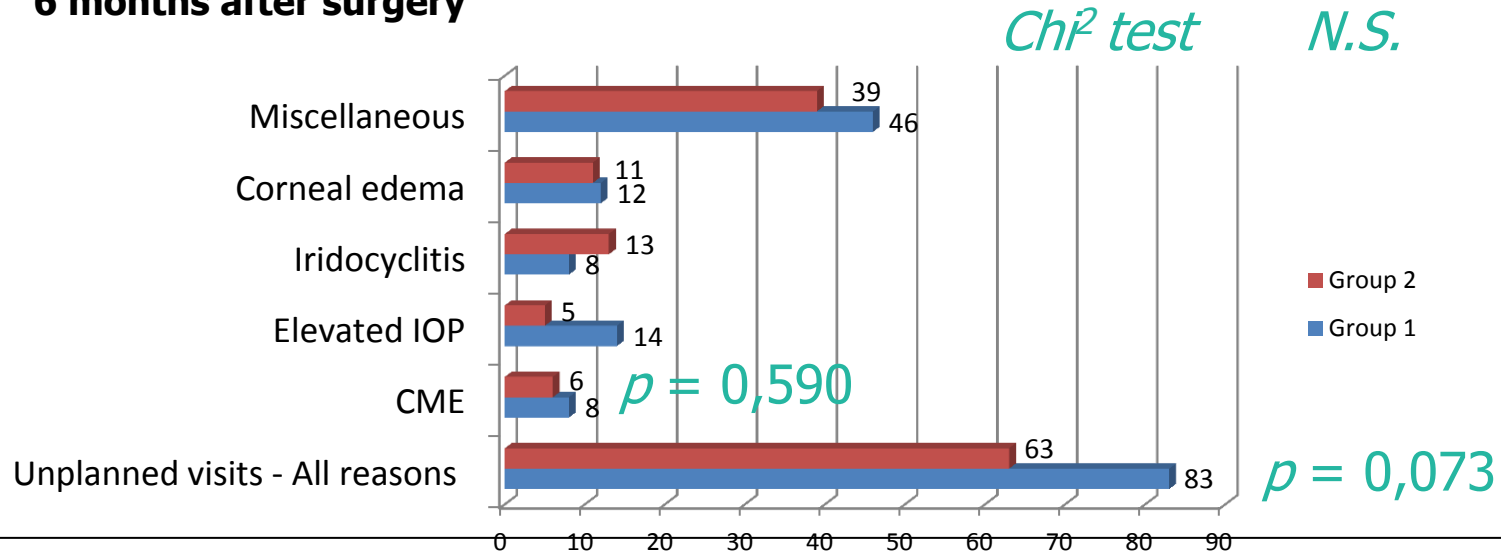
- **Mean BCVA (LogMAR)**

	Mean BCDVA preop	Mean BCDVA postop	
Total	0,50	0,11	n=933
Group1	0,50	0,14	n=465
Group2	0,51	0,07	n=468
Std dev (Grp 1)	0,33	0,22	P<0,00001 (t-test)
Std dev (Grp 2)	0,35	0,15	



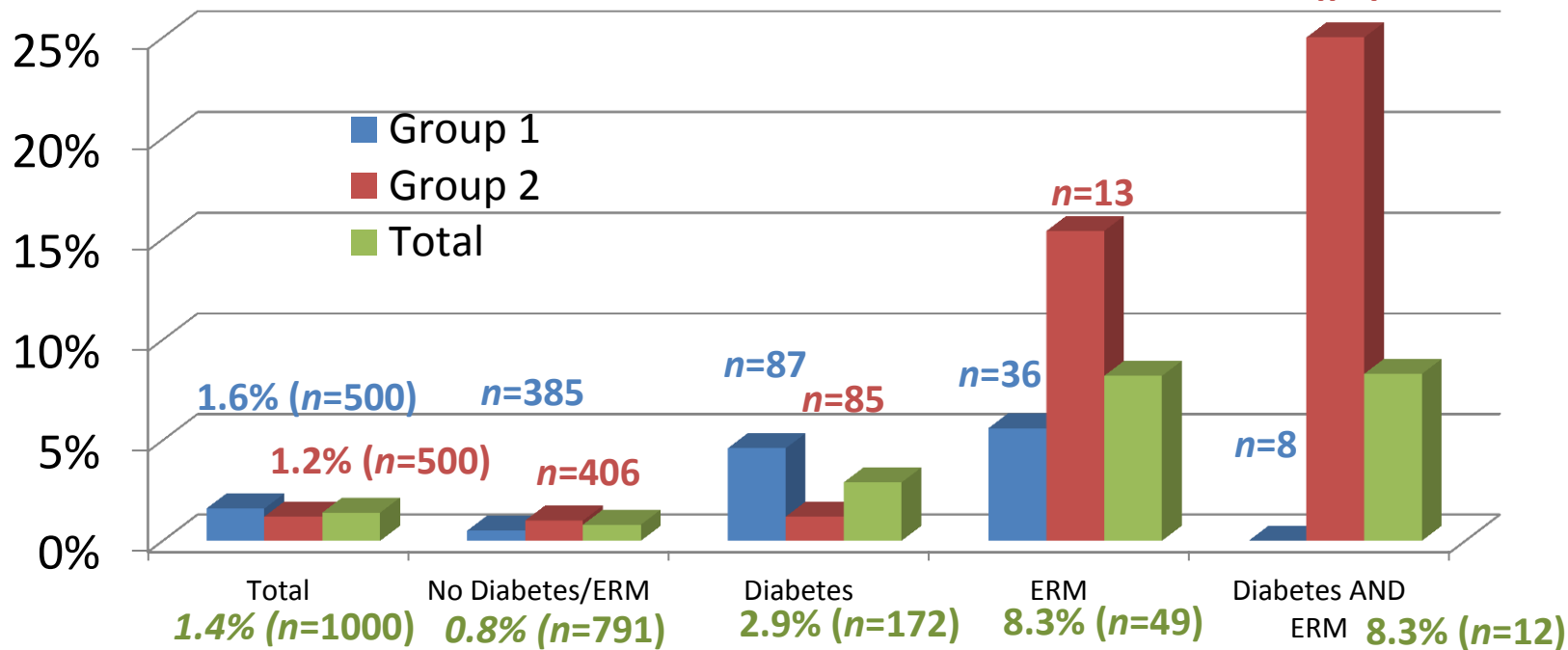
Results

- **Unplanned postoperative visits within 6 months after surgery**



Results

- Unplanned postoperative visits (% eyes, total and subgrouped for diabetes & ERM)



$p = 0,0000002$ (Chi²-test)



Conclusions

- This study indicates that
 - ✓ **addition of NSAID to steroids** as postoperative anti-inflammatory treatment in an unselected population **does not significantly reduce the need for unplanned postoperative controls** due to complications after phacoemulsification surgery, including visually disturbing CME.
 - ✓ the risk for CME is significantly increased in eyes with pre-existing epiretinal membrane.
 - ✓ further research is relevant to clarify the protective effect of NSAID against CME in eyes with vitreoretinal comorbidity in clinical practice

Thank you for your attention

bjorn.johansson@regionostergotland.se

jan.gardin@regionostergotland.se

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