

( ) R1 ( ) R2 ( ) R3 ( ) PG0 ( ) PG1 ( ) Estagiário ( ) Tecnólogo ( ) PIBIC

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Service (sector)  
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### **Meta-analysis of chromovitrectomy with indocyanine green and trypan blue in macular hole surgery**

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**Purpose:** To report meta-analysis comparing ILM-peeling with and without indocyanine green (ICG) and trypan blue (TB) staining in macular hole treatment.

**Methods:** A Pubmed search was conducted from January 1999 through June 2007. Manuscripts describing the anatomical and functional outcomes of vitrectomy plus ILM-peeling with or without ICG or TB-application in macular hole surgery were reviewed. A statistical meta-analysis was performed including studies which defined anatomical outcomes as closure of the macular hole and disappearance of the fluid cuff and functional outcomes as improvement of two or more snellen lines. The secondary outcome was to investigate the incidence of retinal pigment epithelial (RPE)-alterations with vs. without ICG or TB-staining in macular hole surgery.

**Results:** Results including all types of macular holes in 1318 eyes indicated same anatomical success but worse functional outcomes in the group without ICG-application ( $P = 0.0008$ ; odds ratio = 0.587, 95% confidence interval = 0.427-0.808). A higher incidence of RPE-alterations in the ICG-injection group was observed. The incidence of RPE-alterations was found to be 1.98 %, whereas RPE-changes were noted in 13.83% of 201 patients with ICG-application (odds ration= 7.998).

**Conclusion:** This meta-analysis of previous reports comparing ILM-peeling with and without intravitreal ICG or TB-application in the treatment of macular holes demonstrated statistically worse functional outcomes when ICG was applied ( $P = 0.0008$ ). A higher number of RPE-alterations were observed in the ICG-stained group.