

Visco-protection of macular holes during ICG-guided ILM-peeling

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Advantages:

To protect RPE from potential ICG-toxicity in MHS and enhance visual outcomes.

Methods:

Recent data supports that ICG is potentially harmful to the neuroetina and RPE. Presumed mechanisms include direct tissue toxicity and enhanced light absorption (phototoxicity). In addition, ICG seems to have a special affinity to RPE cells as it shows prolonged fluorescence in vivo. The clinical relevance is unclear. In our institution, we perform ICG-guided ILM-peeling routinely in MHS. Earlier, 0,05% ICG had been applied directly to the posterior pole. In view of the controversy about ICG-toxicity, we meanwhile protect the RPE from contact with ICG solution by covering the macular hole with methycellulose. The surgical technique and functional results are shown.

Effectiveness / Safety:

A comparative study of MHS without (group1) and with (group 2) "RPE" protection has demonstrated better functional outcomes in group 2. Visual improvement was slower and less high in group 1.

Take home message:

Even low-concentrated ICG-solution that gets access to the RPE of macular holes has a negative impact on functional results in MHS.