

### **Macular function after scleral buckling surgery for recent onset retinal detachment**

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#### **Purpose:**

To investigate retinal function, and specifically central, macular function after scleral buckling surgery for recent onset retinal detachment.

#### **Methods:**

14 Patients with rhegmatogenous retinal detachment of less than seven days' duration, were operated with scleral buckling surgery. In eight of these, the detachment engaged the fovea, preoperatively. Clinical investigation, OCT, full-field electroretinography (full-field ERG) and multifocal electroretinography (mfERG) with fundus illumination were performed preoperatively and six months postoperatively.

#### **Results:**

MfERG amplitudes were reduced preoperatively in detached retina, with significant improvement at follow-up ( $p=0.005$ ). Central macular function and, specifically, foveal function improved significantly ( $p=0.023$ ), most so in the group of patients in which the detachment engaged the fovea preoperatively ( $p=0.012$ ). Rod function was significantly improved at follow-up, as judged with full-field ERG ( $p=0.015$ ). OCT showed subretinal foveal fluid in four patients, at follow-up, one of whom did not have detached macula preoperatively.

#### **Conclusion:**

In recent onset retinal detachment, localized central retinal dysfunction, and total rod dysfunction, improved significantly after reattachment.

#### **Take-home message:**

The combination of electrophysiological investigations and OCT, is useful when evaluating functional outcomes in retinal detachment.