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Session: **Mrežnica / Retina**

Chairs: Polona Jaki Mekjavić and Ivana Gardašević Topčić

OR-032

Analysis of reading abilities and eye movements in people with low vision due to age-related macular degeneration with eccentric fixation

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PURPOSE: To investigate reading skills and eye movements in people with visual impairment due to age-related macular degeneration (AMD) with eccentric fixation using an eye-tracking technique.

METHODS: Overall, 17 patients with bilateral AMD (7 males; mean age 77.5 ± 6.0 yrs) and 17 healthy controls (10 males; mean age 72.2 ± 6.0 yrs) were evaluated for reading skills – reading visual acuity, reading speed (MNREAD-SI), and contrast sensitivity (Pelli-Robson). The location of the PRL and the stability of the fixation were determined by microperimetry (NIDEK MP-3). All subjects underwent optical coherence tomography, autofluorescence, and fixation determination on MP-3. Eye movements were compared between the two groups using Tobii Glasses Pro 2.

RESULTS: SDM patients had worse reading visual acuity ($p < 0.001$), slower reading ($p < 0.001$), and lower contrast sensitivity ($p < 0.001$). PRL was in the upper quadrant relative to the fovea in the majority; fixation was stable in 8, relatively unstable in 7, and unstable in 2 patients. In the control group, fixation was stable in the fovea. There was a difference in the number of saccades.

CONCLUSION: The findings may contribute to understanding reading adaptations in people with SDM and developing rehabilitation strategies.

Analiza bralnih sposobnosti in očesnih gibov pri osebah s slabovidnostjo zaradi starostne degeneracije makule z ekscentrično fiksacijo

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NAMEN: Preučiti bralne sposobnosti in očesne gibe pri osebah s slabovidnostjo zaradi starostne degeneracije makule (SDM) z ekscentrično fiksacijo z uporabo tehnike sledenja očem.

METODE: Pri 17 bolnikih z obojestransko SDM (7 moških; povp. starost $77,5 \pm 6,0$ let) in 16 zdravih kontrolah (10 moških; povp. starost $72,2 \pm 6,0$ let) smo ovrednotili bralne sposobnosti - bralno vidno ostrino, hitrost branja (MNREAD-SI) in kontrastno občutljivost (Pelli-Robson). Z mikroperimetrijo (NIDEK MP-3) smo določili lokacijo PRL in stabilnost fiksacije. Vsi preiskovanci so opravili optično koherentno tomografijo in avtofluorescenco makule in določitev fiksacije na MP-3. S Tobii Glasses Pro 2 smo primerjali očesne gibe med skupinama.

REZULTATI: Bolniki s SDM so imeli slabšo bralno vidno ostrino ($p < 0,001$), počasnejše branje ($p < 0,001$) in nižjo kontrastno občutljivost ($p < 0,001$). PRL je bil pri večini bolnikov v zgornjem kvadrantu glede na foveo, fiksacija je bila stabilna pri 8, relativno nestabilna pri 7 in nestabilna pri 2 bolnikih. V kontrolni skupini je bila fiksacija stabilna v fovei. Med skupinama je izstopala je razlika v številu sakad.

ZAKLJUČEK: Ugotovitve lahko prispevajo k razumevanju prilagoditev branja pri osebah s SDM in k razvoju rehabilitacijskih strategij.