ELECTROPHYSIOLOGY RESULTS IN AGE-RELATED CHOROIDAL ATROPHY

Keissy Sousa, Luís Mendonça, Rita Gentil, Ricardo Leite, José Mendes, Renato Silva, Nuno Gomes
Hospital de Braga, Portugal
September 2014
ARCA: Age-Related Choroidal Atrophy

- Margolis and Spaide (AJO, 2009) reported changes in choroidal thickness with ageing - **normal value**: $287\pm75.7$ μm and ↓ 16μm per decade of life.
- Spaide (AJO, 2009) described choroidal atrophy with concomitant AMD.

- EDI-OCT: $\leq 125$ μm
- Tesselated Fundus
- Reticular pseudodrusen
- Peripapillary atrophy
- Glaucoma?
- Non-progressive complicated AMD?

Age-related choroidal atrophy – new described entity
Prospective Study: July 2013 to February 2014

Inclusion criteria:

- Visual Acuity loss.
- Tesselated fundus.
- No evidence of associated retinal diseases on fluorescein angiography, fundus autofluorescence and SD-OCT.
- Exclusion of other ophthalmic pathologies that could cause visual loss.

EDI-OCT: cut-off 125 µm for subfoveal choroidal thickness

ERG (flash; pattern) and VEP
Results

16 eyes. 8 patients.
No retinal disease.
1 Fuchs Distrophy, no corneal edema.

Mean Age: 75y (65-91)
Visual Acuity: +0.3 logMAR

No retinal disease during follow-up time.
EDI-OCT – Mean subfoveal choroidal thickness:
102.1±24.85 µm
Electrophysiology Results

• Cone/Rod dysfunction in ERG flash. No photoreceptor dysfunction in SD-OCT.

• VEP: Decreased amplitude and increased latency.

• No PERG alterations.
Discussion and Conclusion:

Small sample. Small follow-up time.

AMD → retina
ARCA → choroid

ARCA:
- New recognized disease. Few studies.
- No electrophysiology data available.

Choroidal changes:
- Retinal pigmentary changes
- Visual Acuity decrease

Choroid - vascular support to the outer retina.

Middle and outer retina: ERG flash

Retina – Visual Cortex: PEV

Choroidal Dysfunction: ERG flash and PEV?