ELECTROPHYSIOLOGY RESULTS IN AGE-RELATED CHOROIDAL ATROPHY

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ARCA: Age-Related Choroidal Atrophy

- Margolis and Spaide (AJO,2009) reported changes in choroidal thickness with ageing - **normal value**: 287±75.7 µm and ↓ 16µm per decade of life.
- Spaide (AJO, 2009) described choroidal atrophy with concomitant AMD.

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

Age-related choroidal atrophy – new described entity

ARCA and Electrophysiology

Hospital Braga

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

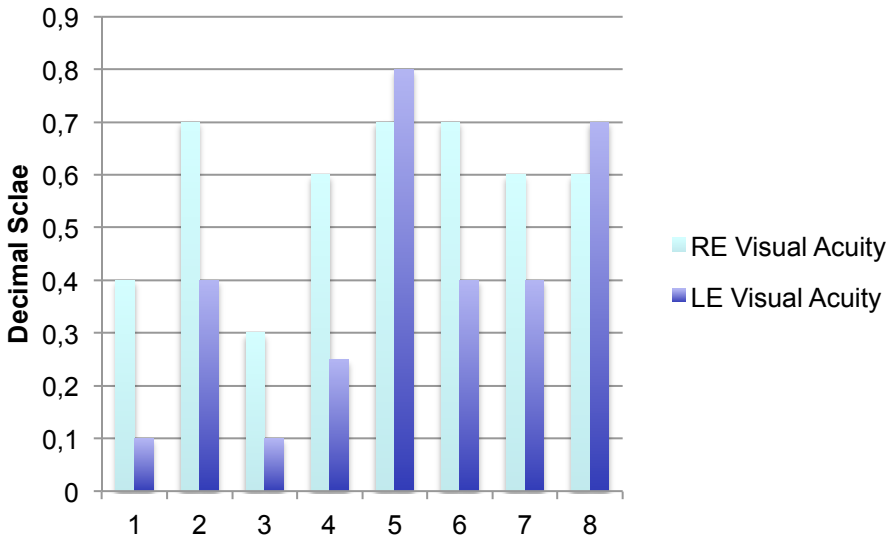
16 eyes. 8 patients.
No retinal disease.
1 Fuchs Distrophy, no corneal edema.

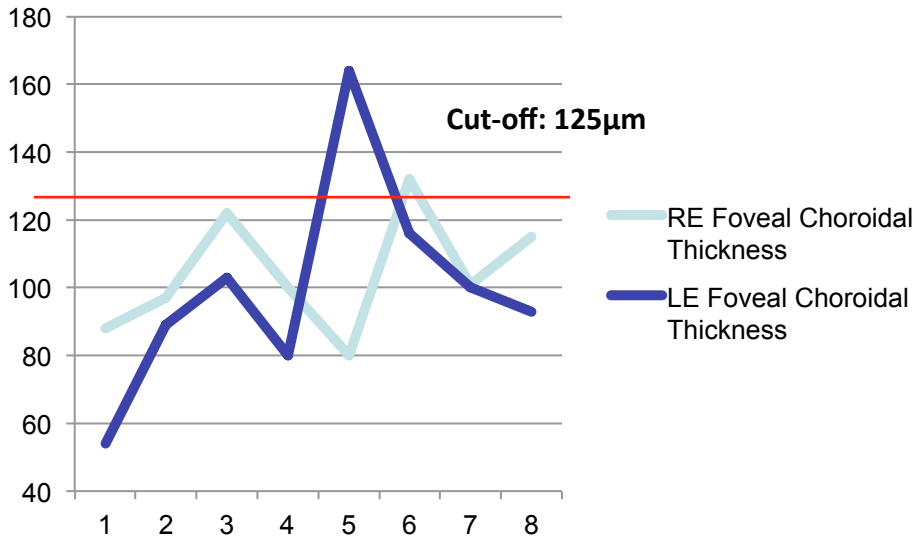
Mean Age: **75y** (65-91)
Visual Acuity: **+0.3 logMAR**

No retinal disease during follow-up time.

EDI-OCT – Mean subfoveal choroidal thickness:

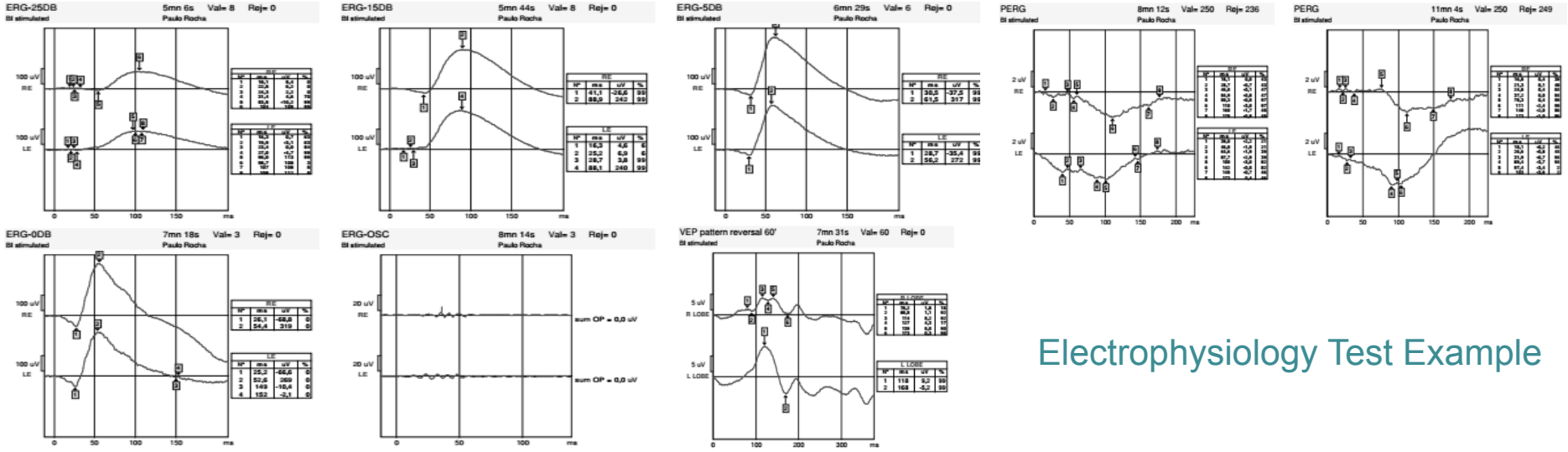
102,1±24.85 µm





Electrophysiology Results

- Cone/Rod dysfunction in ERG flash. No photoreceptor dysfunction in SD-OCT.
- VEP: Decreased amplitude and increased latency.
- No PERG alterations.



Electrophysiology Test Example

Discussion and Conclusion:

Small sample. Small follow-up time.

AMD→ retina

ARCA → choroid

ARCA:

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

Choroid - vascular support to the outer retina.

Choroidal changes:

- Retinal pigmentar changes
- Visual Acuity decrease

Middle and outter retina: ERG flash

Retina – Visual Cortex: PEV

Choroidal Dysfunction: ERG flash and PEV?