



ACADEMIC TESTS
AT THE FACULTY OF MEDICINE OF THE UNIVERSITY OF LISBON
INSTITUTE OF ADVANCED TRAINING

Masters:

Neurophthalmology

Name of Student:

Edite Carla Amorim de Morais Silva Pimentel Teixeira

Subject of Thesis:

Prospective study of the visual associations associated to migraine

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Jury:

President: Professor António Castanheira Dinis (FMUL)

Orientator: Professor José Maria Pereira Monteiro (ICBAS)

Co-Orientator: Professor António Castanheira Dinis (FMUL)

Jury Member: Professor Isabel Pavão Martins (FMUL)



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ABSTRACT

Introduction: Headache is a common complaint among patients who consult ophthalmologists. The presence of any pathology that interfere with the correct work of the optic system can result in an headache of ocular cause.

Although there is a strong popular belief of a causative effect between refractive errors and headaches, there are only few studies claiming association between refractive errors and migraine headaches. There are also many international studies about the relation of the pupil size with migraine headache. The great number of the studies published before, suggests an Autonomic nervous system deficit in migraine patients.

Objectives: To do a prospective study about visual manifestations in a population with migraine trying to investigate the existence of a correlation between non-corrected refractive errors, the presence of heterophorias and the unchain of migraine. To evaluate the presence of anisocoria during the crisis. To diagnose and classify the aspects of the visual manifestations that occur in the group of patients with migraine with aura.

Methods: 50 individuals with migraine headache were observed and divided into two other groups – patients with migraine with aura and patients with migraine without aura. 52 healthy subjects were included as a control group. A questionnaire was presented to all 50 patients with migraine with questions about pain characteristics and for those individuals who suffer of migraine with visual aura, a second questionnaire was presented for a full description of the aura. All subjects, from the two groups, underwent full ophthalmologic examination. All data obtained were recorded and compared for the two groups and statistical analysis was performed for all data with SPSS 15.0 programme.

Results: A great number of cases of myopia and/or astigmatism was found in migraine group. The difference between the mean subjective spherical refractive errors, and also the difference between the average of the absolute astigmatic refractive error for the two groups were not significantly different. The results of the measurements with the Maddox Wing were similar between the two groups studied. Only 14% of the patients had more than 4Δ of exophoria. The mean pupillary diameter of the migraine group is lower than the healthy group and this difference was significant. The frequency of anisocoria of the migraine patients is higher than control group, but the difference between the mean anisocoria for the two groups was not significantly different. The most common site of the pain was temporal. Most patients had bilateral visual auras. The most common phenomena described was “foggy vision”.

Conclusions: There are not enough data in this study to describe with certain a causative link between refractive errors and heterophorias with migraine. Low degrees of astigmatism were more common among the individuals studied. The mean pupillary diameter of the migraine group is lower than the healthy group.

Keywords: Migraine; refractive errors; heterophorias; pupil; visual aura.