Medical Retina

MULTIMODAL IMAGING IN DIABETES RETINOPATHY AND NEW MOLECULAR BIOMARKERS FOR EARLY DIAGNOSIS

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PURPOSE: Due to the clinical and socioeconomic relevance of type 2 Diabetes Mellitus(2DM) is important finding genetic markers that can help recognizing patients presenting a higher risk of retinal complications,and integrating data from the different ophthalmological tests.They will help us
with diagnostic/prognostic and treatment decisions for 2DM subjects at risk of Diabetic retinopathy/Diabetic Macular Edema(DR/DME),improving the health of these patients and lower the health costs that complications cause.The main goal of this study is to integrate molecular-genetic markers with information from imaging systems to establish the preclinical diagnosis of DR/DME in DM2 and identify patients at higher risk for the progression of both pathologies,and
designing algorithms and write a clinical practice guide for General Practice and Ophtalmology that helps to improve the visual prognosis in the affected population.

METHODS: A longitudinal, prospective, case-control study:62 2DM patients of more than 8 years of illness;and 35 patients as control group.All of them will follow the same protocol:Initial interview, Systematized ophthalmological examination, extractition of 2 fasting blood simples and Statistical
Analysis.

RESULTS: 27 of the 62 diabetic patients(43.5%)presented normal retinographies or minimal alterations;how ever,in the OCT and fluorescein
angiography,signs of deeper DR or EMD were observed. 64% of the patients with 2DM had glycosylated hemoglobin(HbA1c)6.5%,however only 7% had
HbA1c higher than 7.6%.The molecular results were not statistically significant, so new studies will be necessary to achieve efficient
answers.

CONCLUSIONS: A non-mydriatic retinography is not sufficient as screening to rule out mild DR/EMD.The screening protocol must include a
complete ophthalmological examination and multimodal imaging tests that allow making the appropriate clinical and therapeutic decisions for a better
visual prognosis;as well as to avoid unnecessary health expenses.