MULTIMODAL FUNDUS IMAGING OF A CASE OF CONGENITAL HYPERTROPHY OF RETINAL PIGMENT EPITHELIUM

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PURPOSE

Describe a case report and multimodal fundus imaging of a case of congenital hypertrophy of the retinal pigment epithelium (CHRPE). The retinal imaging included fundus photography, fundus autofluorescence (FAF), infrared reflectance imaging (also described as near-infrared reflectance - NIR), fundus fluorescein angiography (FFA) and Optical Coherence Tomography (OCT) in addition to clinical examination including indirect ophthalmoscopy, slit-lamp biomicroscopy and others exams.

RESULTS

Asymptomatic 29-year-old female referred for presenting a pigmented lesion on the periphery of the inferior retina of the right eye and previous diagnosis of choroidal nevus. The ophthalmological examination demonstrated a visual acuity of 1.0 in both eyes and normal slit-lamp exam. Fundoscopy of inferior retina of right eye: approximately 4 disc diameters flat lesion with uniform pigmentation, well demarcated margins and a marginal halo of depigmentation surrounding the lesion typical of CHRPE. The left eye fundus examination revealed a small, pigmented lesion of approximately 1/4 disc diameter in temporal retina.

DISCUSSION

Among the differential diagnoses of retinal pigmented lesions, CHRPE is a less prevalent diagnosis (3 cases for 2400 eye exams). CHRPE is usually an occasional finding and corresponds to a congenital hamartoma that occurs in three variant forms: solitary, clustered or multiple lesions. Diagnostic errors can sometimes occur in cases of CHRPE and includes: malignant choroidal melanoma, choroidal nevi, choroidal melanocytoma of the choroid, black sunburst lesions in sickle cell retinopathy and other entities.

Multimodal fundus imaging is essentialy important on the avaliation of small pigmented lesions that may easily be missed. FAF and NIR may be helpful to identify these lesions. CHRPE has a higher percentage of melanin and discrete amounts of lipofuscin, thus generally demonstrates hypoautofluorescence. CHRPE lesions on FFA appear as dark spots blocking choroidal fluorescence and augment the brightness of retinal vasculature.

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Figure1. Multimodal imaging of right and left eye. a) Retinography b) Fundus autofluorescence c) Infrared reflectance d) Fundus fluorescein angiography e) Optical coherence tomography