OCT angiography: Applications and limitations

Statement of the Problem: Optical Coherence angiography (OCTA) is a new noninvasive imaging technique that employs motion contrast imaging to high resolution volumetric blood flow information generating angiographic images in a matter of seconds. Published studies hint at OCTA’s potential efficacy in the evaluation of common ophthalmologic diseases such as age related macular degeneration (AMD), diabetic retinopathy, artery and vein occlusions, and glaucoma. OCTA can detect changes in choroidal blood vessel flow and can elucidate the presence of choroidal neovascularization (CNV) in a variety of conditions but especially in AMD. The purpose of this paper is to elucidate the main applications and potential limitations comparing to Fluorescein angiography (FA).

Methodology & Theoretical Orientation: A review of the recent publications regarding this topic was done to define the applications and possible limitations of this new technology.

Findings: Optical Coherence angiography (OCTA) main applications was diabetic retinopathy, choroidal Neovascularization due to AMD, differential diagnosis with retinal telangiectasia and retinal vein occlusions. The main limitations was: restricted visual field, Inability to show leakage, artifacts during acquisition and the device are currently expensive.

Conclusion & Significance: This technology, despite some limitations, offer a non-invasive option of visualization of the retinal vasculature in detail.

Recent Publications


Biography

Carlos Eduardo Cury Jr MD FBU FBQS has graduated in medical school in 2000 at Santos Medical School São Paulo-Brazil. He has specialized in ophthalmology at Rio Preto Eye Hospital (HORP) São Paulo-Brazil (2001-2004). He received Retinal Research Fellowship from Philipps University-Marburg-Germany in 2005. He completed Master’s Degree in Internal Medicine at Rio Preto Medical School (2011). He has held Retinal Researcher Fellowship at BallsBridge University, Department of VitreoRetinal Surgery of HORA Eye Hospital -Zeiss Reference Center- São José do Rio Preto-SP-Brazil.

drcury@hotmail.com

Carlos Eduardo Cury Junior
Rio Preto Eye Hospital, Brazil