Simultaneous ICG- and fluorescein-angiography for fundus examination

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BACKGROUND: An indocyanine-green (ICG) angiography is rarely used as the only diagnostic procedure. Almost always it is performed additionally to a fluorescein angiography. The use of simultaneous ICG and fluorescein (SIF) angiography therefore makes sense. Several examples for the application of SIF-angiography are presented. MATERIALS AND METHODS: SIF-angiography was performed using a 2-wavelength scanning laser ophthalmoscope (SLO). Images were digitally recorded in real time with a graphics workstation. The following cases will be presented: choroidal neovascularization in age-related macular degeneration, choroidal hemangioma, inflammatory fundus disease (APMPPE) and idiopathic polypoidal choroidal vasculopathy. RESULTS: ICG and fluorescein angiography can be simultaneously recorded with the 2-wavelength SLO. The quality of the combined pictures is comparable to single-channel recordings of separate ICG and fluorescein images. We show results of the above mentioned cases. CONCLUSIONS: SIF angiography is time efficient and allows precise comparison and analysis of the transit of both dyes through retinal and choroidal circulation. The topographic relation of pathologic findings in ICG angiograms with the critical retinal vascular landmarks is facilitated.