Simultaneous indocyanine green and fluorescein angiography

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PURPOSE
To facilitate the interpretation of the choroidal dye filling sequence, the use of simultaneous indocyanine green (ICG) and fluorescein angiography was evaluated.

METHODS
A single-wavelength scanning laser ophthalmoscope (SLO) was modified to a two-wavelength system, permitting the simultaneous recording of ICG and fluorescein angiography. This method has been used in 340 cases. About two thirds of the patients had well-defined or occult choroidal neovascularization (CNV) in age-related macular degeneration (AMD).

RESULTS
Simultaneous ICG and fluorescein angiography is feasible with a two-wavelength SLO and provides images of good quality. Two corresponding ICG and fluorescein angiography pictures can be presented as one combined red-green picture.

CONCLUSION
This method has three advantages: (1) it allows a precise comparison of the transit of both dyes through both circulations, and there are no differences in the injected bolus nor in the actual blood pressure; (2) the important features of the ICG angiograms are fully aligned with the critical retinal vascular landmarks provided by the fluorescein images; and (3) it is very time efficient—with a single injection and one photographic session, immediate results are obtained.

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