Infrared fundus angiography

To the Editor of the British Journal of Ophthalmology

Sir,—An article by Brown and Strong (1973) on infrared fundus angiography was of great interest to us, as we have been working on this same problem since 1971.

Since 1960, much has been done with ICG dye to allay fears of using it for clinical fundus angiography. It has, for example, been administered by constant intravenous infusion over a 3-hr period in doses as high as 50 mg./kg. (Leevy, Bender, Silverberg, and Naylor, 1963) and in hepatic blood flow studies requiring intravenous infusion of 0.5 mg./min. for 70-min. periods (Sherlock, 1968). Also, ICG has been in use throughout the United States with U.S. Food and Drug Administration approval for the past 5 years for the determination of hepatic function by intravenous injection of single-bolus 0.5 mg./kg. doses. These examples alone suggest the safety with which the amounts of ICG required for fundus angiography may be administered. In our experience to date, volumes of less than 2 ml. containing 20 mg./ml. have been demonstrated to be sufficient for fundus angiography—this is not intended to imply, however, that greater dye concentrations may not ultimately prove to be of value in choroidal angiography. Moreover, it should be pointed out that the clinical history of ICG is devoid of any untoward side-effects, including moderate-to-marked nausea and headache, gastrointestinal distress, urticaria, and symptoms and signs of hypersensitivity—all of which have been associated with intravenous fluorescein administration.

The authors further suggest that fluorescein’s “long record of safety in intravenous use [makes it] difficult to promote any alternative form of fundus angiography unless it has a real advantage over fluorescein and is of comparable safety”. It seems to us that ICG has been demonstrated to be of comparable safety, although we would not recommend its use as an alternative to fluorescein. Fluorescein shows up the retinal vessels far better than ICG; however, ICG demonstrates the choroidal vessels whereas fluorescein cannot. We would hope that ICG infrared angiography will continue to be pursued as a potential clinical method of choroidal angiography.

Yours faithfully,

ROBERT W. FLOWER and BERNARD F. HOCHHEIMER

JOHNS HOPKINS UNIVERSITY
APPLIED PHYSICS LABORATORY
8621 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910, U.S.A.
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REFERENCES


Book reviews


A leading neuro-pathologist, the world’s most experienced clinical neuro-ophthalmologist, and a young energetic neuro-ophthalmologist with an interest in pathology have devoted their expertise to the compilation of this Atlas.
Letter: Infrared fundus angiography.

R W Flowers and B F Hochheimer

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