

# Laser flare photometry: correlation to Fluo/ICG angiography



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## Background

Dual fluorescein (Fluo) and indocyanine green (ICG) angiography is currently the most appropriate method to evaluate inflammation in the posterior pole of the eye. Laser flare photometry (LFP) is an accurate method to measure the intraocular inflammation, yet its use in uveitis patients is still under discussion.

## Purpose

To establish the correlation between LFP flare and dual Fluo/ICG angiography data in active noninfectious posterior and panuveitis.

## Materials and methods

The study included data from 100 eyes of 51 patients with active noninfectious posterior and panuveitis examined with the use of routine methods (BCVA, VF, slit-lamp, funduscopy, IOP) as well as B-scan, LFP (Kowa FM 600), SD-OCT and dual Fluo/ICG angiography (HRA2, Heidelberg Engineering, Germany). All angiograms were assessed using the scoring system proposed by the Angiography Scoring for Uveitis Working Group (2007). The specific diagnosis was established in 67% of cases: sarcoidosis (18), Behçet's disease (3), multifocal choroiditis (4), poststreptococcal (3), seronegative spondylitis (2), multiple sclerosis (1), VKH (1), APMPE (1), serpiginous choroiditis (1).

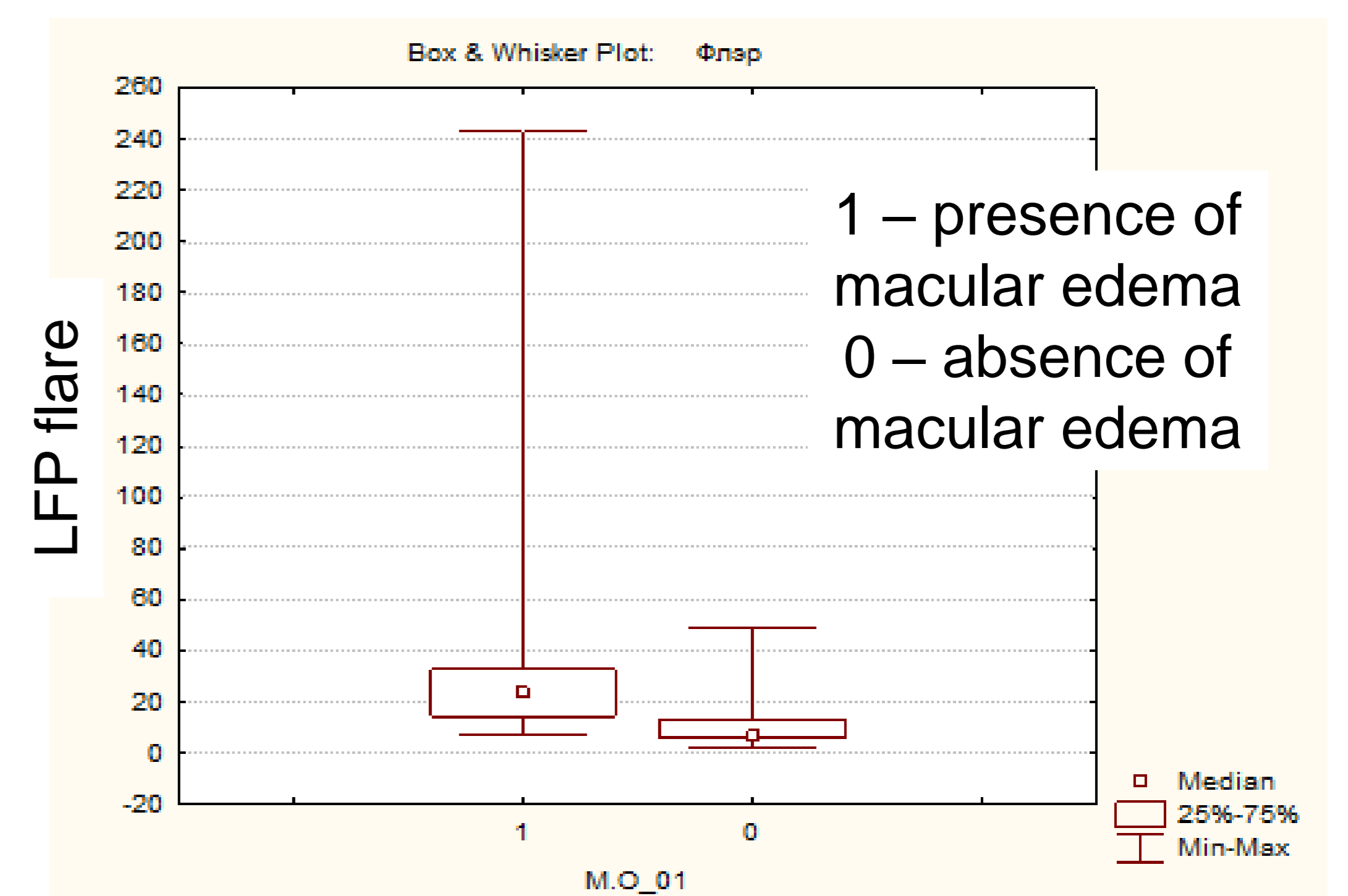
## Results

A statistically significant correlation between LFP flare and Fluo angiography score or ICG angiography score was found ( $p < 0.05$ ), and Spearman's rank correlation coefficient equaled 0.537 and 0.422, correspondingly. There was also a statistically significant correlation between LFP flare and optic disc hyperfluorescence or macular edema assessed by Fluo angiography ( $p < 0.05$ ); Spearman's rank correlation coefficient was 0.401 for optic disc hyperfluorescence and 0.658 for macular edema. Mean LFP flare in eyes without macular edema was  $10.5 \pm 8.7$  ph/ms and  $37.4 \pm 48.7$  ph/ms in its presence ( $p = 0.000048$ ).

## Conclusion

The LFP flare reflects the posterior pole involvement in active noninfectious uveitis, and this could be used as a cumulative index in the intraocular inflammation assessment, especially during follow-up period.

Variable	Spearman Rank Order Correlations
	LFP flare
BCVA	-0.505
IOP	-0.173
Tyndall	0.385
Vitreous cells	0.463
FA optic disc edema	0.401
FA macular edema	0.658
FA score	0.537
ICGA score	0.422



Poststreptococcal uveitis



FA OD

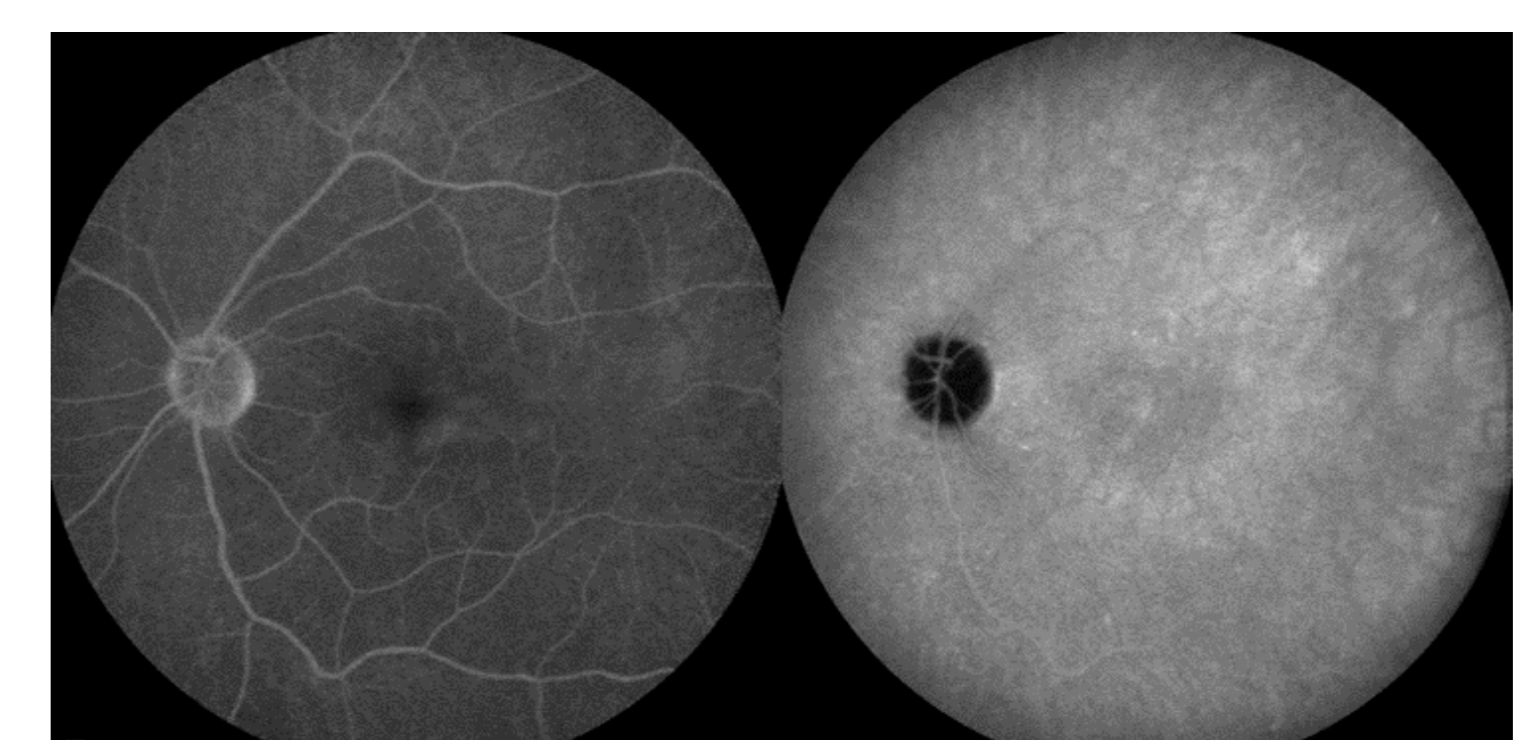
ICGA OD

Sarcoid posterior uveitis



FA OD

ICGA OD



FA OS

ICGA OS