Does demarcation laser photocoagulation really barricade the macula sparing symptomatic and asymptomatic clinical rhegmatogenous retinal detachment?

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Purpose: To evaluate the efficacy of demarcation laser photocoagulation in containing macula sparing symptomatic or asymptomatic clinical retinal detachments (RD).

Design: Prospective interventional case series.

Patients and methods: 16 Eyes of 14 consecutive patients presented with symptomatic (14 eyes) and asymptomatic (2 fellow eyes) clinical MSRRDs were prospectively treated with barrage photocoagulation in 3–5 confluent rows, using argon laser photocoagulation with a slit lamp delivery system in 15 eyes and indirect-ophthalmoscopic delivery system in 1 eye. The patients were reviewed at 1, 7, 15 days, 1, 3, and 6 months, and yearly thereafter. Stability/progression of rhegmatogenous retinal detachment beyond the barrage and best-corrected visual acuity (BCVA) was noted at each visit.

Results: Sixteen eyes of 14 patients (9 males), mean ± standard age was 42.93±16.65 and range (12 to 62 years), underwent barrage laser treatment. Two men had bilateral RD. Most detachments were caused by horse shoe breaks in 12 eyes (75%). Eight (50%) extended superiorly with breaks above the horizontal raphe. Twelve eyes (75%) had posterior vitreous detachment at presentation. The patients are still under regular follow-up yearly. Pretreatment anatomical and functional status was maintained in all eyes till the final visit.

Conclusion: Demarcation laser photocoagulation (DLP) is a low-morbidity procedure that can efficiently stabilize selected clinical macula sparing rhegmatogenous retinal detachments (MSRRDs) by producing a barrier to prevent extension of subretinal fluid (SRF). This procedure may be an alternative to other surgical approaches in patients with symptomatic or asymptomatic MSRRDs.