

# Adding IVTA to PRP for Diabetic Retinopathy Patients With CSME Appears Promising

Panretinal photocoagulation and focal macular laser therapy have become the mainstay of managing of patients with diabetic retinopathy.

BY CONNI BERGMANN KOURY, EDITOR-IN-CHIEF

**T**he addition of intravitreal triamcinolone acetonide (IVTA) to panretinal photocoagulation (PRP) for managing patients with proliferative diabetic retinopathy (PDR) and clinically significant macular edema (CSME) appears promising.

Ziad F. Bashshur, MD, and colleagues from the American University of Beirut, recently reported in *Retina* results of an investigation of 35 eyes diagnosed with both high-risk PDR and CSME. They studied whether IVTA as an adjunctive therapy to PRP would be effective in these patients.

"Both the Diabetic Retinopathy Study [DRS] and the Early Treatment Diabetic Retinopathy Study [ETDRS] have made significant contributions to our knowledge and treatment of diabetic retinopathy," Dr. Bashshur wrote. "Although the DRS and ETDRS contain valuable information for managing eyes with coexistent PDR and macular edema, neither study gave clear recommendations for the subgroup of patients with high-risk PDR and CSME."

## A GAP IN TREATMENT GUIDELINES

The lack of clear recommendations, combined with the dearth of other multicenter controlled clinical trials, has left a gap in treatment guidelines for surgeons and a

Treating macular edema first with focal or grid laser may put the patient at risk of visual loss.

"relatively guarded" prognosis regarding the maintenance and improvement of visual acuity for patients, the researchers wrote. PRP tends to cause worsening of CSME, leading to further visual acuity loss and a real problem for managing patients. "Conversely, treating macular edema first with focal or grid laser therapy [Figure 1] may put the patient at risk of severe visual loss from PDR while waiting for macular treatment to show effect," the researchers said.

The 35-eye IVTA group underwent PRP and a single injection of 4 mg IVTA. The investigators documented visual, anatomic and fluorescein angiographic changes. Complications arising from the combined procedures were noted as well. These data were retrospectively compared with 35 eyes that underwent grid laser treatment to the macula followed by PRP 2 weeks later (laser group).

The main outcome measures were change in BCVA,

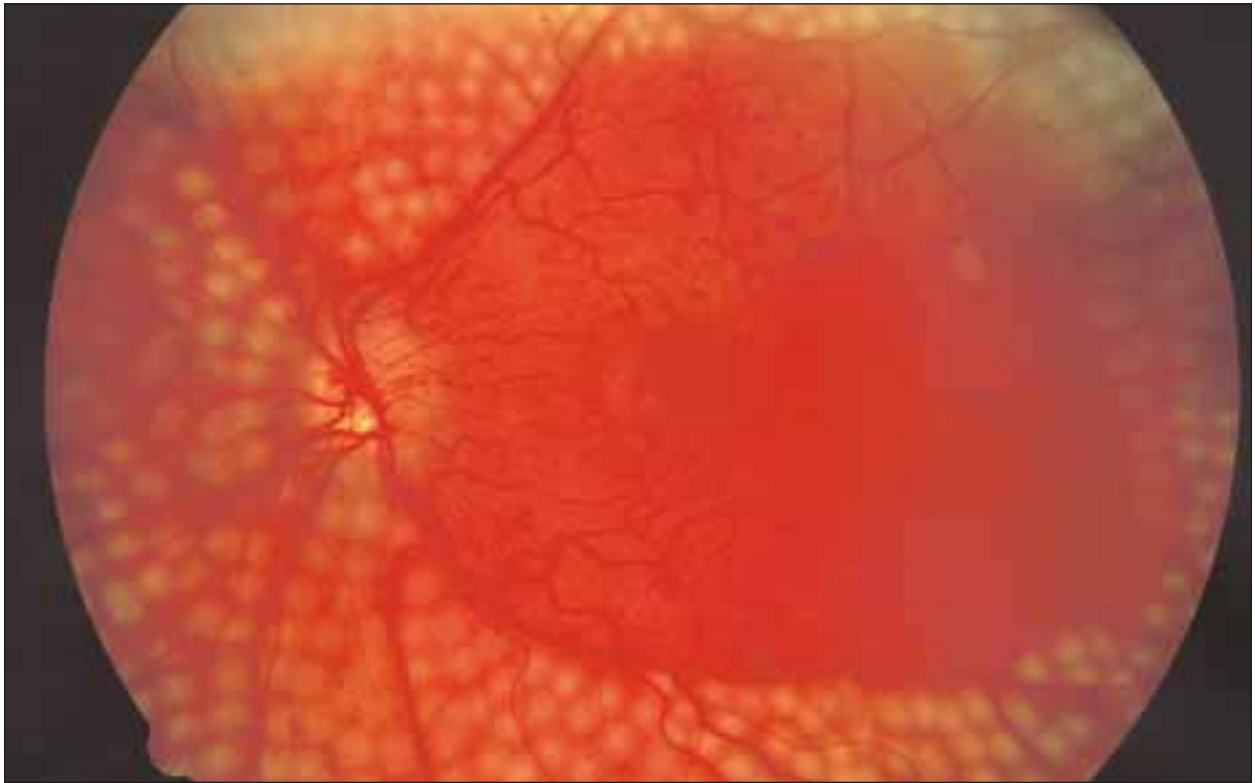


Figure 1. This fundus photo shows focal laser surgery for diabetic retinopathy.

improvement in macular edema and control of neovascular disease.

### OUTCOME MEASURES

Patients who had IVTA treatment were followed for a mean of 9.6 months and laser-treated patients were followed for a mean of 11.9 months. Pretreatment, the mean BCVA was 20/286 in the IVTA group and 20/282 in the laser group ( $P=.80$ ). After 9 months of follow-up, visual acuity was 20/80 in the IVTA group and 20/156 in the laser group ( $P=.007$ ).

"Thirty-four percent of eyes in the IVTA group had final vision of 20/40 or better versus 11% in the laser group ( $P=.044$ )," Dr. Bashshur said. "At 9 months follow-up, 84% of IVTA eyes had complete resolution of macular edema versus 46% of laser eyes ( $P=.002$ )."

In the IVTA group, three eyes had recurrence of macular edema after 6 months and required reinjection of IVTA. Eight eyes in the IVTA group had elevated IOP that responded to topical therapy; cataract progression was observed in nine of the IVTA eyes.

### USE OF IVTA IS POPULAR

"Intravitreal steroid injection for the treatment of diabetic macular edema is a relatively recent addition to the

therapeutic options available to the ophthalmologist," the investigators wrote. "No major randomized controlled trial has been published as of yet, but the use of IVTA has become increasingly popular, especially in view of the visual improvement noted."

Combined PRP and IVTA stabilized or improved visual acuity with a decrease in macular edema in the short term for the majority of cases in this study. "This by itself was a significant finding since PRP may worsen macular edema and cause worsening of visual acuity," they wrote. Another significant finding, according to the investigators, was stability of the proliferative disease and control of neovascularization.

This study is intended as a pilot study, and as such has many shortcomings. Further controlled trials in the future may shed more light on this method of treating diabetic retinopathy, the authors concluded. ■

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