Xenon-arc light assisted pars plana vitrectomy in proliferative diabetic vitreoretinopathy

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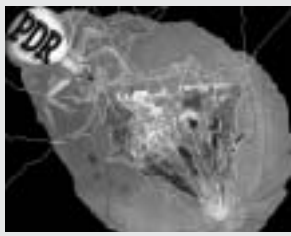

Purpose:
To assess the efficacy and safety of xenon-arc light assisted bimanual vitreoretinal surgery in eyes with proliferative diabetic vitreoretinopathy.

Methods:
Ten consecutive eyes of 10 patients with proliferative diabetic vitreoretinopathy were included in this prospective noncomparative interventional case series. All patients underwent a 20 G or 25 G three-port-pars plana vitrectomy with bimanual removal of fibrovascular epiretinal membranes and vitreous using a novel xenon-arc light source combined with various implantable chandelier light endoilluminators. We documented intraoperative und postoperative course, complications, and visual outcome. Patient follow-up ranged from 3 to 6 months.

Results:
The combined xenon-arc-chandelier light endoillumination technique alone was sufficient to perform all surgical procedures including the removal of epiretinal membranes in all cases. No additional light sources were required. Best corrected visual acuity was improved or stabilized in 7 patients. We observed no major complications.

Conclusion:
The described technique for wide field endoillumination appears to provide an excellent visualization of the vitreous base, pars plana and retina during vitrectomy and may allow 20 G and 25 G bimanual vitreoretinal surgery for the removal of epiretinal membranes associated with proliferative diabetic vitreoretinopathy. No special instrumentation or alteration in pars plana vitrectomy techniques is required.

Take-home message:
The combined xenon-arc-chandelier light endoillumination technique appears to be a safe and effective advance in the treatment of complicated vitreoretinal diseases requiring extensive bimanual vitreoretinal surgery.