

Long-term Outcomes of Vitrectomy for Diabetic Tractional Retinal Detachment

John O. Mason III, MD
Scott McClure, MS-4

FINANCIAL DISCLOSURES

- John O. Mason III, Castle Biosciences

SUMMARY

- We analyzed 140 consecutive eyes of 126 patients who underwent surgery for diabetic TRD with at least 6 month's follow up (mean 26 months).
- Our results showed that vitrectomy for diabetic TRD is effective in maintaining anatomic reattachment and improved BCVA over the long term.

PURPOSE

- To evaluate the long-term visual and anatomic outcomes of 25G PPV for diabetic tractional retinal detachment (TRD).

METHODS

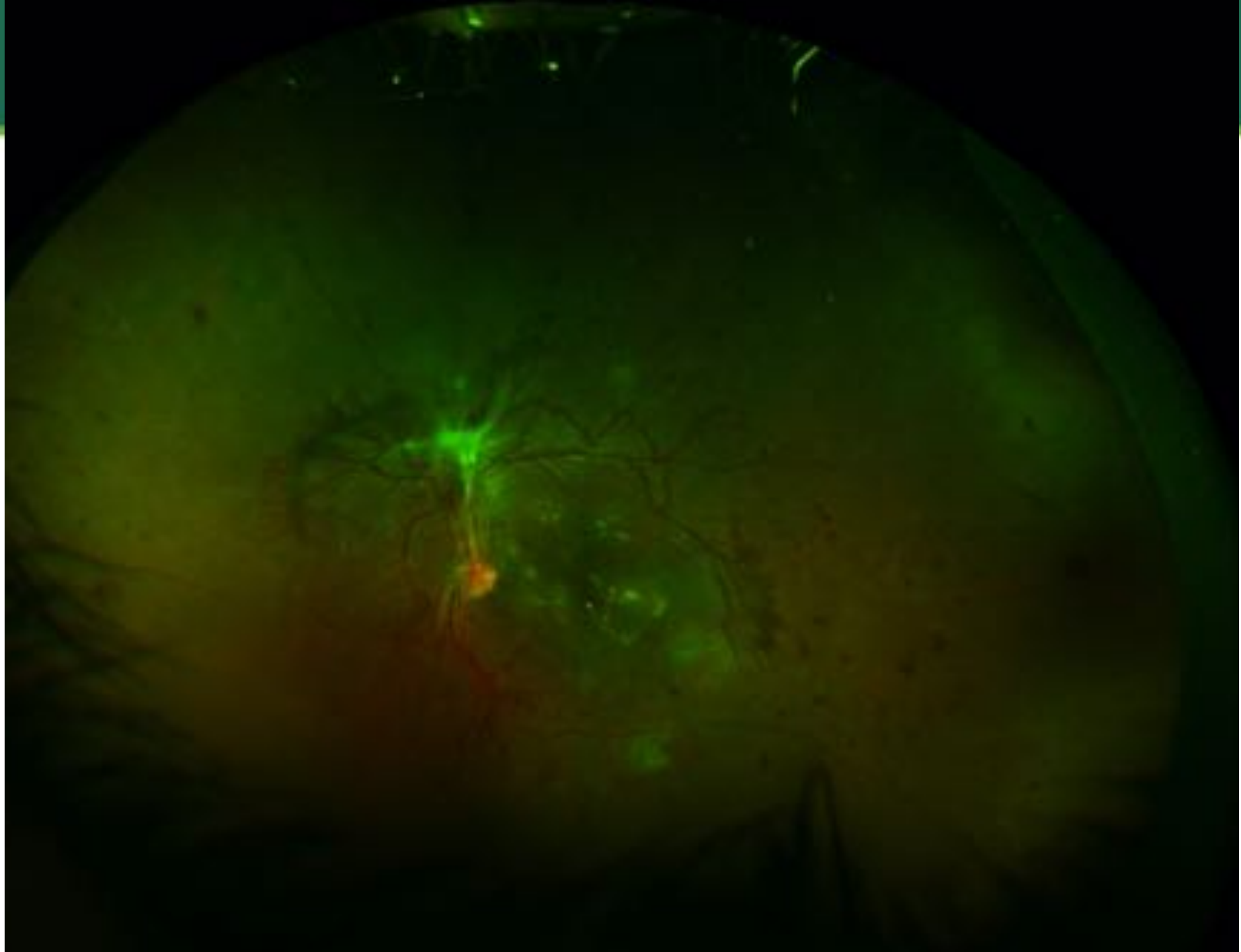
- Retrospective review of 126 consecutive patients (140 eyes) receiving PPV for diabetic TRD between January 1, 2015 and December 31, 2017 at a single retina center.
- Only patients with a minimum 6 months of postsurgical follow up were included.
- Demographic data, pre-and post BCVA, and anatomic outcomes were analyzed.
- Main outcome measures were post-op BCVA and anatomic reattachment.

RESULTS:

- Mean length of follow up for 126 patients (140 eyes) was 26 months (6-51).
- 97 percent of eyes were attached at final follow up.
- 69 percent of eyes were stable or improved from presurgical BCVA at final follow up.
- BCVA improved from mean logMAR 1.10 (20/250 Snellen) before surgery to logMAR 0.81 (20/130) at final follow up [p=0.001].
- Final BCVA was 0.77 logMAR (20/120) for eyes with only one surgery (80%) and 1.08 logMAR (20/240) for eyes requiring at least one reoperation (20%) [p=0.033].

RESULTS

- 22 eyes received SF₆ gas, 1 received C₃F₈, and 28 received silicone oil.
- Eyes receiving oil had worse mean final BCVA of logMAR 1.49 (20/600) compared to logMAR 0.73 (20/110) in those receiving neither oil nor gas [$p < 0.001$].
- Those receiving gas had a final BCVA of logMAR 0.73 (20/110) and were similar to the group receiving neither oil nor gas [$p = 0.98$].



CONCLUSIONS

- This study includes the largest number of patients to date with long-term follow up undergoing PPV for diabetic TRD with a final attachment rate of 97 percent, and statistically significant and continued improved mean BCVA at final follow up.
- Patients who require only one surgery tend to have better visual outcomes than those in whom reoperation is required.
- Those receiving silicone oil tamponade have worse long-term visual outcomes than those receiving gas or neither agent.
- These results confirm the long term benefit of surgery for patients with diabetic TRD.