Purpose: We aimed to detect the safety and affectivity of the combination of phacoemulsification surgery and IVTA injection with or without macular grid laser photocoagulation after surgery.

Patients and Methods: This prospective study included 41 eyes of 36 diabetic patients with CSMO and concurrent cataract. At baseline examination, best corrected visual acuity (BCVA), central macular thickness, and intraocular pressure (IOP) were documented. The enrolled eyes were divided into two groups, the laser and IVTA group (Group 1) and only the IVTA group (Group 2).

Results: A total of 41 eyes of 36 patients, between ages 54 and 79 (mean age 66.39) included in our study. 22 of them are women (%53.7) and 19 of them are (%46.3) man. Comparing the two groups, preoperative BCVA and postoperative BCVA on the first postoperative day, 1st week, 2nd week, 8th week, 12th week are not statistically significant (p>0.05). Best corrected visual acuity in the eyes in group 1 are statistically significant higher from group 2 after 6th months surgery (p<0.01). No injection related complications, including vitreus hemorrhage, infectious endophthalmitis, retinal detachment were encountered.

Conclusion: Depending on our study phacoemulsification combined with IVTA injection improves the BCVA in diabetic patients with macular edema .This improvement is statistically significant. In addition to this therapy macular grid laser photocoagulation after surgery helps to preserve the improvement in BCVA and the decrease in OCT values.