Introduction: Diabetic macular edema (DME) is the most common cause of visual impairment in patients with diabetes mellitus. The benchmark treatment has been laser photocoagulation and anti-angiogenics however not all patients achieve significant improvements in visual acuity. In cases of persistent DME, intravitreal corticosteroid implants have shown a sustained release of the drug with need of a lower number of injections. Iluvien is a nonbioerodable intravitreal implant that releases sub-microgram doses of fluocinolone acetonide (FAc). The FAME study showed a significantly long and effective therapeutic effect of FAc in chronic DME patients although with some steroid-related ocular side effects such as ocular hypertension and cataract.

We aimed to evaluate the efficacy and safety results of FAc 3 months after the intravitreal implant administration in a real-life setting.

Materials and Methods: Six eyes (2 phakic and 4 pseudophakic) of 3 male patients were retrospectively analyzed at baseline and at months 1 and 3 after Iluvien implant. For evaluation of efficacy, best corrected visual acuity (BCVA), central macular thickness (CMT) and macular volume (MV) were measured. The safety analysis included the report of adverse events and the intraocular pressure (IOP) measurement.

Results: Duration of DME was 2.5±1.4 (mean±standard deviation) years. Mean age was 72.7±4.6 years. Previous treatments included laser, ranibizumab and/or dexamethasone. None of the patients was vitrectomized. A statistical significant mean BCVA improvement was found from baseline to last observation, respectively 46.66±8.84 to 59.50±11.14 letters (p=0.028). Regarding CMT, improvement was from 574.50±151.05 to 344.83±63.78 μm (p=0.043) and MV decreased consistently during the studied period (p=0.043). Concerning safety assessments, IOP increased from 12.16±2.31 to 13.00±3.52 mmHg (p=0.683). There were no documented adverse events.

Conclusions: Additional treatment options are needed for DME. In this light, novel therapies have been developed in recent years which show promising results. Our study, although short-termed, shows that long acting therapies with a continuous low dose release steroids, such as iluvien, are useful in the treatment of DME.