

عنوان مقاله:

Effects of repeated intravitreal bevacizumab administration on anterior segment parameters and limbal stem cells

محل انتشار:

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**Abstract Background:** Macular edema (ME) is fluid accumulation in the macula caused by vascular leakage. Repeated intravitreal bevacizumab (IVB) injections are extensively used to treat ME of different origins, are well tolerated, and have few side effects. This study evaluated the effects of repeated IVB injections on the anterior segment parameters and limbal stem cells (LSCs) in eyes with ME. **Methods:** This before-after study involved patients with ME of different causes who underwent repeated IVB injections at the Imam Khomeini Ophthalmology Center in Kermanshah, Iran. Before and after repeated IVB injections, anterior segment parameters were measured using anterior segment optical coherence tomography, and the LSCs were assessed using impression cytology. **Results:** We enrolled 42 eyes of 42 patients with a mean (standard deviation [SD]) age of 59.6 (7.6) years, of whom 25 (59.5%) were men and 17 (40.5%) were women. The underlying diseases included diabetic ME in 30 eyes (71.4%), central (5 [11.9%]) or branch (3 [7.1%]) retinal vein occlusion, and choroidal neovascularization in 4 eyes (9.5%). The right eye was affected in 22 (52.4%) participants. The mean (SD) number of IVB injections was 4.3 (1.3). After repeated injections, the mean central corneal thickness (CCT) increased, whereas the mean anterior chamber angle (ACA) and anterior chamber depth (ACD) decreased (all  $P < 0.001$ ). Three patients developed LSC deficiency after repeated IVB injections for diabetic ME. **Conclusions:** We observed a significant increase in the mean CCT and a decrease in the mean ACA and ACD after repeated IVB injections in our series. Three patients developed LSC deficiency after repeated IVB injections for diabetic ME management. The observed effect on LSC may cast doubt on the safety of repeated IVB injections; however, this finding must be verified in multicenter clinical trials with longer follow-up periods and larger study samples. **Keywords:** Avastin bevacizumab-awwb optical coherence tomography corneal thickness measurement anterior chambers limbal stem cell limbal stem cell deficiency

کلمات کلیدی:

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