Effect of single subconjunctival injection of bevacizumab on primary pterygium: clinical, histopathological and immunohistochemical study.

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Abstract:

AIM: To evaluate the effect (clinically, histopathologically and immunohistochemically) and safety of a single intra- pterygium injection of bevacizumab. METHODS: Prospective interventional study comprised 40 eyes of 40 patients with primary fleshy pterygia who attended the Outpatient Clinic of Department of Ophthalmology, Assiut University Hospitals, Egypt from May 2015 to May 2016. Patients were randomly classified into 2 groups: the first group received a single intralesional injection of bevacizumab (Avastin; Genentech, San Francisco, CA, USA); the second group comprised patients who did not receive subconjunctival bevacizumab. Excision of pterygium and conjunctival auto graft was done in both groups. The excised pterygium tissues were subjected to histopathological and immunohistochemical evaluation. RESULTS: The study comprised 40 eyes of 40 patients (33 men, 7 women) of age range from 31-58y. The study group included 22 eyes. The control group included 18 eyes. A decrease in the vascularity of the pterygium was noted in all injected cases. The mean vessel count was higher in non-injected pterygia than that in injected pterygia and the difference was statistically significant (P=0.001). Also, the mean vessel count in both groups was significantly higher than normal conjunctive (P=0.005 and 0.001). A statistically significant difference in vascular endothelial growth factor (VEGF) expression between injected and non-injected cases was detected in the epithelial, stromal and endothelial cells (P=0.0001, 0.016, 0.014). No serious intraoperative complications occurred in both groups. CONCLUSION: The use of single intralesional injection of Avastin in pterygium decreased vascularity and decreased VEGF expression in injected pterygium after one month. Our study proved the effect of single intralesional injection of Avastin on pterygium. Further studies may enable limiting the need for surgery and improve quality of life for patients with pterygia.

Keywords:

bevacizumab; pterygium; vascularity; vessel count

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