

COMPARISON OF TWO METHODS OF MORPHOLOGICAL ANALYSIS OF THE FILTERING BLEB WITH SYMPTOMS OF FAILURE

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Bleb failure most commonly results from excessive healing caused by fibroblast proliferation and subconjunctival fibrosis. During the first 2 days after surgery, the normal bleb is elevated and pale; its abundantly vascularized surface is always suggestive of poor prognosis. The success of trabeculectomy is the formation of a spongy, diffuse bleb. Purpose: The aim of the study was to compare two methods of morphological analysis of vascular surface of the filtering bleb. Methods: Statistical analysis involved 11 patients after trabeculectomy who developed early postoperative bleb failure, i.e. bleb congestion. Blebs were photographed on postoperative day 2, 2 weeks, 1,3, and 6 months after surgery. Based on images, complete morphological analysis of the bleb was carried out by the automated and manual method using Image J program (www.imagej.net). Results: It turns out that early postoperative bleb failure occurs when mean vascular surface exceeds 20% of the entire area. No statistically significant difference was found between the automated and manual method as for the mean vascular surface of the filtering bleb on day 1 after surgery, 2 weeks, 1,3 and 6 months after surgery. Conclusions: Both methods are appropriate for complete morphological analysis of filtering blebs without any statistically significant differences between them. NO financial disclosure.