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超高分辨率眼前节OCT评价翼状胬肉术后绷带式角膜接触镜的治疗效果

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An evaluation of the therapeutic effect of the bandage contact lenses after pterygium surgery using ultra-high resolution optical coherence tomography

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摘要 图/表 参考文献(11) 相关文章 (15)

摘要

目的 应用超高分辨率眼前节OCT（UHR-OCT）技术评价翼状胬肉术后绷带式角膜接触镜（BCL）的治疗效果。方法 前瞻性病例对照研究。选取行翼状胬肉切除联合自体结膜移植术的患者60例（60眼）。随机分成2组：观察组和对照组各30眼，观察组在手术末予配戴博士伦纯视BCL 1片。术后连续3 d，之后隔天复查至角膜上皮完全愈合，用UHR-OCT扫描评价角膜上皮愈合情况，最终愈合通过荧光素染色确认。术后疼痛值采用视觉模拟评分法（VAS）。2组间的上皮愈合时间比较采用独立样本t检验，VAS疼痛值的比较采用Mann-Whitney U检验。结果 观察组所有患者均成功地配戴BCL，无一例出现角膜接触镜相关并发症。在戴镜情况下，UHR-OCT清晰地显示术后角膜的超微形态学特征，连续扫描显示角膜上皮的动态愈合过程。UHR-OCT判断的角膜上皮愈合与荧光素染色结果具有高度一致性（符合率为95%）。基于UHR-OCT的评估，角膜上皮愈合平均时间观察组为（3.7±1.2）d，对照组为（4.8±1.5）d（t=16.78，P＜0.01）。观察组的VAS疼痛值在术后各个时间点均显著低于对照组（Z=-4.75、-3.84、-2.96、-2.52、-1.98，P均<0.05）。结论 BCL可明显缩短翼状胬肉术后角膜上皮修复时间，减少术后疼痛，可作为胬肉术后的辅助治疗措施。UHR-OCT作为一种非接触式检查手段，是监测胬肉术后角膜上皮愈合的理想工具，可为适时取出BCL提供参考。

关键词 ： 翼状胬肉， 接触镜,亲水性， 体层摄影术,光学相干， 角膜

Abstract :

Objective To evaluate the therapeutic effect of the bandage contact lens （BCL） using ultra-high resolution optical coherence tomography （UHR-OCT） after pterygium surgery. Methods Prospective case-control study. Sixty eyes of 60 patients undergoing pterygium excision and conjunctival autografting were randomly allocated into 2 groups： 30 eyes were covered with silicone hydrogel BCLs at the conclusion of surgery and 30 eyes served as a control. UHR-OCT scans of the cornea were performed sequentially on day 1， day 2， day 3， and then every other day until the end of re-epithelialization after surgery. Complete corneal epithelial healing was verified with fluorescein staining after removal of the BCLs. Post-surgical pain was evaluated using the visual analogue scale （VAS）. An independent t test and a Mann-Whitney U test were used. Results All BCLs were successfully fit without any contact lens-related complications. UHR-OCT images clearly revealed the architectural features of the postoperative cornea with BCL in situ and showed the epithelial healing process. UHR-OCT imaging highly agreed with the fluorescein staining in detecting corneal epithelial defects （95%）. Based on the assessment by UHR-OCT， the average time line for re-epithelialization in the BCL group was 3.7±1.2 days while in the control group it was 4.8±1.5 days （t=16.78， P<0.01）. VAS scores reported lower pain levels in the BCL group compared to the control group at each time point （Z=-4.75， -3.84， -2.96， -2.52， -1.98， all P<0.05）. Conclusion Silicone hydrogel BCL is recommended as an adjuvant therapy after pterygium surgery for its efficacy in improving re-epithelialization and postoperative comfort. UHR-OCT is an excellent tool in monitoring corneal epithelial healing under BCLs and determining the appropriate time for lens removal.

Key words ： Pterygium Contact lenses,hydrophilic Optical coherence,tomography Cornea

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