

论著

## 角膜干细胞重建眼表后泪膜稳定性改变的试验研究

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**摘要** 目的: 研究角膜缘干细胞重建眼表术后泪膜生理功能改变, 探讨利用角膜缘干细胞移植重建眼表的有效性和评价指标。方法: 以健康雄性新西兰兔为实验对象, 取左眼角膜缘干细胞体外培养, 然后进行眼表重建, 观察泪膜生理功能改变情况。结果: 采用羊膜为载体培养角膜缘干细胞, 移植修复眼表结构后, 眼表细胞形态与烧伤前相似; 泪膜破裂时间测试, 修复后与烧伤后有显著差异( $P < 0.05$ ), 修复后与烧伤前无显著差异 ( $P > 0.05$ )。结论: 利用角膜缘干细胞培养可能是重建眼表有效途径, 修复后细胞结构形态和泪膜生理功能恢复良好; 眼表细胞结构形态分析和泪膜破裂时间是良好的眼表重建疗效分析指标。

**关键词** [干细胞](#); [角膜](#)

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## Changes of tear film stability after rebuilding ocular surface with corneal stem cells

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### Abstract

<FONT face=Verdana>AIM: To study the physiological function changes of the tears film after rebuilding ocular surface with corneal stem cells, and to discuss the validity and the estimate system of rebuilding ocular surface with the corneal stem cells. METHODS: The male New Zealand rabbits were used to establish the alkali burning model in the right eye. The corneal stem cells of the left eye were cultured on the amniotic membrane in vivo, and then transplanted to the right eye.

Furthermore, the physiological function changes of the tear film were examined. RESULTS: Compared to the before alkali burning, the ocular surface cell morphology was similar after rebuilding ocular surface with the corneal stem cells, which were cultured on the amniotic membrane in vivo; The tear film breakup time test showed the a remarkable difference between after and before the alkali burning, but the cell modality after rebuilding had no remarkable difference compared to that before the alkali burning. CONCLUSIONS: It's an effective method to rebuild the ocular surface with the corneal stem cells in vivo, the cell framework and the physiological function of the tears film recover well after rebuilding. It may be a validity estimate system of rebuilding ocular surface to analyze framework and configuration of the ocular surface and test the tear film breakup time.</FONT>

**Key words** [Stem cells](#) [Cornea](#)

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