( ) R1 ( ) R2 ( ) R3 (X) PG0 ( ) PG1 ( ) Estagiário ( ) Tecnólogo ( )
PIBIC Last Name - Marinho First Name - Diane Middle - Ruschel

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Does amniotic membrane improve the outcome of autologous limbal transplantation? Marinho, D.R.; Lima, A.L.H.; Kwitko, S.

Purpose: To evaluate the benefits of associating human amniotic membrane (AM) to autologous limbal transplantation (ALT) in chemical burns. Methods: Thirty eyes of thirty rabbits underwent a chemical burn with NaOH 1 N to create features of limbal deficiency. Forty-five days after the burns, the animals were randomized in 3 groups of ten rabbits each. The eyes from group 1 were treated with ALT, group 2 underwent ALT associated with AM and the control eyes were not operated. Corneal vascularization and opacity were documented in the post-operative period with external pictures at 30, 60 and 90 days.The rabbits were sacrificed three months after the surgery and the corneas divided in two halves. For each animal, one half of the cornea was prepared for hematoxilin-eosine and PAS stainings. The other half was prepared with frozen sections for imunohistochemical analysis with AM3 and AE5 monoclonal antibodies. Limbal deficiency was measured by positiveness to the monoclonal antibodies. The final clinical appearance was also evaluated and scored. Results: After the chemical burn, all groups presented similar degrees of conjunctivalization. After the treatment, the corneal vascularization was worst in the control group at sixty and ninety days ($P<0,001$). Thirty days after the treatment,the eyes from group 1 had less corneal opacity ($P<0,05$). The corneal opacities were worse in the control eyes while the results were equivalent in groups 1 and 2 ninety days after the treatment ($P<0,05$). Limbal deficiency was significantly worst among controls ($P<0,05$) and similar between the operated groups. Corneal phenotype was present in 70% of the eyes from group 1 and 50% from group 2. In the control group there was a prevalence of conjunctival phenotype in 70% of the cases. Clinical success with clear corneas was significantly higher in group 1, followed by group 2 and controls ($P<0,001$). Conclusion: Our study was not able to detect a benefit effect in associating AM to ALT in the treatment of unilateral chemical burns in rabbits.