

ABSTRACT

**TRIAMCINOLONE ACETONIDE EFFECT ON INFLAMMATORY
RESPONSE AND EXPRESSION OF COLLAGEN TYPE I AFTER
STRABISMUS SURGERY**

(Experimental Study in *Oryctolagus Cuniculus*)

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Objective : to determine the effect of triamcinolone acetonide as an antifibrotic agent on inflammatory response and collagen type I after strabismus surgery in rabbit

Material and methods : Thirty six eyes of male New Zealand white rabbits divided by two groups, 18 rabbits eyes in control group and 18 rabbits eyes in treatment group. Control group underwent recess musculus rektus superior and irrigation of balanced salt solution in reattachment site. Treatment group underwent strabismus surgery and irrigation Triamcinolone Acetonide (TCA) (Flamicort ® Dexa-medica)(40 mg/ml) 0,15 ml (6 mg). They were terminated on 15 postoperative days. Staining Hematoxylin & Eosin were performed to evaluate inflammatory response and immunohistochemistry using a monoclonal antibody *Collagen I Alpha 2 Antibody* (LS-C352030, LifeSpan BioSciences, Inc) was performed to evaluate collagen type I expression.

Results : This study showed of inflammatory response decreased and statistically significant in the treatment group ($p=0.002$, $p<0.05$). Expression of type I collagen obtained a decrease in the treatment group compared to BSS group ($p=0.004$, $p<0.05$)

Conclusion : Triamcinolone Acetonide (TCA) 40 mg/ml is one of therapeutic approaches that aims to reduce fibrosis after strabismus surgery by inhibiting the accumulation of inflammatory cells activation and suppressing of type I collagen deposition.

Keywords : Triamcinolone Acetonide, strabismus surgery, fibrosis, inflammatory response, type I collagen