ABSTRACT

" COMPARISON BETWEEN SCHIRMER-I AFTER INSTILLATION OF TIMOLOL 0,5% EYEDROP WITH AND WITHOUT PRESERVATING AGENT BENZALKONIUM CHLORIDE 0.01%"

(Experimental study on *Oryctolagus cuniculus*)

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Objective : To study the comparison of Schirmer-I result after instillation of 0,5% timolol with and without preservative for two weeks on New Zealand white rabbit (*Oryctolagus cuniculus*).

Methods : This an experimental study on twenty healthy New Zealand male rabbits (*Oryctolagus cuniculus*), weighing between 2.5 to 3.5 kg, to 2 groups. Ten rabbits was given 0.5 % timolol eyedrop with Benzalkonium chlorida (BAC) 0.01% as preservative and ten rabbits was given 0.5% timolol without preservative for two weeks. Schirmer-I result was done on day 0, 3rd, 5th, $7^{th,}$ and $14^{th.}$

Result : There was significant decrease of Schirmer-I result in both groups from day 3, day 5, day 7, and day 14 (p = 0.000). However the preservative group showed a significantly larger decrease in Schirmer-I compare to non preservative group. Significant difference was found on Schirmer I on day 3 (p=0.013), day 5 (p=0.002), day 7 (p=0.000) between preservative and non preservative groups.

Conclusions : This study shows a difference in Schirmer-I result between the preservative group (0.5% timolol with preservative agent Benzalkonium chlorida (BAC) 0.01%) and non preservative group. Timolol itself can decrease Schirmer-I test result, but the additional preservative showed more significant decrease in Schirmer-I.

Keywords : New Zealand Rabbit, Schirmer -I tear test, 0.5% Timolol , Benzalkonium Chloride (BAC) 0,01%