

ABSTRACT

Therapy Response Comparison Between Autologous Serum 20 % and Platelet Rich Plasma 20 % on Cornea Post Sodium Hydroxide Exposure

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Objective: to compare therapy response between autologous serum 20 % and platelet rich plasma 20 % on cornea post sodium hydroxide exposure.

Methods: a true experimental study with 2 groups post test design on New Zealand white hare's eyes. The hares that fulfilled inclusion criteria were 18, then they are divided into 2 groups. The right eye from both groups was exposed with 1 N sodium hydroxide for 60 seconds. The first group will be treated with autologous serum 20 %, while the second group will be treated with autologous platelet rich plasma 20 %, then will be evaluated for 7 days. Decreased corneal opacity degree and corneal epithelium defect area will be assessed. On the seventh day, corneal tissue will be collected for histopathology examination to evaluate corneal thickness and numbers of epithelium layer. The result will be analyzed, ratio scaled data will be tested by t-test, and ordinal scaled data will be tested by Mann-Whitney test.

Result: statistical analysis result showed the group that treated with platelet rich plasma 20 % had decreased corneal opacity degree and smaller corneal epithelium defect area. Histopathology examination showed that regeneration of epithelium layer and corneal thickness on group that treated with platelet rich plasma 20 % was better.

Conclusion: platelet rich plasma 20 % eye drop can be used as one of adjuvant therapy on chemical ocular injury management.

Keywords: chemical ocular injury, autologous serum, platelet rich plasma