

## عنوان مقاله:

Effects of Aloe Vera Gel-Derived Eye Drops on Alkaline Burned Corneas in Rabbits

## محل انتشار:

هشتمین همایش تحقیقات چشم پزشکی و علوم بینایی ایران (سال: 1397)

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## خلاصه مقاله:

**Purpose:** To investigate the efficacy of topical Aloe Vera gel-derived eye drops on the healing of alkaline-burned corneas in rabbits. **Methods:** Thirty alkaline burned corneas from 30 New Zealand albino rabbits were categorized into three groups: Aloe Vera (AV) treatment that received Aloe Vera gel-derived eye drops every 6h daily, medical therapy (MT), and controls. Clinical examinations together with digital photography of the corneas were performed on days 0, 1, 2, 4 and 7. The area of the corneal epithelial defect (CED) was measured using ImageJ software. After euthanizing the rabbits the affected corneas were evaluated for histopathologic examinations. Finally, the clinical and histopathologic results were compared between the groups. **Results:** None of the cases developed hypersensitivity reactions, limbal ischemia, Descemetocoele, or corneal perforation during study. CED area on days 2 and 7 was significantly less in AV group than MT ( $P = 0.007$  and  $P = 0.024$ , respectively) and controls ( $P = 0.003$  and  $P = 0.037$ , in that order). On histopathology, loss of keratocytes was notably less in the AV than the MT ( $P = 0.001$ ) and controls ( $P = 0.022$ ). However, the inflammatory response after alkali burn was increased in the AV group as compared to the controls ( $P = 0.028$ ). **Conclusion:** Short-term topical AV treatment is effective in healing alkaline-burned corneas and its therapeutic results in terms of enhanced corneal re-epithelialization are superior to those of MT, albeit the inflammatory response was not reduced by the AV gel-derived eye drops.

## کلمات کلیدی:

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