

**Effect of platelet-rich plasma on ultraviolet b-induced skin wrinkles in nude mice.** - Cho JM - *J Plast Reconstr Aesthet Surg* - 01-FEB-2011; 64(2): e31-9 (MEDLINE® is the source for the citation and abstract of this record )

**Abstract:**

**BACKGROUND:** Platelet-rich plasma (PRP) is researched and used in many clinical fields as it contains an abundance of various growth factors. Recently, a topical injection of PRP has been clinically tried for treatment of photoageing-related skin wrinkles. Nevertheless, there have been only a few studies including objective data or explaining the mechanisms of PRP. Therefore, the authors performed animal experiments to collect laboratory data and to infer the basal mechanism of the effect of PRP on skin rejuvenation.

**METHODS:** Mice photoaged by ultraviolet B (UVB) irradiation for 8 weeks were divided into three groups (no-treatment group, saline injected group and PRP-injected group) with 10 mice in each group. After 4 weeks, the degree of wrinkle formation was compared among three groups by replica analysis, and skin biopsies were performed. An additional in vitro assay with growth-factor-neutralising antibodies was performed to evaluate whether growth factors contained in PRP could accelerate fibroblast proliferation and collagen production, which may play a major role in skin rejuvenation.

**RESULTS:** The wrinkles in the PRP-injected group were significantly reduced than in the other groups. Biopsy results indicated that the dermal layer was remarkably thicker in the PRP-injection group. In in vitro assay, fibroblast proliferation and collagen production were increased in the experimental group through growth factors in the PRP.

**CONCLUSION:** Although more in vivo studies and research about the mechanism of PRP are required, the results of this study indicate that PRP is effective in the rejuvenation of photoaged skin.

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- Cell Proliferation

- Female
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