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Histomorphometrical study of the adult rats skin following injection of PRP and PPP

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In the last decades, the role of PRP (platelet-rich plasma) for the treatment of pattern hair loss has been demonstrated in many reports. PRP is a biological product that the therapeutic results have proven a significant difference compared with synthetic drugs and some traditional methods, in sports medicine, dermatology and beauty, healing of wounds. In this study, we aimed to evaluate the histomorphometrical properties of adult rat skin after injection of plasma. Thirty adult rats were divided into 3 groups. First group was control and treated with normal saline, and test groups were nominated as 2 and 3 and were treated with PPP and PRP. The blood samples were collected through cardiac puncture and were centrifuged. The upper layer consisted of platelet-poor plasma and lower layer consisted of platelet-rich plasma. The skin samples staining with H&E and Masson-trichrome-methods. The thickness of epidermis, dermis and hypodermis layers, thickness of epithelial hairs root sheath, maximum depth of hair follicles, thickness of the whole skin, the number of sebaceous glands and hair follicles in the specified scale, finally the number of Fibroblast cells and the percent distribution of connective tissue fibers were investigated in histometrical structure of the skin and skin appendages. The results of this study indicated that systematic and controlled PRP may have beneficial effects on the reconstruction and rehabilitation of the skin and its appendages. Present study showed that growth factors in plasma especially PRP, must have stimulated connective tissue fibroblasts of the dermal layer of the skin.

Biography

Ghazal Adibmoradi received his PhD in 1995 in Human Anatomy from University of Tehran, Iran. He was the Head of the Pathology Department for 8 years at the same university. He has published 4 books in the Human and Animal Pathology and Anatomy. He has also published over 20 international and national articles. He is currently a Professor at University of Tehran and teaches anatomy.

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