STRUCTURED REVIEW OF PLATELET RICH PLASMA IN SKIN REGENERATION AND REJUVENATION

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ABSTRACT

Wrinkles and folds are often defined as overt reminders of the aging process. There has been a growing interest in facial rejuvenation and 46% of cosmetic procedures are performed on people aged 35-50. We are moving toward a model of prevention and maintenance rather than correction.Cosmetic rejuvenation procedures involve injectable fillers, semi or non-permanent or permanent,botulinium toxin, ablative and non-ablative resurfacing procedures, phototherapy and radiofrequency.The purpose of this review is to investigate the effectiveness of platelet rich plasma (PRP) in skin regeneration and rejuvenation. The structured review considers the previous randomized controlled trials (RCTs), case control studies, case reports and longitudinal studies, in which PRP was administered for skin regeneration and rejuvenation. Studies which were not written in English language, animal studies, and small sample size less than 20 participants were excluded. A search of the English-language published papers (1970-2013) was conducted using MEDLINE, PUBMED, COCHRANE,EMBASE and Google scholar. Data was extracted from retrieved articles in a systematic manner by doing the research table.Summary data was categorized and tabulated for data analysis. Comparison of intervention, control and outcomes were noted. Then those data were synthesized in order to discuss in this paper.PRP treatment is a type of regenerative medicine that uses platelets to regenerate and rejuvenate skin. PRP uses the patient's own blood. α granules in the platelets contain growth factors and cytokines such as platelet-derived growth factor, transforming growth factor, betafibroblast growth factor, insulin-like growth factor 1, insulin-like growth factor 2, vascular endothelial growth factor, epidermal growth factor, Interleukin 8, keratinocyte growth factor, and connective tissue growth factor. PRP is autologous, hence elimination of donor transmissible infections and is non allergenic. PRP has drawn the attention of aesthetician for its ability to treat skin wrinkles, regenerate and rejuvenate skin. PRP increased type I collagen and MMPs gene expression, suggesting that PRP may have the potential to promote the remodelling of aged and photo damaged skin. More RCT case control studies are required to decide whether PRP produce beneficial effects in the skin.