



PRP in Facial Rejuvenation (Facts vs. Hypothesis)

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Editorial

Ageing is accompanied by a decline in the homeostatic and regenerative capacity of all tissues and organs. Biostimulation for new collagen, elastin, extracellular matrix and vascular network formation has the potential to restructure the skin and reverse the signs of aging [1]. In facial rejuvenation, dermal stimulation and augmentation represent the main facial target in aesthetic medicine. There are numerous exogenous fillers that may be used to obtain a fibrotic response at the dermal level, resulting in volume augmentation and rejuvenation [2]. Platelets in platelet-rich plasma (PRP) act as a storage pool for a vast number of growth factors. Once platelets are activated, growth factors are released in specific ratios and work in a specific order [3].

In recent years, platelet-rich plasma (PRP) has received extensive attention from oral surgery and craniofacial surgery specialties. PRP has been used in aesthetic medical procedures of skin rejuvenation possessing growth promoting properties to accelerate the repair of aged and damaged soft tissues. In the cosmetic field, prevention and treatment of skin ageing represent a driving force for technological innovations aiming at the improvement of such a condition with minimal downtime. Accordingly, PRP use is recommended for skin rejuvenation and shows superiority over readymade growth factors rich solution (mesotherapy). Although both are not FDA approved, PRP is a more effective and safe tool for combating ageing signs, owing to the significantly higher patient satisfaction, fewer side effects, and more sustainable results than in mesotherapy [4].

Since Sclafani's [5] successive clinical study that proved the PRP intradermal or subdermal injection treatment stimulates a number of cellular changes that achieve considerable aesthetic improvements, this has become a more popular application. Yuksel E, et al. [2] considered PRP application as a safe and effective choice as a cosmetic procedure for facial skin rejuvenation. This came in one line with Abuaf O, et al. [6] in their observations that found that PRP increases dermal collagen levels not only by growth factors, but also by skin needling (the mesotherapy technique 'point by point'). PRP application could be considered as an effective (even a single application) and safe procedure for facial skin rejuvenation. Elnehrawy et al [7] confirmed that single treatment with autologous PRP is well tolerated and can produce a significant correction of wrinkles, without development of excessive fibrosis, injection of foreign substance, or need for downtime.

It was found that the efficiency improves with younger patients and those with less severe grades of wrinkles. Nasolabial folds (NLFs) and fine wrinkles improved with the treatment, while there was no significant difference before and after treatment for deep wrinkles. PRP treatment has a statistically significant result on skin homogeneity and texture while the clinical and instrumental assessment made by Cameli N [8] showed that PRP applications could have a significant impact on

the clinical aspects of aesthetic treatment. The PRP preparation procedure used (Cascade method) made the technique reproducible and did not lead to any enrichment apart from platelets.

On the other hand, the potential utility of PRP therapies in the face and neck combined with other modalities such as lasers, radiofrequency, and autologous fat grafting are promising with an easy-to-use technique performing favorably in all small skin wrinkles, as well as in skin texture and elasticity. Good results were also observed in skin homogeneity. No serious and persistent side effects were detected. This technique was well tolerated and the objective clinical results were good. Patient's satisfaction was very high. The technique's exact mechanism of action has not yet been entirely clarified [9]. The significant outcomes for the injection of PRP and Hyaluronic Acid (HA) showed that biostimulation for facial rejuvenation and repair is possible. Growth factor and HA installation into the skin, and SMAS tissues with the additive effect of needling trauma for percutaneous collagen induction allowed us to obtain satisfactory results [10].

Hui Q et al [11] recently showed that PRP coating after ultra-pulsed fractional CO₂ laser therapy leads to pain relief and the combined application could not only effectively reduce facial wrinkles and texture, but also significantly relieve the coarse pores, pigmentation and erythema caused by laser therapy. In conclusion, PRP had a synergistic effect on the therapy for facial rejuvenation.

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