

A Unique Technique to Treat Comedones with the Combination of Platelet Rich Plasma with Microneedling on Face

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Abstract

Comedo is Latin word for Glutton. It is collectively known as Acne, white heads, black heads, pustules, pimples and infected cysts. We are presenting the two cases of comedones successfully treated with PRP and microneedling at our center.

Keywords: Atrophic; Concentrate; Comedones Management; Platelet; Platelet-Rich Plasma (PRP); Scar

Objective of the Study

Aim is to study the effect of PRP and Micro Needling in treatment of comedones.

Mechanism of action

PRP: The PRP's mechanism of action involves the release of powerful antimicrobial peptides from the platelets' alpha granules.

PRP is a promising adjunct in scar management practice. Further research with long-term follow-up is warranted to delineate the value of this modality in different subtypes of scars.

Microneedling: Collagen induction therapy. It enhance the PRP delivery in transdermal region. These micro injuries lead to minimal superficial bleeding and set up a wound healing cascade with release of various growth factors such as platelet derived growth factor (PGF), transforming growth factor alpha and beta (TGF- α and TGF- β), connective tissue activating protein, connective tissue growth factor, and fibroblast growth factor (FGF) [1]. The needles also breakdown the old hardened scar strands and allow it to revascularize. Neovascularization and neocollagenesis is initiated by migration and proliferation of fibroblasts and laying down of intercellular matrix [2,3]. A fibronectin matrix forms after 5 days of injury that determines the deposition of collagen resulting in skin tightening persisting for 5 - 7 years in the form of collagen III. The depth of neocollagenesis has been found to be 5 - 600 μ m with a 1.5 mm length needle. Histological examination of the skin treated with 4 microneedling sessions 1 month apart shows upto 400% increase in collagen and elastin deposition at 6 months postoperatively, with a thickened stratum spinosum and normal rete ridges at 1 year postoperatively [4]. Collagen fibre bundles ap-

pear to have a normal lattice pattern rather than parallel bundles as in scar tissue [5].

Case-I



Figure 1

Case-II



Figure 2



Figure 2

Conclusion

Microneedling is an effective modality of treatment, especially in patients with Fitzpatrick's IV and V skin types because it overcomes the side effects of scarring and hyperpigmentation resulting from other procedures in which the epidermis is compromised. It certainly promises to be a valuable technique with its numerous applications and its ever-expanding modifications as well as feasibility of home use.

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