

A Unique Technique to Treat Keloid with PRP

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Received: May 16, 2020

Published: June 18, 2020

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Abstract

Keloid is a healing process after skin injury in which extra scar tissue grows, forming smooth and hard growths. We are presenting a case of Keloid treated first time only with PRP.

Keywords: Keloid; Platelet-Rich Plasma

Objective of the Study

A case of keloid (Right) side face treated with platelet rich plasma (PRP) Injections. The objective of this case study is to evaluate the efficacy of the authors PRP therapy protocol for keloid treatment.

Mechanism of action

We hypothesised that a feedback mechanism of the transforming growth factor (TGF)- β 1 signalling pathway, triggered by high-level TGF- β 1, activates platelet-rich plasma (PRP) release to reduce connective tissue growth factor (CTGF) production and expression of CTGF mRNA in hypertrophic scar dermal fibroblasts.

Main outcome measure

For the purpose of this study, recurrence was defined as any sign of extraordinary erythema, induration, and hypertrophy beyond the site of excision.

Result

The keloids treated with 4 PRP injection at interval of 15 days between each injection, there is no evidence of recurrence. The size of keloid reduced around 90%.

Conclusion

Platelet Rich Plasma therapy achieved a 90% nonrecurrence rate at 1- to 3- month follow-up 4 injection at 15 days gap. This



Figure

protocol appears to be a safe and viable option in the management of keloids and merits further randomized controlled study of its comparative efficacy [1-14].

Bibliography

1. Mary Babu., *et al.* "Keloid fibroblasts exhibit an altered response to TGF- β ". *Journal of Investigative Dermatology* 99.5 (1992): 652-655.
2. Giogrio Pietramaggiore., *et al.* "Freeze-dried platelet-rich plasma shows beneficial healing properties in chronic wounds". *Wound Repair and Regeneration* 14.5 (2006): 573-580.

3. Klosova H., *et al.* "Objective evaluation of the effect of autologous platelet concentrate on post-operative scarring in deep burns". *Burns* 39.6 (2013): 1263-1276.
4. Lenie J van den Broek., *et al.* "Human hypertrophic and keloid scar models: principles, limitations and future challenges from a tissue engineering perspective". *Experimental Dermatology* 23.6 (2014): 382-386.
5. Obolenskiy VN., *et al.* "Efficacy of platelet rich plasma for the treatment of chronic wounds". *EWMA Journal* 14.1 (2014): 37-41.
6. Rose E Marck., *et al.* "Consideration on the use of platelet-rich plasma, specifically for burn treatment". *Journal of Burn Care and Research* 35.3 (2014): 219-227.
7. Woo SH., *et al.* "Favorable vocal fold wound healing induced by platelet-rich plasma injection". *Clinical and Experimental Otorhinolaryngology* 7.1 (2014): 47-52.
8. Obolenskiy VN., *et al.* "Efficacy of platelet rich plasma for the treatment of chronic wounds". *EWMA Journal* 14 (2014): 37-41.
9. Michael Eugene Jones., *et al.* "Head and neck keloid management: A retrospective early review on a new approach using surgical excision, platelet rich plasma and in office superficial photon X- ray radiation". *Edorium Journal of Otolaryngology* 2 (2015): 14-19.
10. Michael E Jones., *et al.* "Keloid management: a retrospective case review on a new approach using surgical excision, platelet-rich plasma, and in-office superficial photon X-ray radiation therapy". *Advances in Skin and Wound Care* 29.7 (2016): 303.
11. Rose E Marck., *et al.* "The application of platelet-rich plasma in the treatment of deep dermal burns: A randomized double-blind, Intra-patient controlled study". *Wound Repair and Regeneration* 24.4 (2016): 712-720.
12. Chunlin Chen., *et al.* "Three-dimensional poly lactic-co-glycolic acid scaffold containing autologous platelet-rich plasma supports keloid fibroblast growth and contributes to keloid formation". *Journal of Dermatological Science* 89.1 (2018): 67-76.
13. Osaid H Alser and Loannis Goutos. "The evidence behind the use of platelet-rich plasma (PRP) in scar management: a literature review". *Scars, Burns and Healing* 4 (2018): 2059513118808773.
14. Ehab Zaki Azzam., *et al.* "Treatment of auricular keloids by triple combination therapy: Surgical excision, platelet-rich plasma, and cryosurgery". *Journal of Cosmetic Dermatology* 17.3 (2018): 502-510.

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