







plus PRP and the left side was treated with microneedling plus vitamin C. Four sessions were performed with an interval of 1 month in between treatments. The Goodman and Baron Scale was used to assess treatment efficacy. Overall, both treatments led to improved outcomes, but in categorizing patients who demonstrated poor responses, a significantly larger percentage existed in the microneedling plus vitamin C group (37% [10/27]) versus the microneedling plus PRP group (22% [6/27])( $P=.021$ ). Additionally, aggregate patient satisfaction scores were higher with microneedling plus PRP relative to microneedling plus vitamin C ( $P=.01$ ). Of note, assessments of improvement were performed by the treating physician and patient satisfaction reports were completed with knowledge of the therapies and cost factor, which may have influenced results.<sup>20</sup>

## Conclusion

Microneedling therapy continues to evolve with a range of applications now emerging in dermatology. As PRP has gained popularity, there has been increased interest in its utilization to amplify the regenerative effects of microneedling. Although the number of direct comparisons examining microneedling with and without PRP is limited, the available evidence indicates that the addition of PRP may improve cosmetic outcomes. These results have been demonstrated primarily in the management of acne scars, but favorable effects may extend to other indications. Continued study is warranted to further quantify the degree of these benefits and to elucidate optimal treatment schedules.

In addition, it is important to consider a cost-benefit analysis of PRP. The price of PRP varies depending on the clinical site but in certain cases may double the cost of a microneedling treatment session. Although studies have demonstrated a statistically significant benefit to PRP, the clinical significance of this supplementary treatment must be weighed against the increased expense. A discussion should take place with the consideration that microneedling alone can provide a satisfactory result for some patients.

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