Laser in Burns Scar Management

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Background

Significant morbidity is seen in burns patients due to post burns scaring resulting in contractures, itch and suboptimal aesthetics. Laser therapy is becoming more common place in burns units and shows great promise when managing burns scars and their sequel.

Method

Pubmed was searched using the below search terms excluding non human studies, those not specific to laser therapy in burns scar management and studies prior to 2015 were also not included. This resulted in 9 studies being reviewed.

Search terms:

- Laser
- Burns
- Scar
- Management

Discussion

Laser is effective when used for management of vascularity, pigmentation and scar thickness secondary to burns scarring, with ablative fractionated lasers stated as being particularly effective in one literature review (1).

A randomised control trial has shown improvement in itch severity scoring systems and quality of life with high intensity laser therapy (2). 49 patients were included in another study that showed improvement in patient satisfaction following treatment with Erbium-YAG laser therapy (3).

Pulse dye laser is especially effective in managing erythematous and pruritic scars (4). Hypertrophic and uneven scarring can be particularly problematic in burns patients and fractional carbon dioxide (CO_2) lasers can be especially effective in their management (4).

Histological studies have also shown a reduction in collagen bundles and newly formed dermal papilla when using fractional CO_2 lasers (5).

Conclusion

Laser therapy shows great promise, but there is still a need for further robust clinical trials. Type of laser, side effects, scar characteristics and necessity for repeated sessions are all considerations when managing burn scars with laser therapy.

References

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