

Effectiveness Of Post Surgical Scar Management Techniques In Upper Extremity Patients

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BACKGROUND

The importance of this is to educate occupational therapists on the effectiveness of how to best treat post surgical scar management patients. Scar formation can be a side effect/ outcome when one undergoes a surgical procedure. There are two common types of scars that Therapists can help provide treatment/scar management with, these are Keloid and Hypertrophic scars.

Hypertrophic scars stay within the boundary of the initial injury site and usually occur after surgery or burns, whereas Keloid scars are scars that extend or go beyond the boundary of the initial surgical scar site. These typically happen after minor injuries. (O'Brien, & Jones, 2013).

If scars do not heal properly there can be some symptoms that may be experienced for Hypertrophic scars someone could experience itching, pain, pressure, and limited range of motion. (Kafka, Collins, Kamolz, Rappl, Branski, & Wurzer, 2017). However, both of the above mentioned type of scars can have adverse effects in ones functional and psychological well being as well. (O'Brien, & Jones, 2013).

That is why it is important for occupational therapists to be informed on best practice treatments to help address, prevent or limit these possible outcomes after one undergoes surgery or requires scar management.

Based on the research, there are many interventions available for treatment of scarring. Occupational Therapist can play a vital role in helping minimize the possibility of scarring by using scar massage, topical moisturizers/vitamin E, compression therapy, and silicone gel sheeting. Therefore, occupational therapist should use evidence based research when implementing interventions relating to post surgical scar management. It is important Occupational Therapists are informed on the evidence of treatments for scar management including: scar massage, topical moisturizers/vitamin E, compression therapy and silicone gel sheeting when providing treatment for patients with post surgical scars.

FOCUSED QUESTION

“What is the effectiveness of post scar management techniques in individuals who have undergone an upper extremity procedure?”

METHODS

A literature review was completed and the following Keyword phrases were used:

- post op management of scars for therapists systematic review
- scar massage systematic review
- scar management systemic review
- post surgical scar management systematic review
- silicone gel pads for scar management meta analysis
- systematic review silicone gel pads for scar management
- scar massage systematic review

Data bases used: 3

- Cochrane Database of Systematic Reviews
- EBSCOhost MEDLINE Complete
- EBSCOhost CINAHL Complete

Inclusion criteria:

Patients who have undergone surgery and will have post surgical scarring or require scar management

Exclusion criteria:

Patients who are not experiencing or needing post surgical scar management. Articles that are more than 10 years old. Studies that fall in levels II-IV and that are not written in English.

Quality control/peer review process:

The author conducted a literature search which included search engines stated above. The databases accessed were provided by Creighton University Health Science Library. All of these databases contain peer reviewed articles that are in well renowned and scholarly research journals.

Level of evidence: Level 1 (3 systematic reviews)

RESULTS

Summary of key findings:

-Scar massage (1 review)

The authors of this review found that 45.1% of patients in one of the studies had beneficial outcomes when using scar massage for scar management. However the authors did note that negative effects (bleeding, infections, graft failure and irritation) of scar massage therapy have also been reported (Tanaydin, Conings, Malyar, Van der Hulst, and Van der Lei, 2016).

-Topical Moisturizers/Vitamin E (1 review)

The authors noted that there was not significant evidence demonstrating the benefits of the sole use of vitamin E for treatment when treating scar appearance even though it is widely used. They also said their can be adverse side effects from the use of topical vitamin E which could impact the outcome on skin appearance. However, the authors did note that when vitamin E is used in combination therapy, there seems to be a positive effect on scar healing. (Tanaydin, Conings, Malyar, Van der Hulst, and Van der Lei, 2016).

-Compression therapy (1 review)

The authors noted that when the combination of silicone with pressure garments was used together in therapy there was a decrease in scar thickness and an improvement in pliability when compared with the control group. (Kafka, Collins, Kamolz, Rappl, Branski, & Wurzer, 2017).

-Silicone gel sheeting (all 3 reviews)

According to O'Brien, & Jones the study showed that there seemed to be less abnormal scars in high risk patients possibility of generating keloid or hypertrophic scars with improvement in scar color, softness and existing scars when using silicone gel sheeting. However, they noted their was a lack of quality research and this could shroud the results. (O'Brien, & Jones, 2013).

In this systematic review there was some improvement on the scar from use of silicone products, however there was not a huge difference in results attained when silicone products was referenced with the placebo or other therapies in the review. (Kafka, Collins, Kamolz, Rappl, Branski, & Wurzer, 2017).

In another systematic review the authors noted that there is weak evidence of benefits when using silicone gel sheeting to prevent abnormal scarring in high risk individuals. (Tanaydin, Conings, Malyar, Van der Hulst, and Van der Lei, 2016).

BOTTOM LINE FOR OT

As occupational therapists, it is important to address scar management/ healing with our patients as it can affect their functional activities due to decreased client factors of sensory functions (touch functions, pain, and sensitivity to temperature and pressure), neuromusculoskeletal and movement-related functions (joint mobility), and muscle functions (muscle power, muscle tone, and muscle endurance). By learning and incorporating evidence based best practice scar management techniques, clinicians can determine what techniques along with traditional therapy would be the most beneficial for the patient's healing. The issue can be addressed before it becomes even worse. This can affect participation and socialization within the patient's desired occupations. Occupational therapists can utilize scar massage, topical moisturizers/ vitamin E, compression/ pressure therapy, silicone gel sheeting as an additional treatment which could be beneficial for management of minimizing the amount of scarring for patients post surgery. Scar management techniques can be used along with other scar management techniques in combination therapy instead of just monotherapy which was noted in one of the systematic reviews. This showed that combination therapy could have better benefits than just the single use of one treatment option. However, It is important for practitioners to consult other resources for appropriate usage of the desired treatment and make informed decisions with the treatment they use when treating post surgical scar management.

REFERENCES

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