USE OF POLYMERIC MEMBRANE DRESSINGS IMMEDIATELY AFTER FRACTIONATED FACIAL LASER RESURFACING PROCEDURES IMPROVES OUTCOMES

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CASE SERIES

Use of Polymeric Membrane Dressings* Immediately After Fractionated Facial Laser† Resurfacing Procedures Improves Outcomes

PURPOSE:

Pain, edema, extensive drainage, scabbing, long lasting redness, pigment alterations, milia formation and delayed healing are common after extensive facial laser skin resurfacing and may contribute to the effective management of these outcomes is important in promoting early return to daily activities as well as achieving desired final outcomes.

RATIONALE:

The fractionated laser skin resurfacing system dramatically improves deep wrinkles, laxity, and sun-damaged skin using a highly reliable tabletop-art process that delivers thousands of laser pulses to the skin. Polymeric membrane dressings are non-adherent to the wound and actively draw wound fluid, which is known to contain natural growth factors and nutrients to the wound site. The dressings contain glycerol, which has been shown to stimulate the body’s natural healing processes through multiple mechanisms.

The active drawing of wound fluid to the dressing, combined with release of soluble components from the dressing continuously cleans the wound so manual cleansing during changing dressings is usually unnecessary. The reduction of manual cleansing during dressing changes reduces the risk of contaminating the wound during the change process and helps assure the newly forming tissues are not removed during a manual cleansing process.

Additionally, polymeric membrane dressings help reduce edema, pain, and inflammation when applied to burns, abrasions and other wounds. The dressings have also been shown to reduce inflammation, edema, bruising and pain when applied over injury sites where the skin is unbroken, such as sprains, strains and contusions. The dressings have been shown to achieve these results by altering the nociceptor response at and around the injury site. The nociceptor response to injury results in inflammation, edema, and bruising, as well as the sensations of pain, itching and burning at and around the site of injury.

METHODS:

Prospective case series analysis of 20 patients undergoing fractionated facial laser resurfacing was conducted.

Immediately following the procedure, appropriately sized sterile polymeric membrane dressings were applied to the face. The dressings were replaced at 24 hour intervals until the drainage stopped — usually 2 to 3 days. Usually the continuous cleansing provided by the dressing eliminated the need for manual cleansing during the initial healing which is marked with extensive drainage. After final removal of dressings, bismuth powder was applied daily for 3-5 days.

RESULTS:

The facial laser skin procedures were performed in 2 males and 18 females with an average age of 52 years (range 46-80). The use of the polymeric membrane dressings resulted in significant reduction in drainage, and edema. Use of the dressings eliminated scabbing which helps eliminate risk of scarring. The patients’ faces were free of discoloration allowing patients to greatly reduce and often eliminate post-procedure pain medication. The use of the dressings shortened the healing time to 6-7 days from the anticipated 10-21 days. The expected post-procedure severe skin redness was greatly reduced in 2-4 weeks compared to the customary 2-3 months. The dressings also reduced the bruising, itching and stingging often seen 12-72 hrs after the resurfacing procedure. Use of polymeric membrane dressings immediately after post-procedure skin pigmentation alterations, milia and post-procedure skin dryness patients often experience.

2 WKs AFTER PROCEDURE: Notice the excellent skin condition and excellent eye lift outcome.

METHODS:

A prospective case series analysis of 20 patients undergoing fractionated facial laser resurfacing was conducted.

1. Discuss the benefits of using a dressing that continuously cleanses the wound while helping to reduce pain, edema, inflammation, and bruising associated with fractional laser resurfacing procedures.

2. Indicate the evidence for the use of polymeric membrane dressings to decrease inflammation, edema, bruising and pain and relevance to plastic surgery practice.

LEARNING OBJECTIVES:

1. Discuss the benefits of using a dressing that continuously cleanses the wound while helping to reduce pain, edema, inflammation, and bruising associated with fractional laser resurfacing procedures.

2. Indicate the evidence for the use of polymeric membrane dressings to decrease inflammation, edema, bruising and pain and relevance to plastic surgery practice.

RESULTS:

The facial laser skin procedures were performed on 2 males and 18 females with an average age of 52 years (range 46-80). The use of the polymeric membrane dressings reduced edema, pain, and bruising associated with fractional laser resurfacing procedures.


4. Analyze and discuss the benefits of using a dressing that continuously cleanses the wound while helping to reduce pain, edema, inflammation, and bruising associated with fractional laser resurfacing procedures.

5. Indicate the evidence for the use of polymeric membrane dressings to decrease inflammation, edema, bruising and pain and relevance to plastic surgery practice.

BIBLIOGRAPHY:


