

Decreased Swelling and Bruising by Using Polymeric Membrane Dressings After Various Plastic Surgery Procedures on 23 Patients

Edda Skrinjar MD, Doris Spreitzer MD, Plastic Surgery, Baden, Austria

info@doris-spreitzer.at
edda.skrinjar@wienkav.at

INTRODUCTION

A considerable number of patients undergoing aesthetic surgery suffer from painful postoperative hematoma and swelling which sometimes has a negative impact on healing. This patient population entrust themselves to us, and they have high aesthetic demands. We feel that it is our responsibility to minimize any postoperative inconvenience. Especially when it comes to facial surgeries, reduction of hematoma and swelling is required to decrease patients' limitations in daily activity and thus improve the final cosmetic outcome.

AIM

Evaluate the effect of polymeric membrane dressings in regards to postoperative hematoma and swelling after various plastic surgery procedures

METHOD

23 patients were evaluated consisting of 3 facelifts; 5 abdominoplasties; 12 breast surgeries, of which 7 were augmentations, and 5 breast reductions; and 3 liposuctions. Polymeric membrane dressings (PMDs) were applied directly onto the operated area and surrounding skin after each surgery. After the liposuction, the entire area in which the trochar traveled was covered with PMDs. Patients who have undergone facial surgery or liposuction are usually discharged from the clinic on the same day, the others were hospitalized one to two days depending on the procedure.

Wounds and surrounding tissue were assessed at the first dressing change. Dressing changes were performed according to the level of exudate. At the point of change - usually on the fourth day after the procedure- the dressings were saturated up to about 75%. By then most incisions had epithelialized. Thereafter we continued local therapy with PMD until removal of sutures.

Rationale for consideration of PMDs for this application;

PMDs have been shown to reduce the spread of secondary injury into the surrounding, initially undamaged tissue, after blunt trauma, stab wounds, and other soft tissue injuries. The dressings have been shown - when applied directly to open, and the skin over closed injuries - to reduce the recruiting activity of the inflammatory nerve endings which results in reduced swelling, pain, and bruising and the consequential secondary injury usually seen after trauma of any kind.

RESULTS

Postoperative bruising and swelling was significantly reduced on all 23 patients. Beyond the borders of where PMD wound dressings were applied hematomas occurred, whereas the areas covered by PMDs were almost free from hematoma. Unfortunately we couldn't evaluate postoperative pain reduction since many of our hospitalized patients have continuous epidural anesthesia as postoperative pain treatment.

DISCUSSION

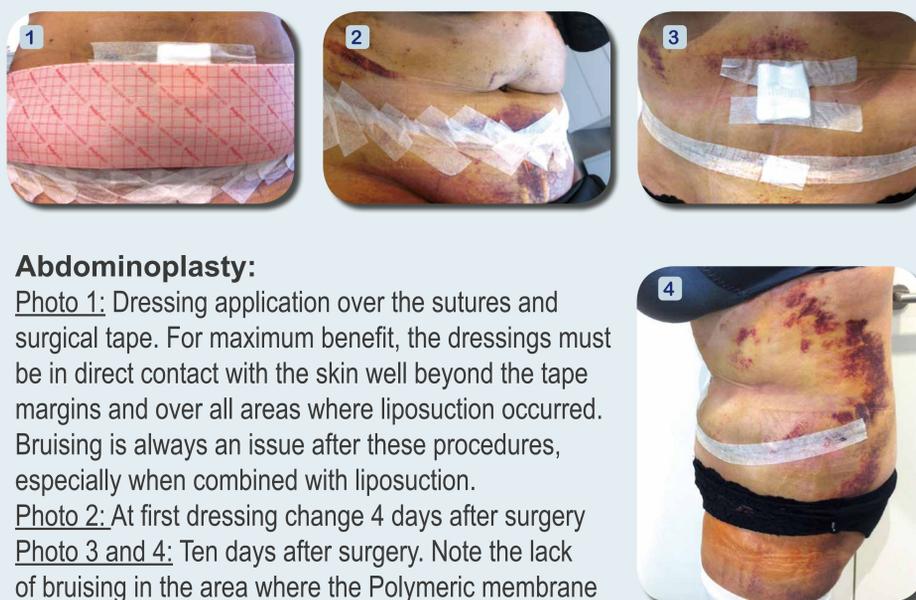
Due to our preliminary results, we may assume that the usage of PMDs in aesthetic surgery could substantially improve the postoperative results by reduction of swelling and bruising; this could decrease the risk for further complications as problems with healing, tissue necrosis and infections since post-operative swelling are closely associated with post-operative infection. It should be noted that many of our patients were high-risk patients, due to smoking habits and obesity. However, the number of evaluated patients is too small to allow a statement on statistical significance.



Application: Immediately after the facelift we apply the polymeric membrane dressings onto the surgical wounds and surrounding tissue. It sometimes happens that patients get severe hematomas after undergoing a facelift, particularly in the cheek, throat and neck area. Our technique was to cover these areas and apply a light compression bandage around it.



Dressing change: First change was usually performed 3-4 days postoperative at this point we make the first evaluation of the bruising and swelling. Hematoma is always more pronounced at the side of the face where operation starts; due to the ongoing surgery on the second side the patient has to lay on this half of the face for one to two hours causing more hematoma. The hematoma on the neck and parts of cheek on the top left photo are areas outside of the polymeric membrane dressing. As we gained more experience with the dressing we started to apply it with more care making sure to cover even the neck area. As a result, note the lack of bruising on the second patient.



Abdominoplasty:

Photo 1: Dressing application over the sutures and surgical tape. For maximum benefit, the dressings must be in direct contact with the skin well beyond the tape margins and over all areas where liposuction occurred. Bruising is always an issue after these procedures, especially when combined with liposuction.

Photo 2: At first dressing change 4 days after surgery
Photo 3 and 4: Ten days after surgery. Note the lack of bruising in the area where the Polymeric membrane dressings were used compared to the back and legs which we didn't cover.