

Novel Use for Hemostatic Net in Split-thickness Skin Grafts

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Skin grafts are a widely known and used technique in the field of plastic surgery.¹ According to the International Burn Injury Database, there are 1000 skin grafts in patients with burns per year in England.² The most common cause of skin graft failure is hematoma, followed by infection, seroma, and the presence of shearing forces.¹ Numerous methods for fixation with tie-over bolster, negative pressure, tissue glue, and others are found in the literature because immobilization is essential to prevent graft loss.³ However, there is a high rate of graft loss that is still unreported.

The hemostatic net was first mentioned in cosmetic procedures to reduce hematoma in the early postoperative period.⁴ This is achieved because the suture performed provides an almost total occlusion of the surgical area and avoids fluid accumulation.⁵ However, the use of this procedure has not been described in split-thickness skin grafts in burn patients.

We used a modified hemostatic net technique to favor optimal postsurgical results in acutely burned patients. This technique consists of a series of continuous and transfixing sutures with Monocryl 3-0, 0.5 cm apart from each other, until achieving a net shape in the whole grafted area (Fig. 1). (See Video, Supplemental Digital Content 1, which displays a plastic surgeon performing hemostatic net over a split thickness skin graft in a burn patient.) The grafts are bolstered with the conventional technique. We considered that the fixation technique with internal sutures can be performed with other types of absorbable suture material, and achieve results as good as those using Monocryl.

The concept of internal sutures was first described by Barouide and Ferreira in abdominoplasties in 1998, as a technique that avoids the eventual fluid deposits.⁴ In 2012 based on the concept of mechanical closure, Auersvald et al described a surgical procedure



Fig. 1. Hemostatic net in a split-thickness skin graft in a burn patient.

of transcutaneous continuous and transfixing sutures of skin flaps in rhytidoplasty, creating a hemostatic net that leads to almost total occlusion of the treated area.⁵ They found that this technique was an efficient method for the prevention of early hematomas, without an increase in ischemia or necrosis of flaps.⁴ In 2018, the same authors described the use of this method in facelift surgery, with the conclusion that hemostatic net is a safe and effective method to reduce hematoma in the early postoperative period by not altering the perfusion of the flaps.⁴

Further research is needed to better define the advantage of the hemostatic net with the suggested modifications in this field. We propose a novel indication for a modified hemostatic net technique as an effective method for prevention of hematomas and seromas in skin grafts.

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DISCLOSURE

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