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A SIMPLE STYROFOAM FRAME DESIGNED TO PROTECT SPLIT-THICKNESS SKIN GRAFT DONOR SITE

KISMİ KALINLIKTA DERİ GREFTİ DONÖR ALANINI KORUMAK İÇİN DİZAYN EDİLMİŞ BASİT STRAFOR ÇERÇEVE

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INTRODUCTION

The most disturbing process and requirement of the early postoperative period of split-thickness skin graft procedure for the patient is keeping the donor-site open. Hence there are various kinds of donor site dressings and procedures have been described for this purpose, for the fast recovery of the donor site it should be kept open and must be protect from trauma at the same time. Donor site protection as one of the most important point after surgery, can be achieved with easy to design, hand-made and cost effective methods such as styrofoam frame with increasing patient life quality.

The aim of this report is to point out the significance of postoperative donor site protection, which has not been emphasized thoroughly in the literature, and to introduce a new and economic solution to protect the graft donor site while providing a comfortable dressing and resting opportunity for patients in whom reduction of donor site morbidity is of primary concern.

MATERIAL AND METHODS

A frame that is higher than the donor site to avoid physical touch with the clothes and bed sheet and which is light to avoid extra pressure on the wound area and to obtain a good mobility while standing up is located on donor site. For all of those purpose, styrofoam is the best material which is very cheap, easy to find and light in terms of avoiding the pressure and weight on the wound area.

A styrofoam block is resized to fit the donor site dimensions by forming a rectangular frame. A higher oval roof to keep the wound area untouchable by the clothes or external physical materials is formed over the donor site. Hence the styrofoam is a fragile and inflexible material, obtaining an oval form is quite difficult. A plaster is helpful at this point, by covering the styrofoam with plaster, it can be more flexible and easily shaped with hands (Figure 1).

While patient is in supine position, the styrofoam frame is fixed with an elastic rubber from the two sides of the frame (Figure 2,3). By this way, the frame does not moves with standing up or changing position in the bed. And while resting and sleeping, patients can wear their clothes or use their bed sheet without a risk of physical touch with the donor site. Also, during the dressing of wound this frame can be easily moved upward or downward of donor site with loosening the rubbers without hurting the patient.

As preventing infection and avoiding the pain in the donor site is important during postoperative period, the patients could not get dressed and put the bed sheet on them while sleeping and resting to avoid the risk of sticking the cloth with the open wound. This causes an additional discomfort for the patient while facing the painful and uncomfortable postoperative period.

Patients' comfort and keeping the wound clean is an important factor in the postoperative period to obtain a good healing. The principal goal of the technique described in this article is to provide a well donor-site closure by protecting it with a frame made of a simple styrofoam with increasing the quality of patients' postoperative period.

After placing the styrofoam frame to protect the donor site, patients were able to put their clothes on and feel free in terms of moving in the bed. Moreover, they did not control themselves to protect the open wound from touching with the bed sheet. This also avoided potential wound infection and sticking with antisterile substances from the clothes. Both for the patient comfort and wound healing, the framing method can be a good solution with its economic and user - friendly advantages.

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DISCUSSION

Skin grafting is the most common procedure for reconstructing defects of various size and anatomical localizations. Reconstruction with split-thickness skin grafts (STSG) is one of the most frequently practiced procedures in plastic surgery, as a fundamental step in the reconstructive process.[1] On the other hand, donor-site problems associated with this invaluable procedure are inevitable. Various methods are used in the postoperative management of the partial-thickness donor site created during the harvest of a split-thickness skin graft. Each technique has the potential for complications.[2]

Reconstruction of tissue defects with skin grafts is one of the most used processes in soft tissue defects.[3] Because controversy continues about the ultimate character of donor sites after healing, no standard method has been established to manage these wounds. Historically, surgeons have used a variety of methods to treat fresh donor sites but the postoperative treatment is the most crucial factor to obtain a well wound closure and patient satisfaction.[4] Patients' psychological health and movement ability is as important as keeping the wound sterile and protect from the pressure and wound infection in the postoperative period.[5]

Positioning easy to made devices were found to be an effective method of positioning lower extremities to prevent donor site morbidity, and obtain a good healing period. By improving frame strength and netting maintained positioning throughout application regardless of the patient's size . It can be located only according to the donor site dimensions by hand–resizing. The device is not required repairs or replacement because of being common and economic in terms of affordability. The device is simple to construct, maintain, and require and can be used on multiple patients once appropriately disinfected. Furthermore, the most important outcome of the device is a more comfortable patient postoperative period without caring the wound in terms of infection or physical touch with the external factors.

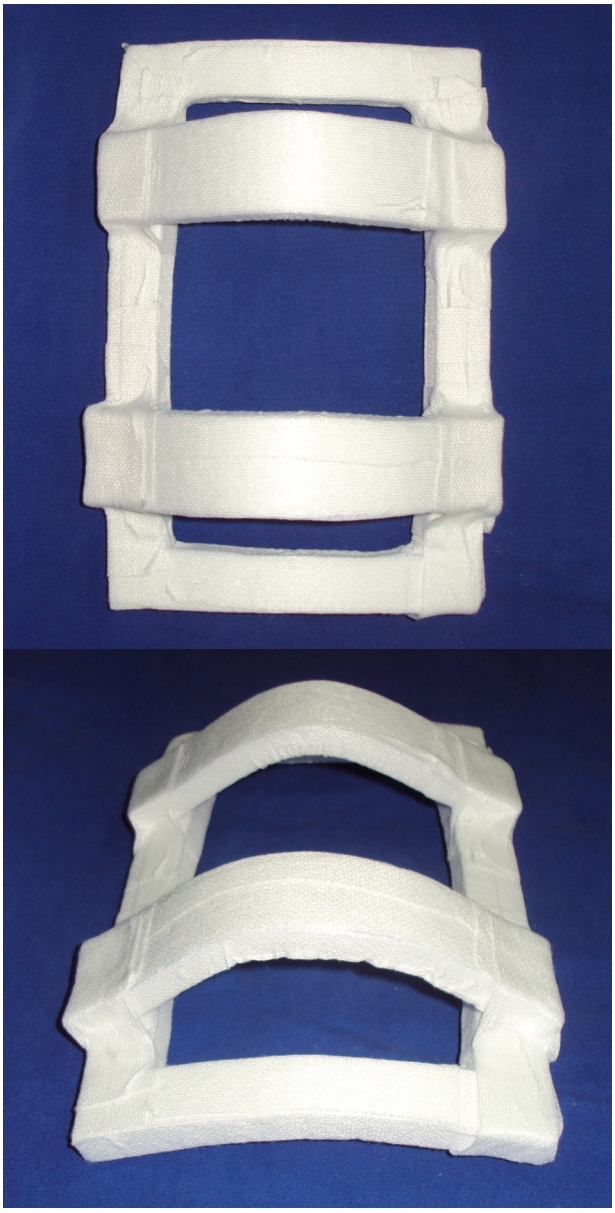

Figure 1. Styrofoam designed to protect donor site

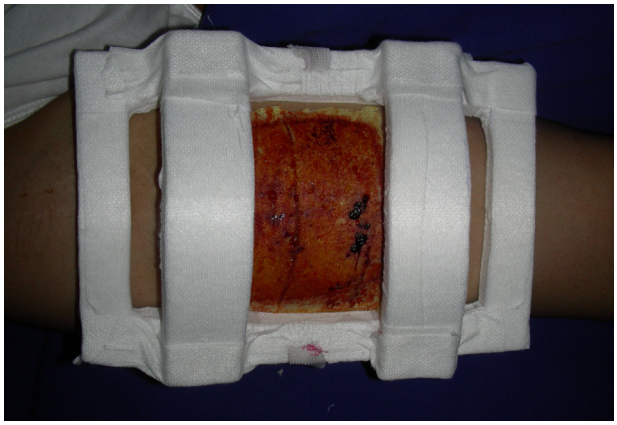

Figure 2. Styrofoam designed to protect donor site

Figure 3. The use of styrofoam frame at the donor site

CONCLUSION

Obtaining a physical and psychological comfortable postoperative period is an important advantage for the patients dealing with the donor site pain and treatment. In order to make patient move comfortably in the bed and stand up easily, a styrofoam frame which is higher than the donor site can be a good method to get dressed while protecting the donor site. This frame avoids physical touch with the clothes and bed sheet to obtain a good mobility while lowering the pressure on the wound area to keep it clean. A qualitative output of the method is patients' extremely good feedback and increased satisfaction with their dressing advantage and bed-time comfort.

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