Role of Tensor Fascia Lata in Wound Bed Preparation

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Abstract

To make wounds heal wound bed preparation is essential. There are four components of Wound Bed Preparation (WBP)-TIME concept of WBP- tissue, infection and inflammation, moisture and edge management. The current study showed the versatile use of tensor fascia lata autograft for wound bed preparation which is a cost effective, easily available measure for the purpose.

Keywords: wound bed; tensor fascia lata

Introduction

Chronic wounds are defined as wounds that fail to proceed through the normal phases of wound healing in an orderly and timely manner [1]. To make a wound heal, Wound bed Preparation (WBP) is essential. There are four components of Wound Bed Preparation (WBP) namely, Tissue-This involves assessing for the presence of non-viable or necrotic tissue; callus, foreign bodies; and exudate, biofilm or slough. Intervention consists of debridement, for which thereis a wide range of techniques available. Infection/Inflammation- This involves assessing the aetiology of the wound and treating infection or inflammation unrelated to infection. Moisture & Edge management- This involves the assessment and management of non-advancing or undermining wound edges and the condition of the surrounding skin. Each component of WBP needs separate attention & treatment. Unless the WBP is done neither wound heals nor can it be reconstructed. Usually while preparing wound bed, an agent or therapy which has multimodality effects are encouraged to use so it is cost effective and time saving. Tensor fascia lata is abundant, safe to harvest, and have sufficient tissue coverage and strength. Nevertheless, because of donor site morbidity after autologous fascia lata harvest, physicians are reluctant to use this useful material despite the advantages mentioned earlier. This study is an attempt to introduce our experience with tensor fascia lata for wound bed preparation.

Materials and Methods

This study was conducted in Tertiary Care Centre in Department of Plastic Surgery after getting the department ethical committee approval. Informed consent was obtained. A 59-year-old male known case of diabetes for 12 years on oral hypoglycemic drugs came with alleged history of RTA for which patient was operated outside Mayiladuthurai with intramedullary nailing followed by which patient wound was infected with exposed bone and raw area over middle 1/3rd of right lower limb **(Figure 1).**

Figure 1: Wound with exposed bone

Implant was exposed in the middle of the wound. After serial debridement of necrotic tissues, exposed tendons, soft tissues are prepared for skin cover, Tensor Fascia Lata(TFL) graft done over the exposed bone (Figure 2,3).

Figure 2: Tensor Fascia Lata graft applied over the wound bed

Figure 3: Tensor Fascia Lata donor site

Figure 4 : Limb at discharge

Full thickness raw area with exposed bone is present over the right leg. Split this skin graft was applied over the raw area once bone was covered with TFL.

Results

The use of Tensor fascia lata is helpful in preparing wound bed preparation in raw area in a lower leg middle third defect with exposed bone. Granulation tissue with soft tissue cover developed in the wound bed when wound was examined in postoperative day 7. Split thickness graft uptake was good. (Figure 4) Patient was discharged and referred to orthopedics department for further management.

Discussion

Successful wound closure and healing are a matter of concern for today's clinician. Determining if the wound will progress or not depends upon a comprehensive assessment, recognition of wound characteristics that will promote or impede the healing process and preparing the wound bed such that pathological features are removed allowing the healing cascade to

occur. [2] The current study showed the versatile use of tensor fascia lata autograft for wound closure. Although we don't have a pathological confirmation of how implanted tensor fascia lata allograft is incorporated into the wound, the fact that we have not encountered any wound complications is one of the most vital pieces of evidence of how this implantation technique is valuable and safe for soft tissue reconstructions. Human Fascia Lata Allograft (FLA) is a biodegradable low cost natural tissue with high elasticity and flexibility and therefore exhibits tensile strength and is easy to fit; furthermore it is biologically compatible, has a minimal risk of infection, lesser immunological response and is safe to use.[3]. Therefore, when surgeons plan to close wounds with vascularized tissue, the addition of tensor fascia lata allografts can support the vascularized flap incorporated into the wound bed which is cost effective and minimises wound infection rates.[4].

Conclusion

Tensor fascia lata graft can be an excellent cost effective surgical option for wound closure, with high success rate and minimal complications.

References

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