"The Fat Pouch" dressing method: a way for grafting aspirated granulated fat on wounds



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Introduction: The treatment of wounds has always been a major issue in medical practice. It has also represented one of the most antique challenges in the history of medicine. The objective is to describe a method to hold aspirated fat graft on complex wounds, with or without association with negative pressure wound treatment.

Method: An average of 100cc to 150cc of aspirated fat is collected from a donor site with a 4mm cannula ("macro" granulated fat). The preparation of the fat before grafting was decantation of the aspirated fat for 30 minutes. After the cleaning of the wound bed to remove necrosis and devitalized tissue, a petrolatum impregnated gauze (AdapticR) was sutured over the skin around the wound, so that it ended up in the form of a pouch of petrolatum impregnated gauze. A simple continuous suture with nylon 3.0 is used to fix the gauze over the skin. Lipofilling with 1.8mm or 2.0mm cannulas is performed in the borders of the subcutaneous tissue around the wound. The fat bag is stuffed with aspirated fat to the point the fat leaks out of the pouch, through the suture. Some simple stiches may be necessary to reinforce the contention of the aspirated fat inside of the pouch.

Figure 1



A: Complex wound in the posterior aspect of the right ankle. B: Lipofilling of the petrolatum impregnated gauze pouch,

Figure 2



NPWT foam adaptation for the "Fat Pouch"

Discussion: The treatment of a wound with fat grafting inside a "bag", in order to hold the fat over the desired area, reduced the waste of collected fat, optimizing the fat of restricted donor site. A good quantity and stability of fat graft on the wound bed were possible to obtain by the use of the fat pouch (with or without association of the negative pressure wound treatment (NPWT)). When the NPWT was associated it was noticed a good adaptation with the fat pouch sutured over the wound. The change of secondary dressings was possible, and the wound bed could remain untouched for more than 15 days or more, with good control of exudate. Very favorable results were noticed.

Conclusion: A novel method for grafting fat on wounds was described. "The fat pouch" lay out dressing is a new way to manage fat grafting over complex wounds, with very good perspectives in the salvage of inferior limbs wounds, as an option of treatment for difficult situations, such as loss of flaps.



after debridment of the wound.

Results: The described method of the "Fat Pouch" was capable to hold and stabilize the fat grafting over the wound bed for a long time, stimulating the healing and providing anti-inflammatory and angiogenic effects with very promising results. A very low morbidity in the patients was noticed with this method.



Figure 4

A: Diabetic patient with complex wound in the posterior aspect of the right ankle. **B:** Preparation of the petrolatum impregnated gauze with suture. **C:** Lipofilling of the fat pouch with counter aperture. **D:** Fat pouch stuffed with fat graft and covered with the placement of NPWT.



Figure 3

A: Complex wound in the lateral aspect of the right ankle. B: Preparation of the petrolatum impregnated gauze before fixing it with suture. C: Lipofilling of the sutured fat pouch with counter aperture in the inferior aspect of the limb. D: Fat pouch stuffed with fat graft. E: Fat pouch, five days post op.



Figure 5

A: Patient with bullous epidermolysis, after an espinocelular carcinoma ressection. Complex wound in the posterior aspect of the right ankle. B: Lipofilling of the fat pouch with counter aperture. C: New tissue progressive formation before skin grafting. D: Surgical aspect after skin grafting E:.Complex wound healed completely

No conflict of interest

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