THE APPLICATION OF WOUND DRESSINGS AND NPWT FOR PATIENTS WITH DIABETIC FOOT ULCERS

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Introduction :

Patients with diabetic foot ulcers present a special group in surgical practice. These patients often have complex issues presenting challenges requiring special attention during treatment[1,2].

Aim :

The aim was to define optimal treatment for patients suffering from diabetic foot ulcers treated in our surgical practice. Treatment pathways address both pre and post-surgical treatment.

Method :

We developed a treatment pathway that included the following:

- **Preoperative examination included:** Endocrinologists consultation; The profile of blood glucose during the day; Analysis of urine for glucose and acetone and level of glycosylated hemoglobin (HB A1).
- **Preoperative treatment:** General: Low carbohydrate diet; Insulin therapy not depending on the type of diabetes.
- **Pre and post-surgery local ulcer treatment:** *Hydrocolloid dressing or **NPWT, depending on ulcer condition.

CASE 1 :

Fig.1:
Situation at the start, necrotic tissue Covers the ulcer

Fig. 2:
After debridement **NPWT is used.

Fig. 3:
Wound bed after 3 days of **NPWT.

Fig. 4:
Graft application.

Fig. 5:
Ulcer is almost closed

Fig. 6:
Offloading with contact cast.

CASE 2 :

Fig. 7:
Situation at the start.

Fig. 8:
After 12 days of treatment

Fig. 9:
Grafting after 15 days of treatment

Fig. 10:
Situation at week 5

Fig. 11:
Ulcer is almost closed

Fig. 12:
Offloading using casting

Results :

After adequate wound bed preparation surgical treatment took place. The patients were mobilized early after surgical intervention. Offloading was performed with a device comprised of a semi-rigid removable non-windowed fiberglass cast. Fig. 6 and Fig. 12.
Two typical cases are shown to demonstrate the treatment approach. Case 1: Fig. 1-6; Case 2: Fig. 7-12.

Conclusion:

The treatment pathway using dressings and **NPWT to prepare the patients for surgical intervention and effective offloading post-surgery was shown to improve patient outcomes.

References :

[1]Udovichenko O, Galstyan G. Efficacy of removable casts in difficult to off-load diabetic foot ulcers: a comparative study. The Diabetic Foot; December 22, 2006.
2Armstrong DG, Lavery LA, Wu S, Boulton AJM. Evaluation of removable and irremovable cast walkers in healing of DFU, a randomized controlled trial. Diabetes Care 2005;28(3):551-554

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