

P3

Matrix Metalloproteinases levels influence the integration of dermal grafts in diabetic foot ulcers.

Izzo V, Meloni M, Vainieri E, Giurato L, Ruotolo V, Uccioli L. Department of Internal Medicine. Tor Vergata University, Rome, Italy.

Aim: To analyze factors, including Matrix Metalloproteinases (MMPs) levels, that could influence the integration of dermal grafts when applied in diabetic foot ulcers. **Methods:** 35 diabetic patients, with IIA lesion (Texas Wound Classification) and an extensive foot tissue loss were considered suitable for dermal graft. Before the enrollment we ensured the best local conditions to allow the healing process: adequate blood supply, control of infection, offloading. MMPs level of each lesion was evaluated blindly before the application of dermal substitutes. At 1 month follow up, the dermal graft was considered successful if there was any plane of cleavage between the wound bed and the dermal replacement. We analyzed the correlation between clinical patient characteristics, local wound features including MMPs levels, dermal substitute applied and the outcome expressed in terms of dermal graft integration. **Results:** We observed the dermal graft integration in 80% of our population (28 patients). At the multivariate analysis high MMPs level was the only negative predictor for dermal graft integration ($p < 0.0007$). In addition, we divided the patients in two groups according to MMPs levels: group 1 with low protease activity (24 patients) and group 2 with elevated protease activity (11 patients). The integration of the dermal graft was 100% in group 1 (n=24 patients) and 36.4% in group 2 (n=4 patients) [$p < 0.0001$]. **Conclusion:** According to our data, the evaluation of MMPs levels is useful to choose the right strategy to get the best results in terms of clinical success and cost saving.