

ACELLULAR DERMAL GRAFT DERIVED FROM FISH SKIN IN THE TREATMENT OF DIABETIC FOOT ULCERS: REAL-WORLD EFFICACY AND IMPACT ON HEALING

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BACKGROUND

- Diabetic Foot Ulcers (DFUs) represent a severe clinical challenge often requiring advanced regenerative treatments to support cellular repair.
 - Acellular dermal grafts derived from fish skin are a promising regenerative biomaterial that accelerates tissue healing.
- Study Objective:** Evaluate real-world clinical outcomes and healing efficacy of complex DFUs treated with fish skin grafts.

MATERIALS AND METHODS

Single-center, retrospective observational study of consecutive patients conducted at the Diabetic Foot Unit of IRCCS MultiMedica S.p.A. All patients were managed in accordance with the International Working Group on the Diabetic Foot (IWGDF) guidelines prior to grafting.

- **Primary Endpoints:**
 - Complete healing rate evaluated at 12 weeks.
 - Surface area reduction >50% at 12 weeks.
- **Secondary Endpoints:** Incidence of major amputations

RESULTS

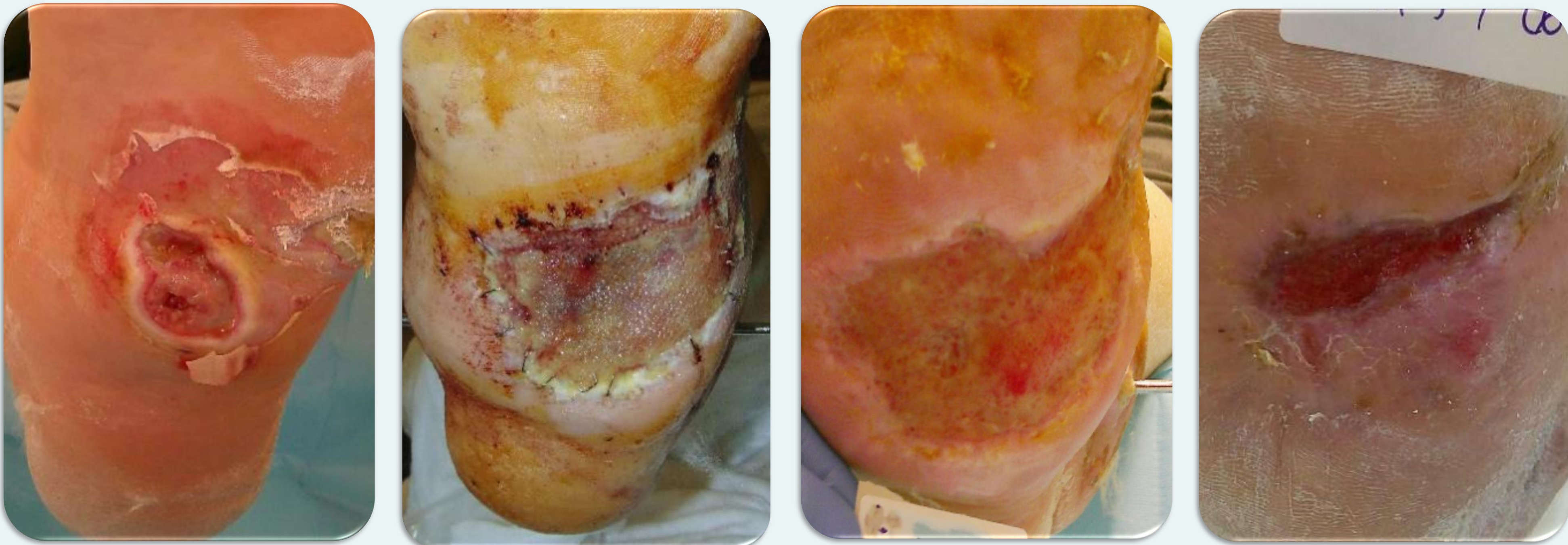
This included 10 patients (duration of illness 10.9 ± 2.77 years) with forefoot/midfoot ulcers.

Clinical Parameter	Value (Mean $\pm$ SD / %)
Mean Age (years)	$70,7 \pm 12,4$
Gender (Male)	50%
Diabetes Duration (years)	$10,9 \pm 2,77$
Mean Basal Diameter (cm)	$33,04 \pm 4,2 \text{ cm}^2$
Baseline Area T0 (cm ²)	50%
Peripheral Artery Disease (PAD)	20%
Osteomyelitis	60%
Active Wound Infection	$4,2 \pm 1,1 \text{ cm}$

After 12 weeks, a 100 % improvement was recorded:

- 50 % (5 patients): complete healing.
- 50 % (5 patients): >50 per cent reduction in ulcer area
- 0 % major amputations recorded during follow-up.

LESIONS' CLINICAL PROGRESSION



CONCLUSIONS

The real-world application of acellular dermal grafts derived from fish skin is associated with significant clinical improvement in complex lesions and the total prevention of major amputations. These outcomes confirm the highly effective and safe role of fish skin grafts as a regenerative strategy for complex and hard-to-heal diabetic foot ulcers