La terapia chirurgica in elezione

Roberto Da Ros
SSD Diabetologia Monfalcone-Gorizia

Il sottoscritto__Roberto Da Ros____ _____

Ai sensi dell'art. 76 sul Conflitto di Interessi dell'Accordo Stato-Regioni del 02 febbraio 2017 in materia di ECM,

Dichiara

X che negli ultimi due anni non ha avuto rapporti di finanziamento con soggetti portatori di interessi commerciali in campo sanitario

□ *che negli ultimi due anni ha avuto i seguenti rapporti anche di finanziamento con soggetti portatori di interessi commerciali in campo sanitario (elencare le Aziende con le quali ha avuto negli ultimi due anni rapporti di interessi commerciali in campo sanitario)*

IWGDF Guidelines

AUTOLOGOUS SKIN GRAFT SKIN SUBSTITUTES

Recommendation 18: Do not use autologous skin graft skin substitute products as an adjunct therapy for wound healing in patients with diabetes-related foot ulcers. (Strong; Low)

ACELLULAR SKIN SUBSTITUTES

Recommendation 17: We suggest not using acellular skin substitute products as a routine adjunct therapy to standard of care for wound healing in patients with diabetes-related foot ulcers. (Conditional; Low)

CELLULAR SKIN SUBSTITUTES

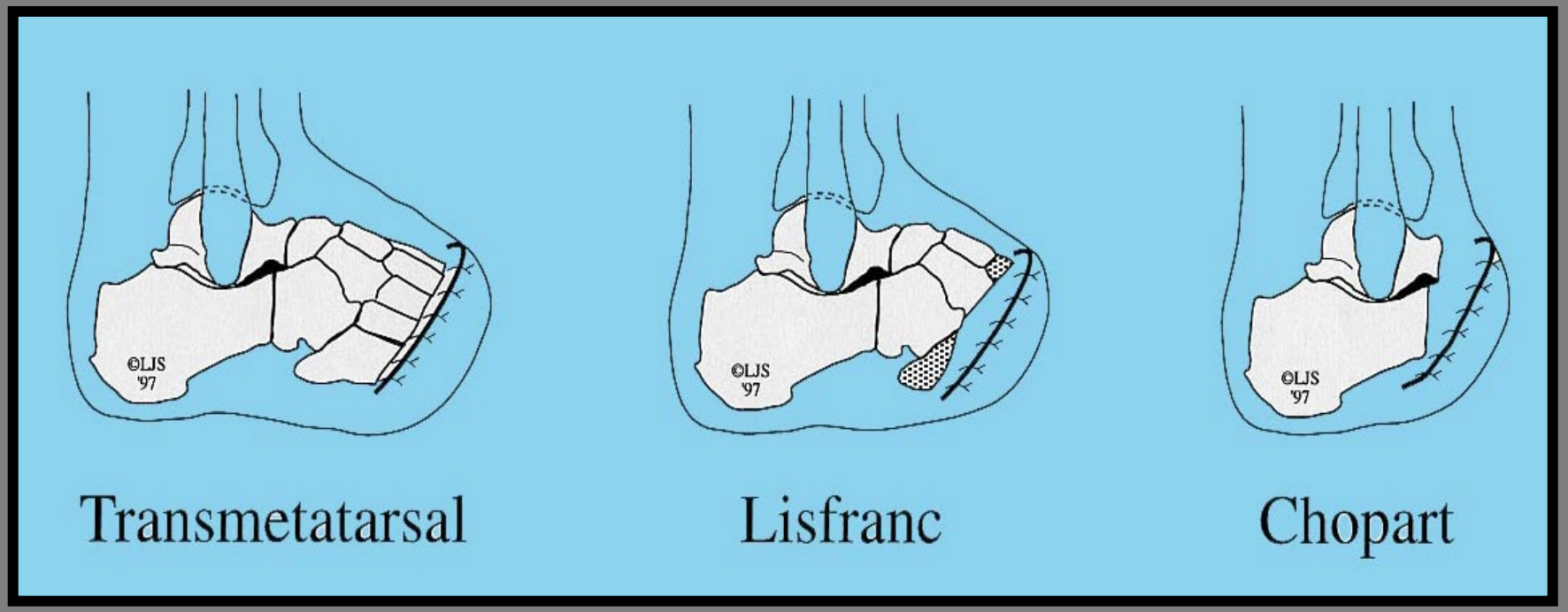
Recommendation 16: We suggest not using cellular skin substitute products as a routine adjunct therapy to standard of care for wound healing in patients with diabetes-related foot ulcers. (Conditional; Low)

IWGDF Guidelines

Recommendation 21: We suggest not using other cell therapy as an adjunct therapy to standard of care for wound healing in people with diabetes-related foot ulcers. (Conditional; Low)

Recommendation 24: We suggest not using topical (sponge, cream, and cement) antibiotics in combination with systemic antibiotics for treating either soft-tissue infections or osteomyelitis of the foot in patients with diabetes. (Conditional; Low)

Amputazioni avampiede



Innesti dermo-epidermici

Review Article

Advances in Dermoepidermal Skin Substitutes for Diabetic Foot Ulcers

Author(s): Francisco Javier Álvaro-Afonso, Yolanda García-Álvarez, Jose Luis Lázaro-Martínez, Despoina Kakagia and Nikolaos Papanas*

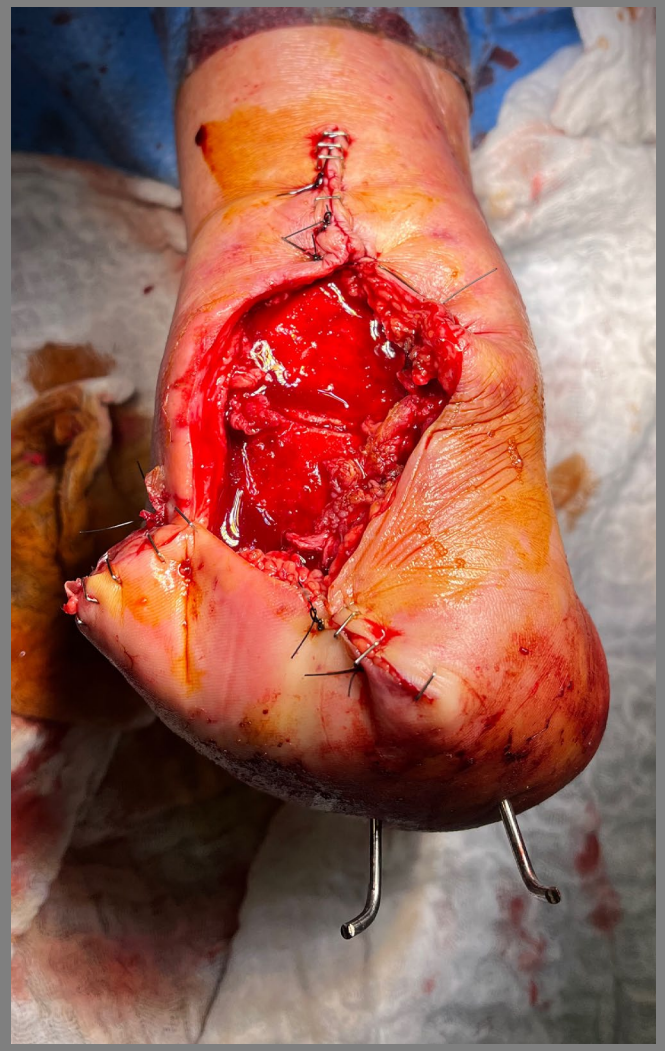
Volume 18, Issue 2, 2020

Review > Clin Podiatr Med Surg. 2022 Apr;39(2):343-350. doi: 10.1016/j.cpm.2021.11.006.

Soft Tissue and Osseous Substitutes for the Diabetic Foot

Steven L Stuto [1], Crystal L Ramanujam [2], Thomas Zgonis [1]

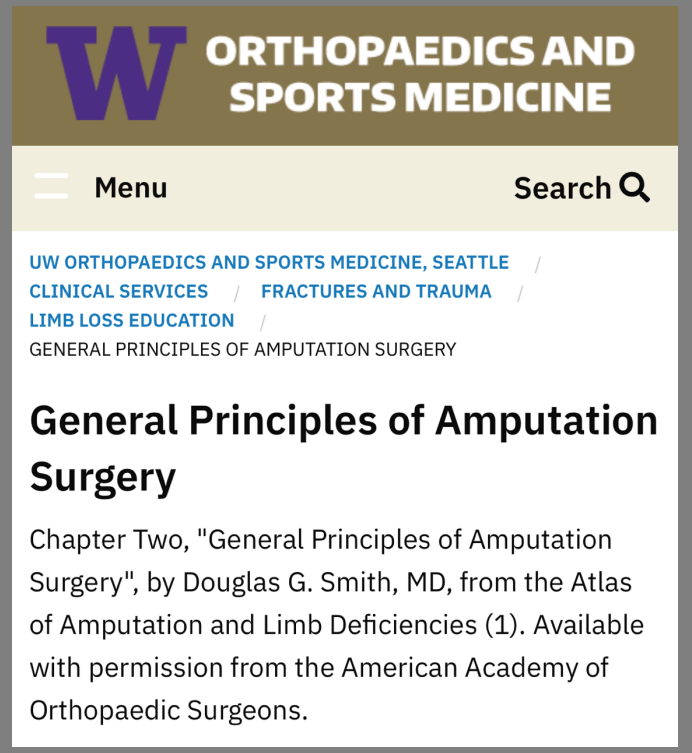
Amputazione di Chopart



Remove all damaged tissue while leaving as much healthy tissue as possible

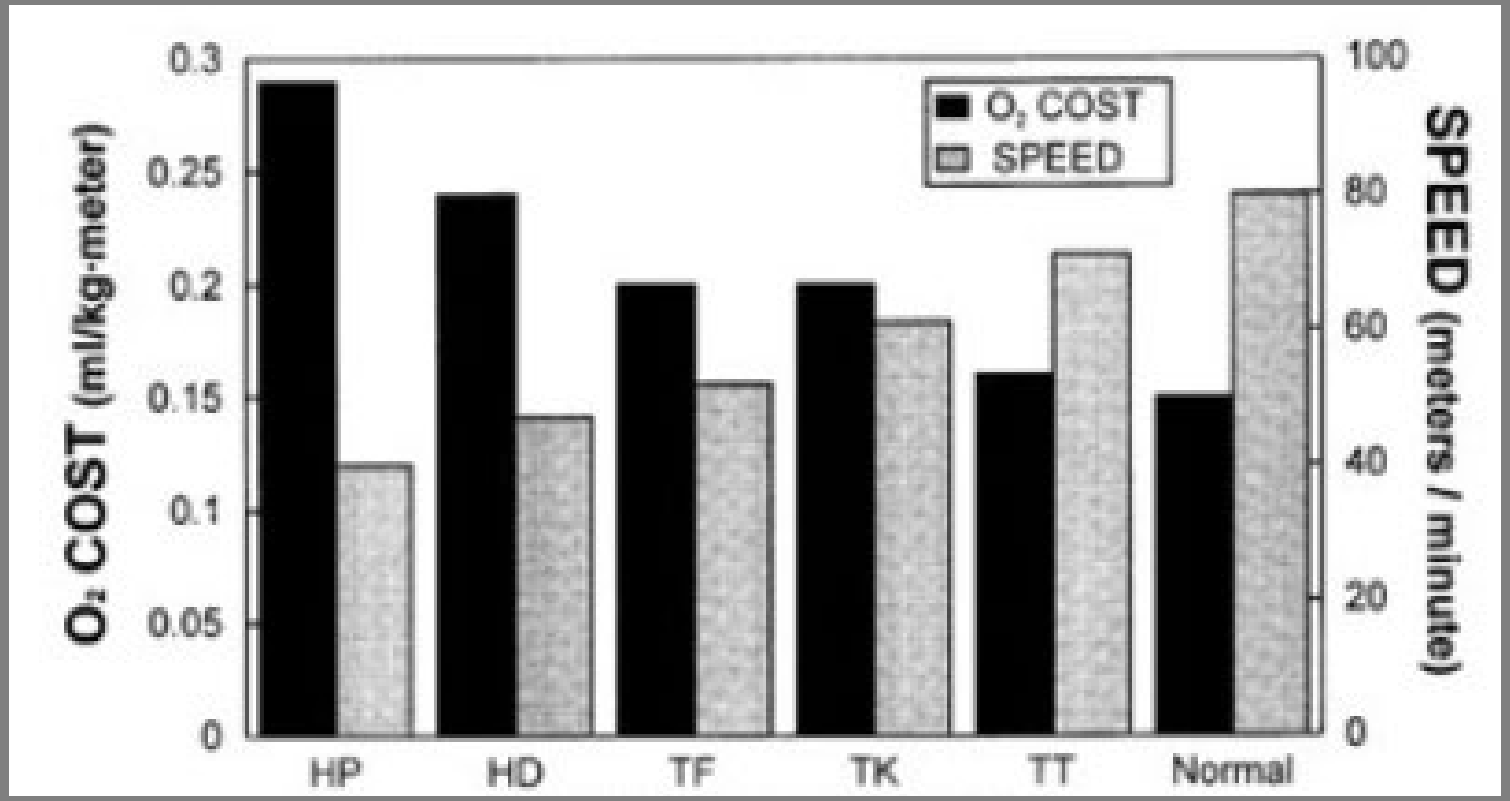
Great improvements in desing and engineering of prosthetic devices that make knee and ankle amputation more successful

Surgeon determine the most distal level of Amputation compatible with wound healing and subsequent satisfactory prosthetic fitting



AMPUTAZIONI MAGGIORI O MINORI: DIFFERENTE SIGNIFICATO CLINICO

- AMPUTAZIONI MAGGIORI
  - TERZO MEDIO DI GAMBA
    - SALVATAGGIO D'ARTO
    - **RIABILITAZIONE**
  - TERZO MEDIO DI COSCIA
    - LAST CHANGE CHIRURGICA
    - RIABILITATIVO (RARAMENTE)
- AMPUTAZIONI MINORI
  - DITO, RAGGIO, TMT, TSC, CHOPART ,SYME
    - SALVATAGGIO D'ARTO
    - **RIABILITATIVO**



aka bka

Negli amputati trans-femorali (TF) si ha un aumento dell'energia metabolica richiesta durante la deambulazione variabile dal 27 al 88%

(Gitter 1995, Hoffman 1997, Schmalz 2002, Waters 1999, Gonzales 1974)

Chopart/syme

0,7 kg

Gamba

1,6 kg

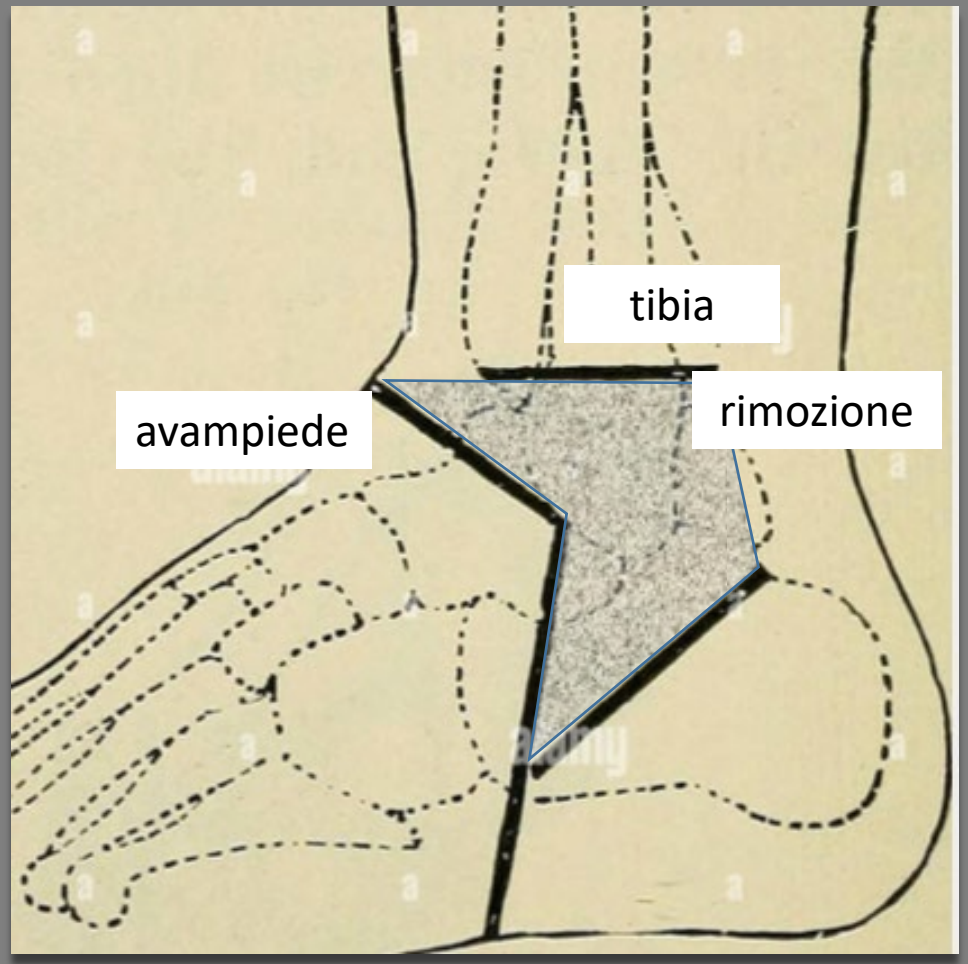
Coscia

4,5 kg

Amputazione Pirogoff

- Rimozione piede conservando parte del calcagno

- Necessario creare un artrodesi calcaneo/tibiale



Amputazione Syme

- Rimozione piede a livello malleoli
- Necessaria integrità del lembo plantare tallone
- Punto critico: rimozione parte posteriore calcagno senza danneggiare lembo cutaneo

Pochi dati in letteratura

Syme amputation: an alternative to major amputation?

Da Ros R, Michelli A, Brunato B, Barro E, *Miranda C, Assaloni R.
Diabetologic Center Monfalcone, *Diabetologic Center Pordenone

Background:

Syme amputation represent an alternative to below- or above-knee amputation. Until now this amputation was not considered a viable option for limb salvage. Necessity of intact heel pad and difficulties in prosthesis contribute to a low use of syme amputation.

Aim of the study evaluate if Syme amputation could be an alternative for patients destinated to major amputation for extreme rear foot impairment with loss of heel pad in diabetic patients

Methods

retrospective observational study performed with interrogation of surgical database between January 2017 and December 2020,

founded 15 diabetic patients with syme amputation.

Protesization was obtained with a new 3D print tool, a socket of anatomical form, typically amputation allows linking of the prostethic foot. The suspension of the prosthesis is made vacuumally or by mechanical methods like belt. Outcome evaluated: healig rate, death, time to heal, walking ability.

Results

All patients have type 2 diabetes, mean age was 69±12 years (mean ± SD), 73% were male, long history of diabetes 22 ± 13 years and quite good metabolic control (HbA1c 7.7% ± 1,5) were founded. 6 (40%) patients presented chronic renal damage and 2 (13%) end stage renal failure, ischaemic heart disease was present in 5 (33%) patients.

They presented very advanced and complicated wounds, lesions were at tibio-tarsal joint in 20% of patients, 80% presented osteomyelitis of the heel with loss of soft tissues, all Texas grade 3. 12 (80%) patients were ischaemic and underwent revascularization (all angioplasty).

At follow up of 9±10 months: 10 (66%) patients healed, 1 (7%) underwent below the knee amputation, 1 (7%) patient died with lesions, 3 (20%) are still ulcerated.

Mean healing time was 66±44 days.

Relapse rate was 14% with a rapid resolution. Walking ability was preserved in 11 (73%) of patients thanks to the innovative brace.

Conclusions

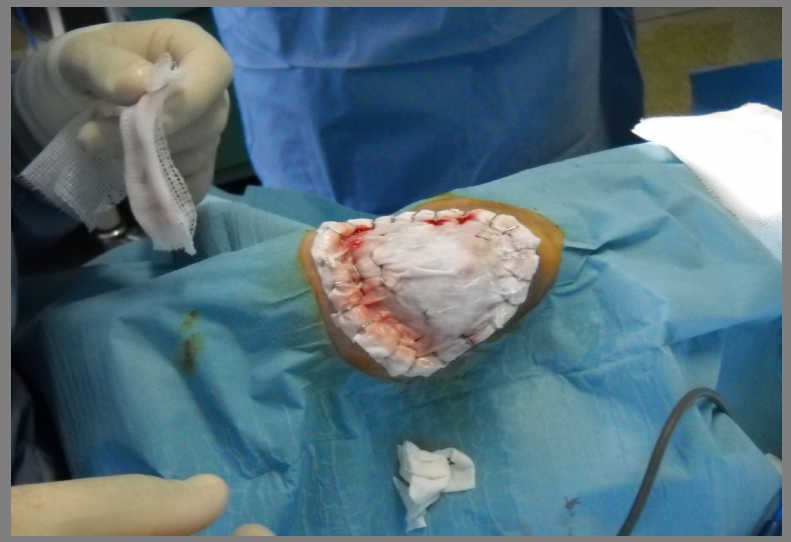
Syme amputation could be an alternative to major amputation also in presence of heel and tibio-tarsal infection with soft tissue loss.

Our data demonstrate high percentage of limb salvage in patients with high heel impairment too.

Extreme surgery in association with new prosthesis tools permit a good preservation of walking ability ensuring better quality of life for patients respect below or above the knee amputation.

Osteomielite

Trattamento osteomielite + correzione deformità

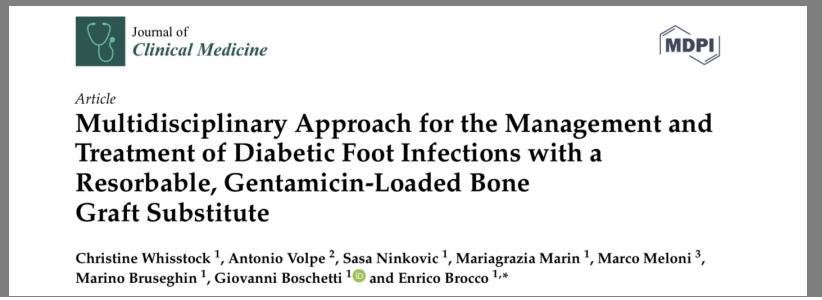


Innesti ossei

Autologo-eterologo-di sintesi

Evoluzione tecnologica materiali
(porosità, migrazione cellulari, interconnessione, meccanica)

Possibiità di associazione con antibiotico



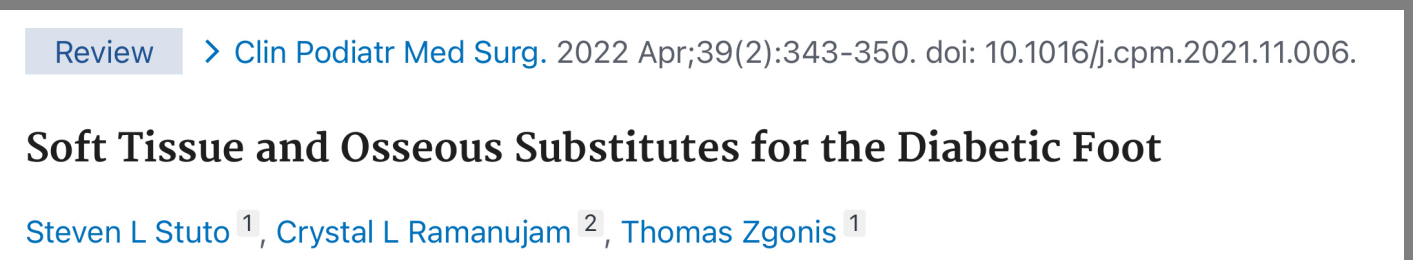
Journal of *Clinical Medicine*

MDPI

Article

Multidisciplinary Approach for the Management and Treatment of Diabetic Foot Infections with a Resorbable, Gentamicin-Loaded Bone Graft Substitute

Christine Whisstock [1], Antonio Volpe [2], Sasa Ninkovic [1], Mariagrazia Marin [1], Marco Meloni [3], Marino Bruseghin [1], Giovanni Boschetti [1] and Enrico Brocco [1,*]



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Soft Tissue and Osseous Substitutes for the Diabetic Foot

Steven L Stuto [1], Crystal L Ramanujam [2], Thomas Zgonis [1]

Bone Grafting Options

Check for updates

Sean T. Grambart, DPM[a,b,*], Danika S. Anderson, BS[a], Travis Drew Anderson, BS[a]

Trattamento

Outcome clinico

Outcome radiologico

Osteomielite calcagno


2


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D

Innesto osseo

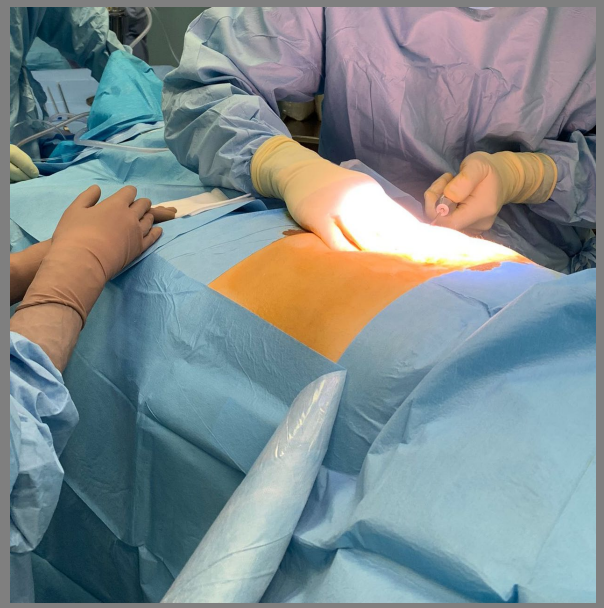
Quale innesto scegliere

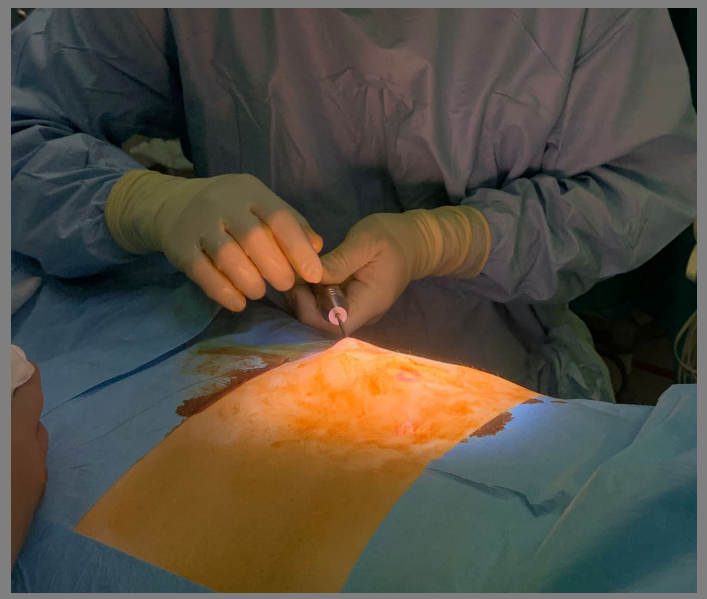
Sedi di utilizzo

Debridement osseo

Scopo

Innesto adiposo





OPEN

PRS GLOBAL OPEN

ORIGINAL ARTICLE

Research

Autologous Minimally Manipulated Homologous Adipose Tissue (AMHAT) for Treatment of Nonhealing Diabetic Foot Ulcers

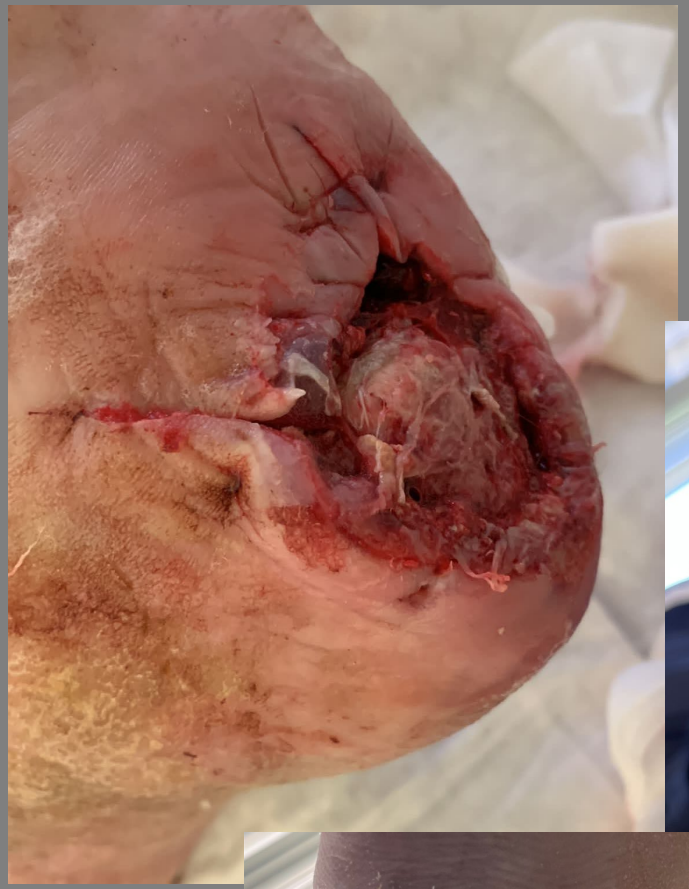
David G. Armstrong, DPM, MD, PhD*
Steven G. Harris, MD†
Zachary Rasor, DPM‡

Background: Diabetic foot complications are increasingly burdensome for patients, clinicians, and society. Development of innovative therapies to support good quality basic care is a priority among those with an interest in this area. One of these involves scanning and printing tissues to match and conform to a defect (so-called


FREE





Innesto adiposo

Quale innesto scegliere

Sedi di utilizzo

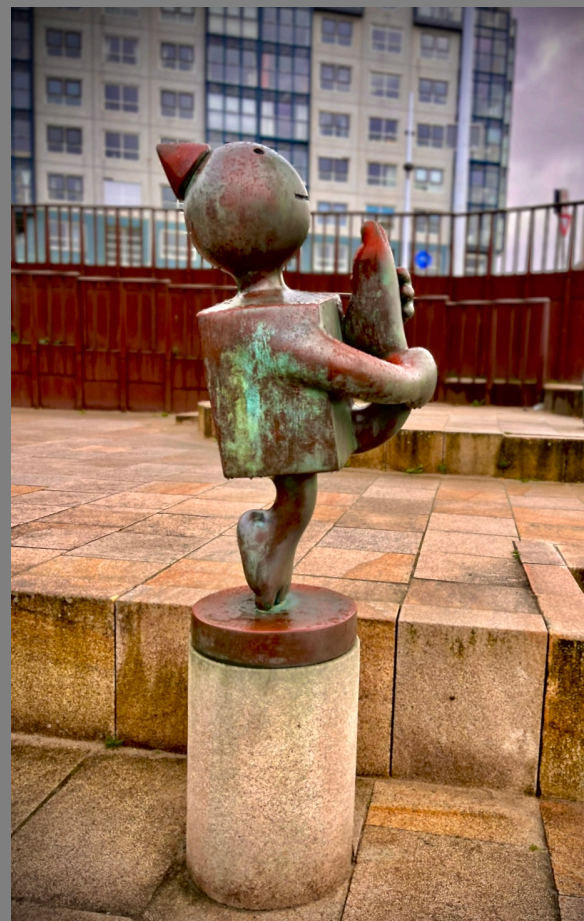
Scopo

Approccio chirurgico al piede diabetico

Utilizzo nuova tecnologia/combinazione

Orientamento non solo alla guarigione della lesione ma alla funzionalità dell'arto

Trend conservativo



Grazie per l'attenzione