FIRST TREATMENT OF DISTAL LOSSES OF TISSU ON LOWER LIMBS

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Introduction

Complex open foot and ankle traumas corresponding to the association of multiples or comminutive bone lesions with Gustilo grade III soft tissues lesions are a challenge for the surgeons. Functional outcome can be dramatical.

Many questions are raised:
- Radical or conservative treatment?
- Type of osteosynthesis?
- Early or delay coverage?
- Skin graft or flap?

Material and methods

- 15 patients were treated for open complex injuries of the foot and the ankle
- 13 men and 2 women, 33 middle-aged
- Lesions were always distal to the ankle with Gustilo IIIa or IIIb reach
- External fixation in each case
- 3 supra malleolar flaps were realized
- 1 neurovascular sural flap was realized
- 11 skin graft after controlled scarification
- Vacuum assisted closure was used in each case

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Case 1

- Male 21 years old
- Complex war injury of the rear foot (shrapnel)

- Debridement
- Vacuum assisted closure (VAC®)
- External fixation
- Controlled scarification by VAC®
- Bone defect treated by cement
Case 1

- Distal lateral supra malleolar flap
- Skin graft on donor site

Long term follow up (12 months)
Case 2

- Male 25 years old
- War injury (bullet)

- Debridement
- VAC®
- External fixation
Case 2

- Distal lateral supra malleolar flap
- Skin graft on donor site

Long term follow up (10 months)
Case 3

- 45 years old

- Motorbike accident
Case 3

- Debridement (including 3 toes amputation)

- Coverage by skin graft after controlled scarification

Long term follow up (12 months)
Case 4

- Male 25 years old
- Car accident
- Chopart dislocation and metatarsus fractures

- Debridement
- Tendon and bone exposure
Case 4

- Supra malleolar flap distal flow to cover fore foot
- Skin graft on donor site
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• Discussion
  ✓ Importance of early debridement and second look
  ✓ Bone fixation in order to prevent definitive stiffness
  ✓ Delayed coverage to evaluate the necrotic area
  ✓ Controlled scarification by VAC® to prepare coverage either by skin graft or flap
  ✓ Skin graft if vessels, tendons and bones are not exposed
  ✓ Fascio cutaneous flap (distal latero supra malleolar flap, sural neuro cutaneous flap) are simple, safe and rapid procedure to cover the foot
  ✓ Muscular flap difficult in this area
  ✓ Free flap proposed by some authors

• Conclusion
  ✓ At the dorsum of the foot, tendons, bones and joint are only protected by thin skin and exposed to trauma
  ✓ Controlled scarification is the first stage of treatment after debridement
  ✓ Fasciocutaneous flaps are great type of coverage
  ✓ Free flap can be used on early or delayed coverage
  ✓ Functional outcomes despite codified treatment still worrying: stiffness, pain, deformation, gait disorder, shoe wearing problems