

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 lesion 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

1. Praticien certifié des Hôpitaux des Armées. 2. Praticien confirmé des Hôpitaux des Armées. 3. Praticien certifié des Hôpitaux des Armées. 4. Praticien certifié des Hôpitaux des Armées, chef de service. Service de Chirurgie plastique et maxillo-faciale. Hôpital d'Instruction des Armées PERCY, 101, avenue Henri Barbusse, 92140 Clamart, France.

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Case 1

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



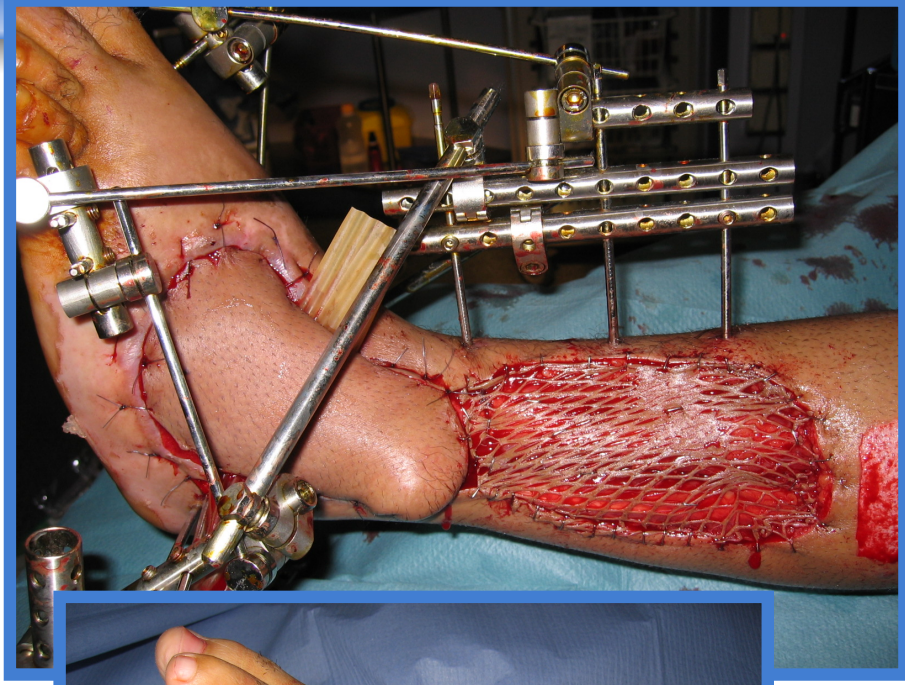
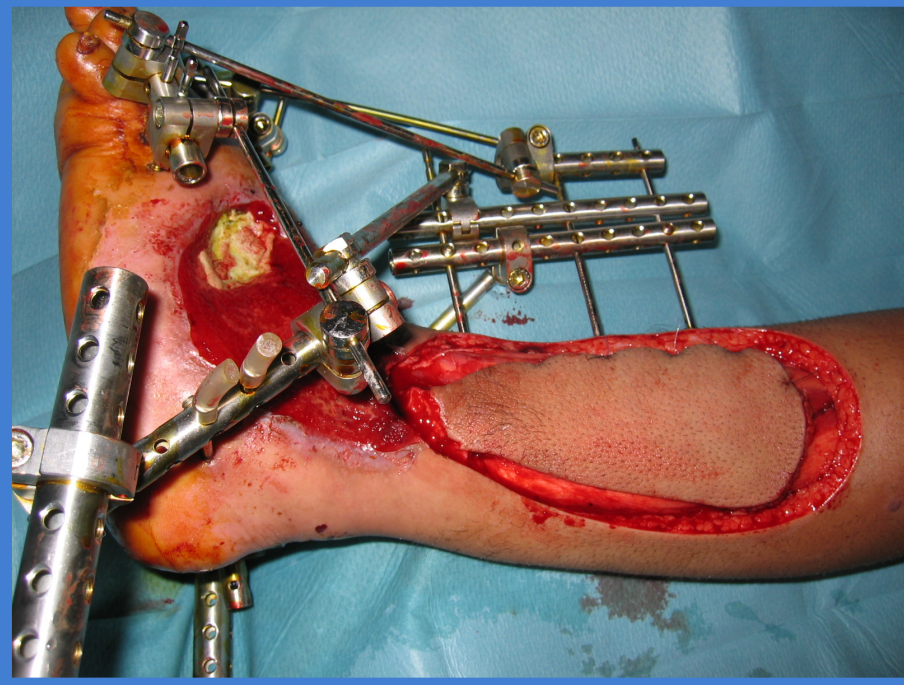
- External fixation



- Debridement
- Vacuum assisted closure (VAC®)

- 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)



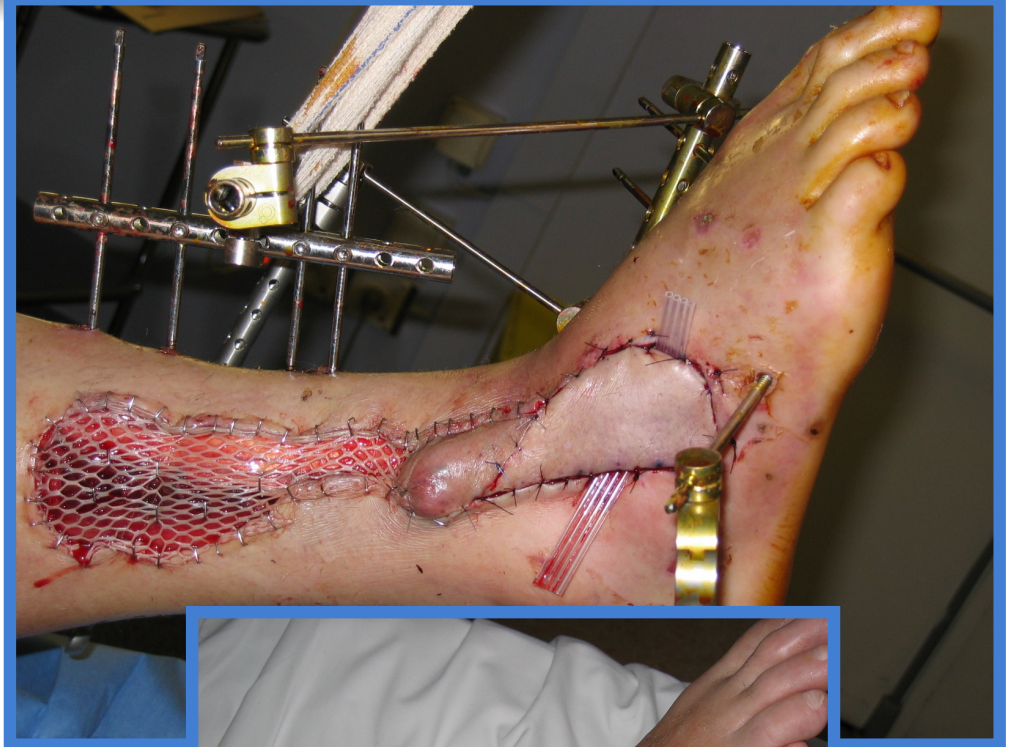
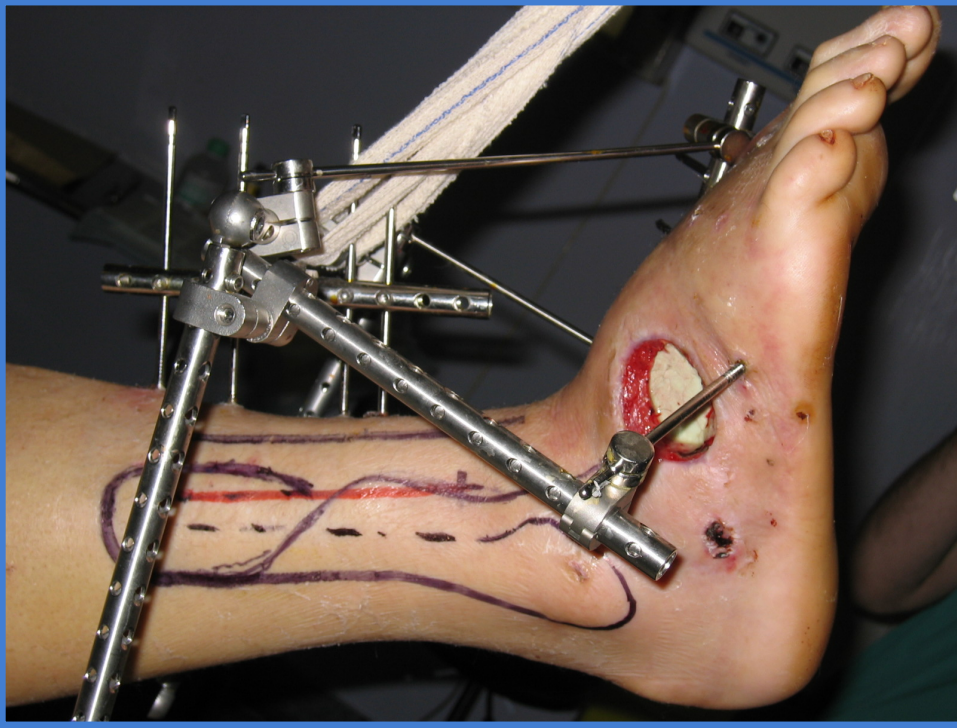
Case 2

- 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

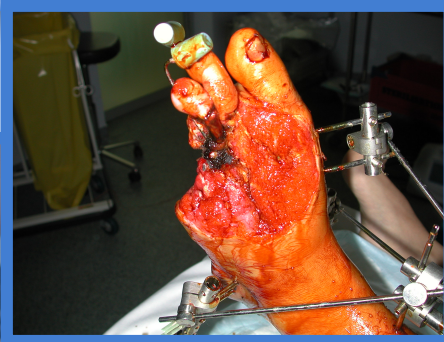


- Motorbike accident

Case 3



- Coverage by skin graft after controlled scarification



- Debridement (including 3 toes amputation)



Long term follow up (12 months)

Case 4



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

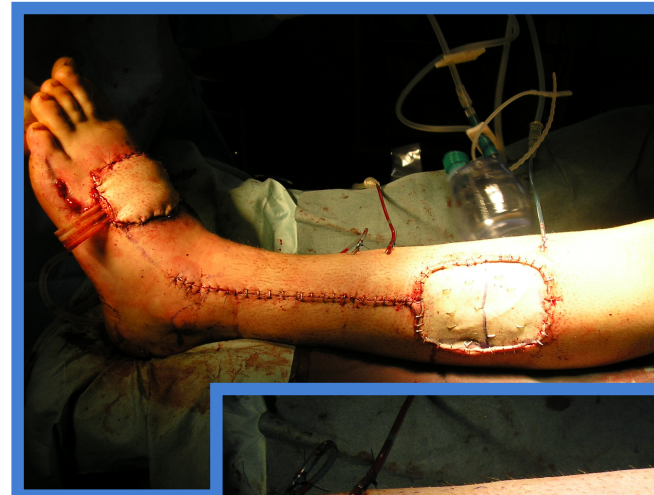


- Debridement
- Tendon and bone exposure

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 stiffness¹
- ✓ Delayed coverage to evaluate the necrotic area
- ✓ Controlled scarification by VAC® to prepare coverage either by skin graft or flap²
- ✓ 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^{3,4}
- ✓ Muscular flap difficult in this area
- ✓ Free flap proposed by some authors⁵

• 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

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