

Osteomyelitis post trauma – treatment in times of antibiotic resistance



**HANS-PETER
GEISELHART MD,
DT.GES.
TROPENCHIRURGIE**

**J.BERGER CLINIC
ABUJA, CENTRAL
UNIV.TEACH.HOSP.
KIGALI**

Preventive measures:

- Cleansing
- Rinsing
- Irrigating
- Debridement
- Preserve any viable tissue
- Cephalosporine 3 days
- Immobilisation
- Cover bone, vessel & nerve



- Galen of Pergammon –
(125BC)



***„ANY TISSUE HEALING
NEEDS A MOIST
ENVIRONMENT“***

Immobilisation

- External Fixator
- Wood Fixator (Domres etc)
- Back slab, cast +window
- closed cast
- cast+Steinmann
- Traction



Gold Standard External Fixator

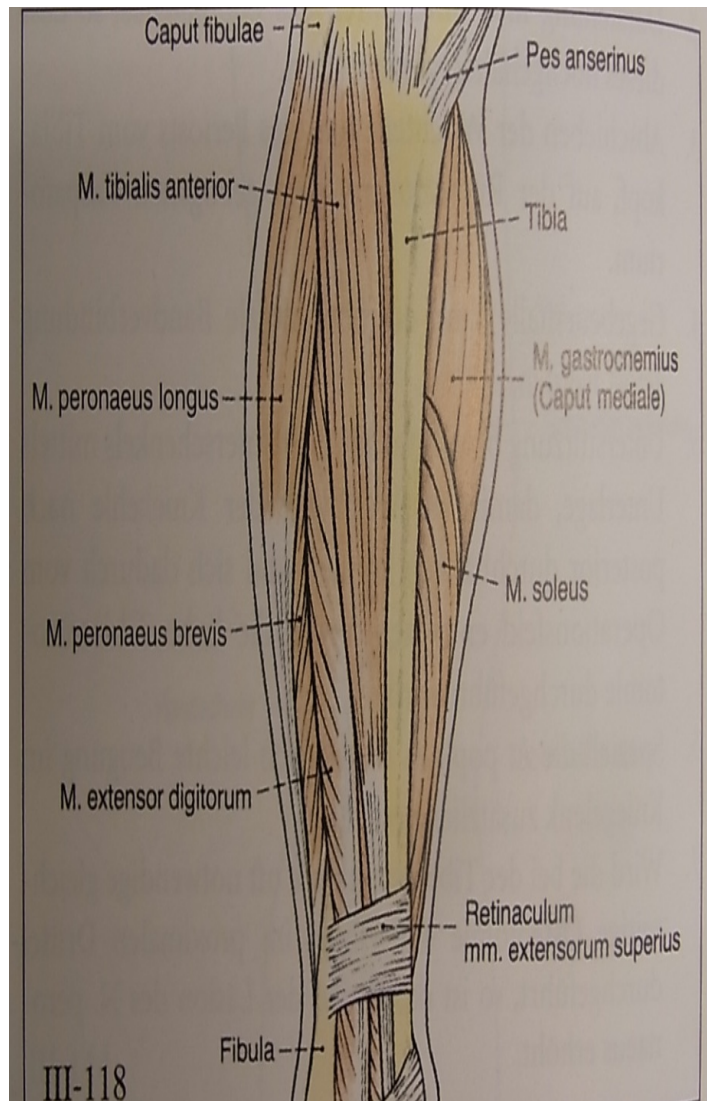
- Insert it through sound skin
- Daily care of pin entrance
- Limited stay
- Recycling after use



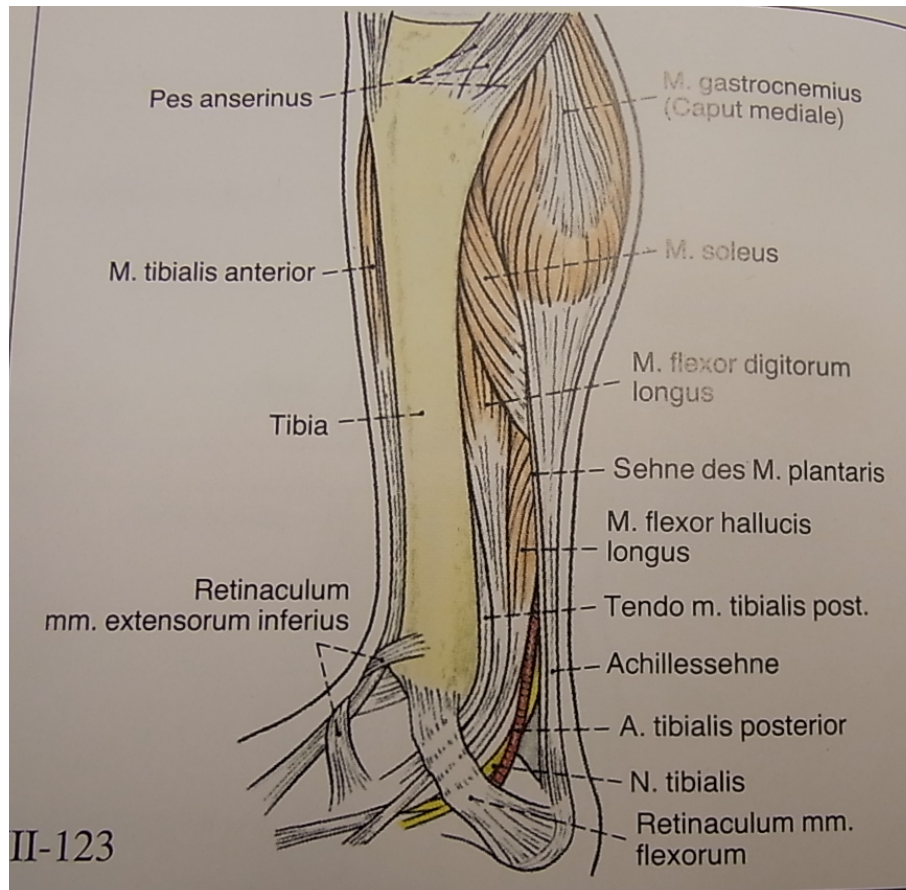
Coverage

- Mobilize wound edges, preferably +fascia
- Sliding flap width 6cm
- Regional flap muscle: gastrocnemius, soleus, etc





Gastrocnemius as muscle flap or skin-muscle flap wide range - proximal and middle third

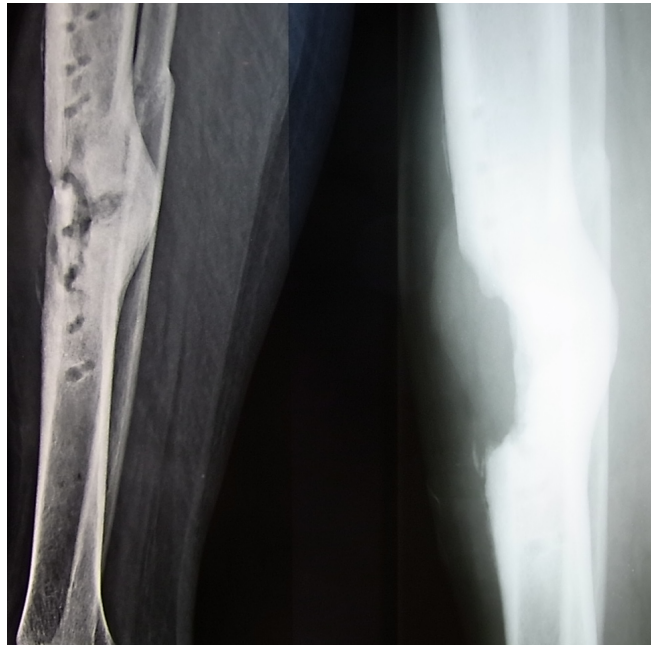


Case 1:

closed tibia shaft
fracture 2 yrs ago

- 1. with E.F.
- 2. ORIF with plate
- 3. fistula with daily purulent discharge

• Cure - Established Osteomyelitis.



First step:

sequesterectomy +
gentamycine chain

→ persisting
discharge

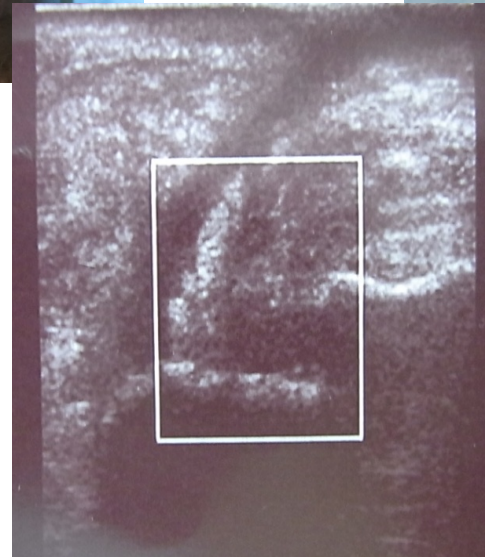
→ Gastrocnemius
flap



2 weeks of
significant swelling

→ Ultrasound

→ Sign of the
defence process
provided by the
muscle
metabolism and
vigour

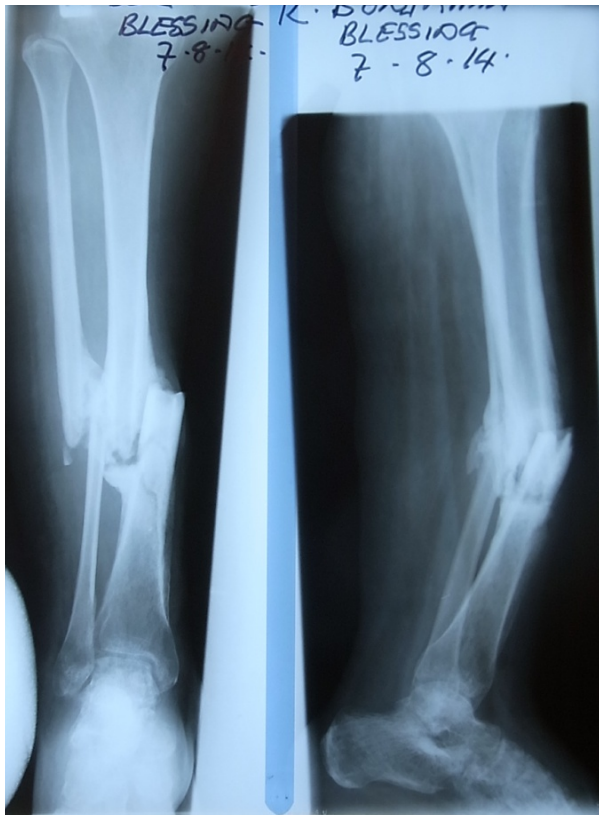


Case 2:

Bil. G3a open tibia #
and closed rt
forearmshaft #

Chronic O.itis + Non
Union both tibiae





No more Antibiotics

The strategy:

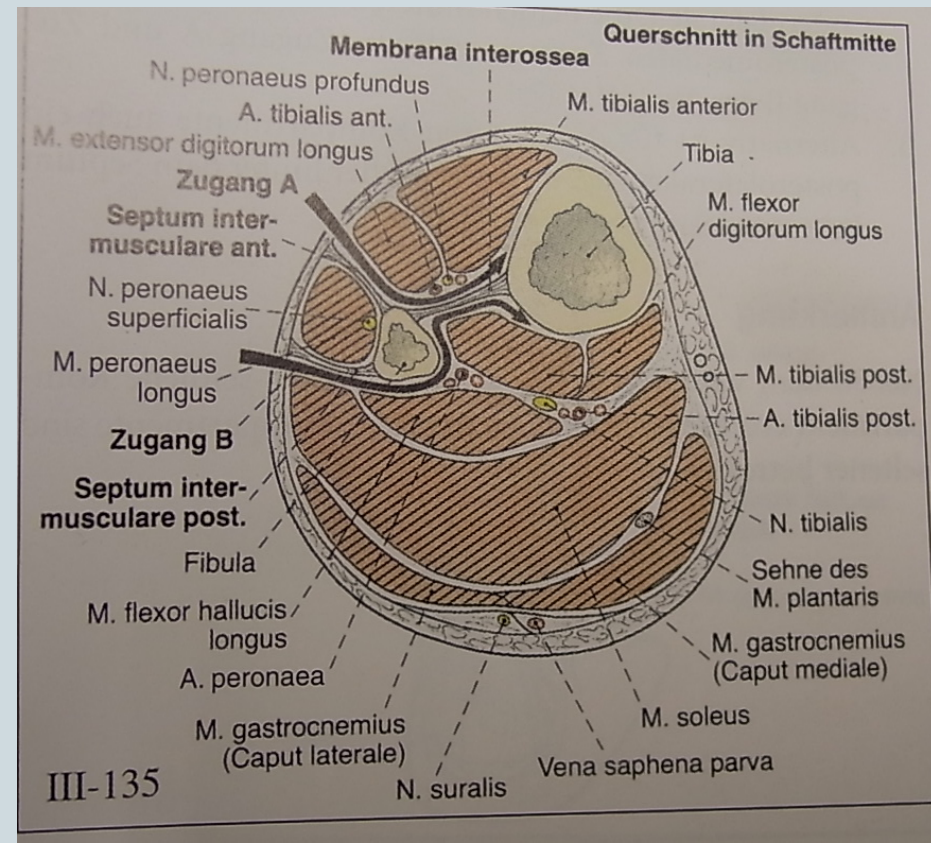
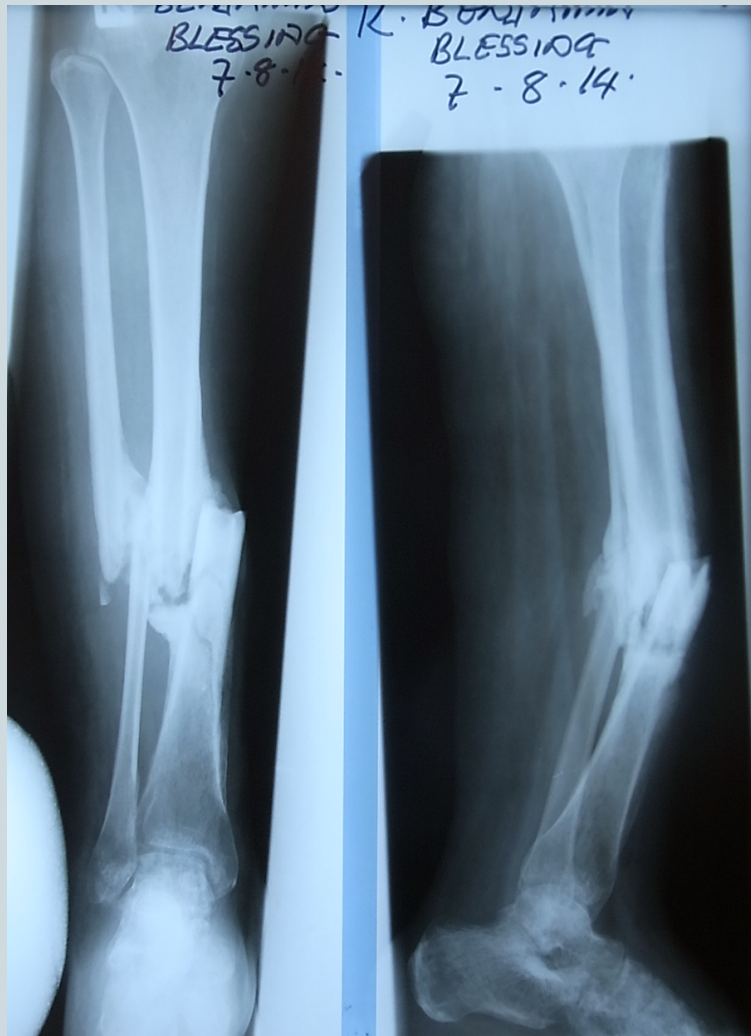
- debridement and external fixation
- enhancing granulation
- skin grafting:
 - epithelial coverage
 - reduction bacterial load
- ORIF right forearm
- tibia callus stimulation → decortication+bone graft
- finally weight bearing with support



Debridement dead bone → Enhancing granulation
in moist environment - 4 hourly NaCl-irrigation



1. skin graft
2. bone graft from iliac crest on posterolat. tibia + fibula + decortication



Finally walk with frame support E.F. located opposite side to fibula

