

Complex Articular Knee Fractures Non Union & Mal Union Previous Material



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Fracture with material (TKA excluded)

✓ Minimal (eg ACL)

✓ Screws

✓ Pins



✓ Medium (Osteotomy plate)

✓ Important (eg femur)

✓ Plate

✓ Nail



Fracture with material



✓ Non union

✓ Stiff knee (excessive loads @ flexion)

✓ Stress shielding

Perren SM. *Clin Orthop Relat Res* 1988
Harkness JW. *In Rockwood CA ed Fractures
in adults, 4rd ed. Lippincott-Raven, 1996*

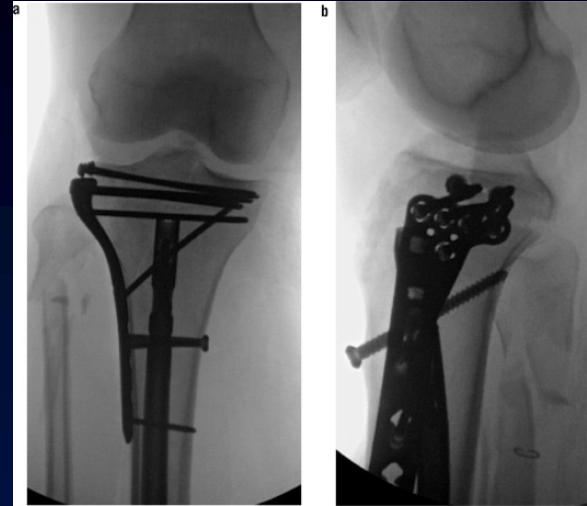


Fracture with material

Sometimes one step

Simple cases

W/O interference



Corrective
osteotomy



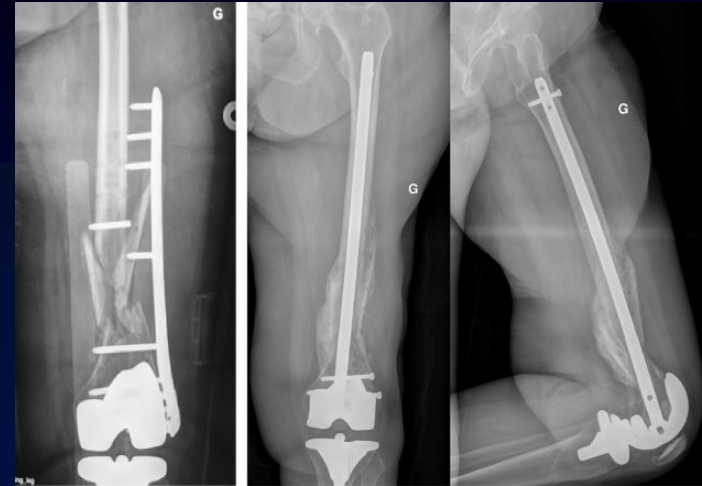
Fracture with material

Better two stages

✓ Bacteriological harvesting

Risk of infection X 8

Consensus Med Mal Infect 2009



✓ Bony status



Fracture with material

- ✓ Fixation removal
- ✓ Special set



- ✓ Multiple bacteriologiques samples
- ✓ Temporary splint

Fracture with material

Ct scan / treatment choice

- Conservative
- Graft
- Cement
- Fixation



- Arthroplasty



Fracture on non union

- ✓ ≠ delayed healing
- ✓ Periarticular malunion



- ✓ Bone scan
- ✓ Check low grade infection

Fracture on non union

- ✓ Treatment Malunion
- ✓ Graft
- ✓ Strong new fixation



Fracture on mal union

- ✓ Mal union led to
 - ✓ Knee stiffness
 - ✓ Post traumatic osteoarthritis

New fracture allows you to treat deformity



Fracture on mal union

✓ New fracture

✓ Poor bone stock

✓ Osteoporosis

✓ Prosthesis

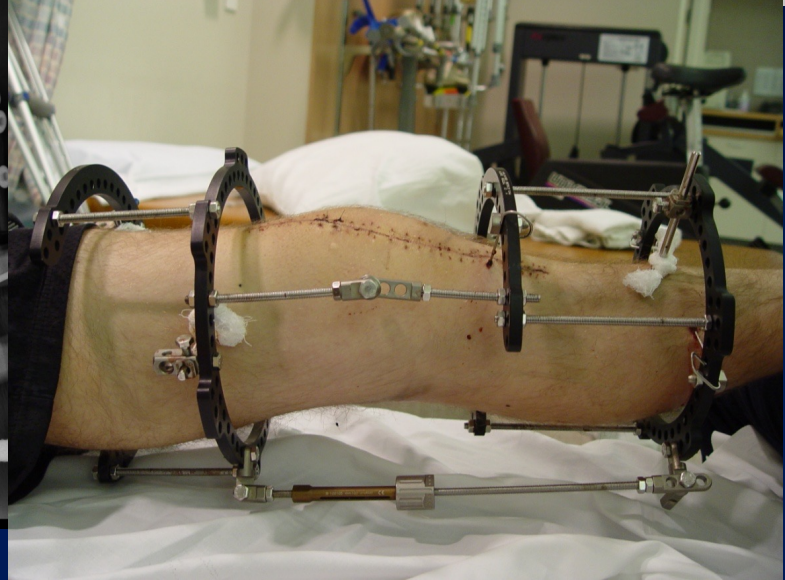
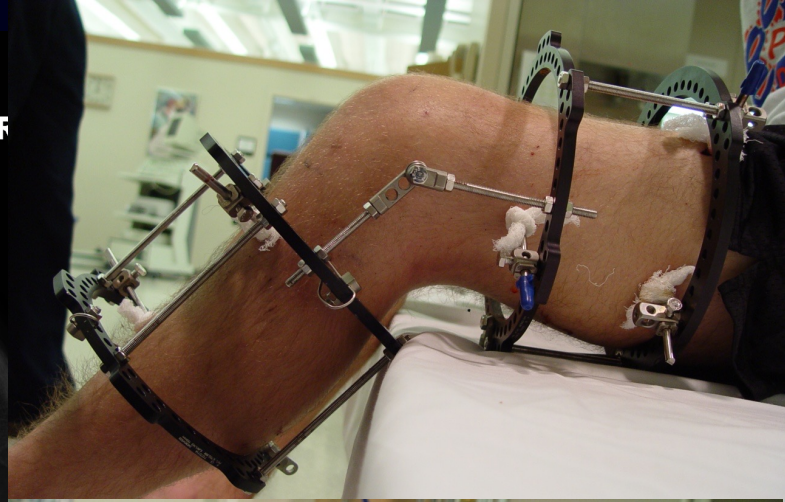
✓ Conservative

✓ Ext frame fixator allows motion

✓ Relaxes soft tissues, improves motion



Conservative Case Report



R₀

STANDARD

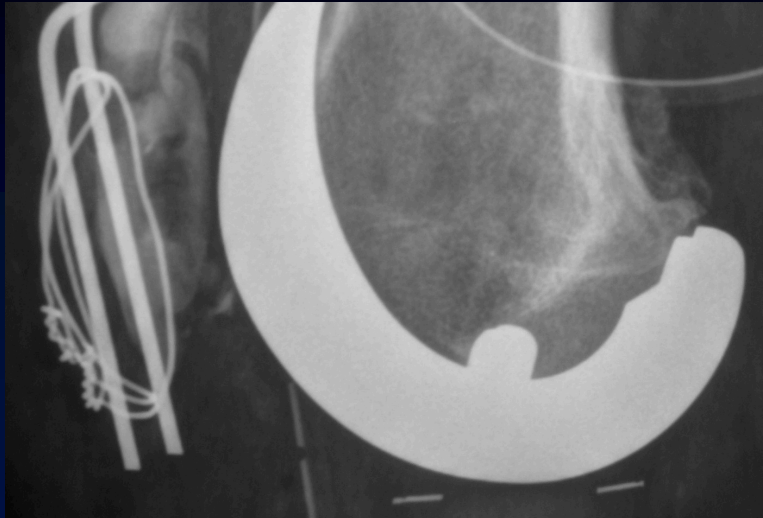


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Courtesy Dr Amendola

Patellar Case Report





Each case is unique