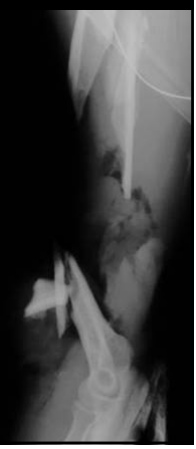
How to handle major extremity injuries? Clinical aspects



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5th Nordic Trauma Radiology Course
May 2008

Aims

- Background
- Management
  - –Historical
  - –Present
- Summary

BACKGROUND


Major extremity injury?
• Injury to major EXTREMITY
• MAJOR injury to extremity

Major extremity injury?

- Injury to major EXTREMITY
- MAJOR injury to extremity
- Major injury INVOLVING extremity

Major injury involving extremity

Injury in the polytraumatized patient (ISS>15)

1. Cerebral	72%
2. Thoracic	49%
3. Extremity	**46%**
4. External	34%
5. Abdominal	29%
6. Facial	25%

Ullevål University Hospital, Trauma registry 1993-99

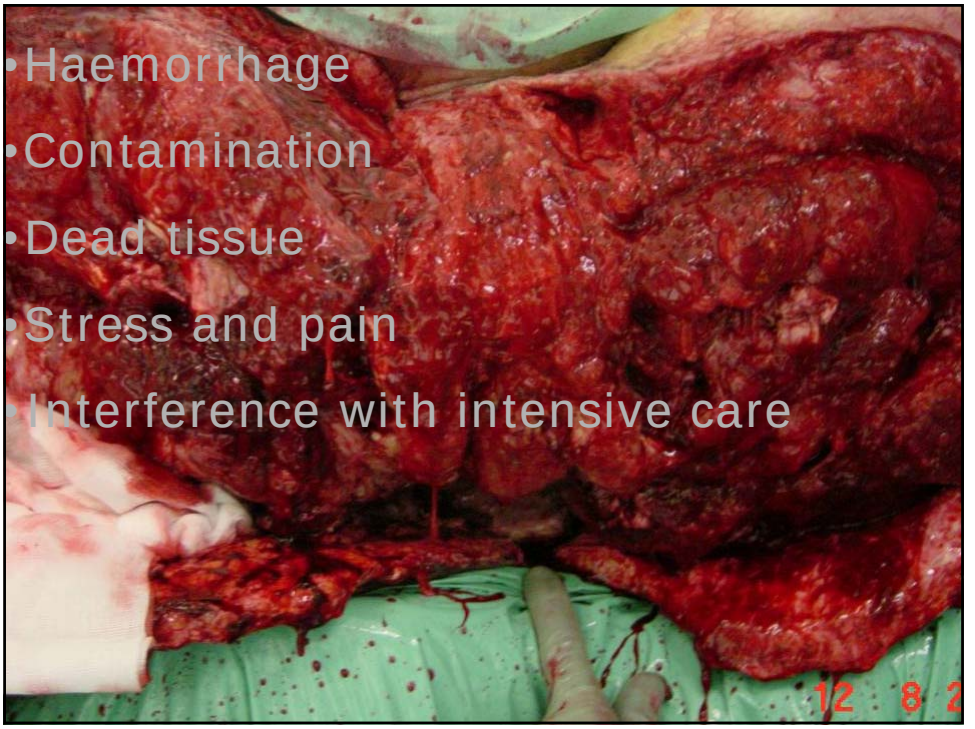
MANAGEMENT

Management of severe extremity inuries: Aims

1.To increase number of survivors

Extremity injuries important in the systematic traumatic reaction due to:

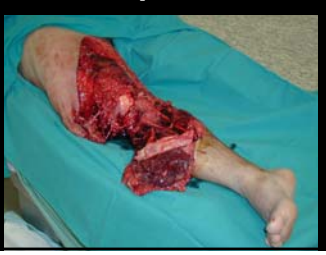
- Haemorrhage
- Contamination
- Dead tissue
- Stress and pain
- Interference with intensive care

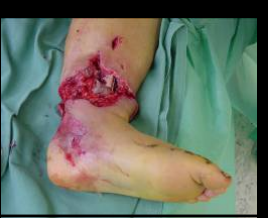


Management of severe extremity inuries: Aims

1.To increase number of survivors

2. To improve long-term outcome





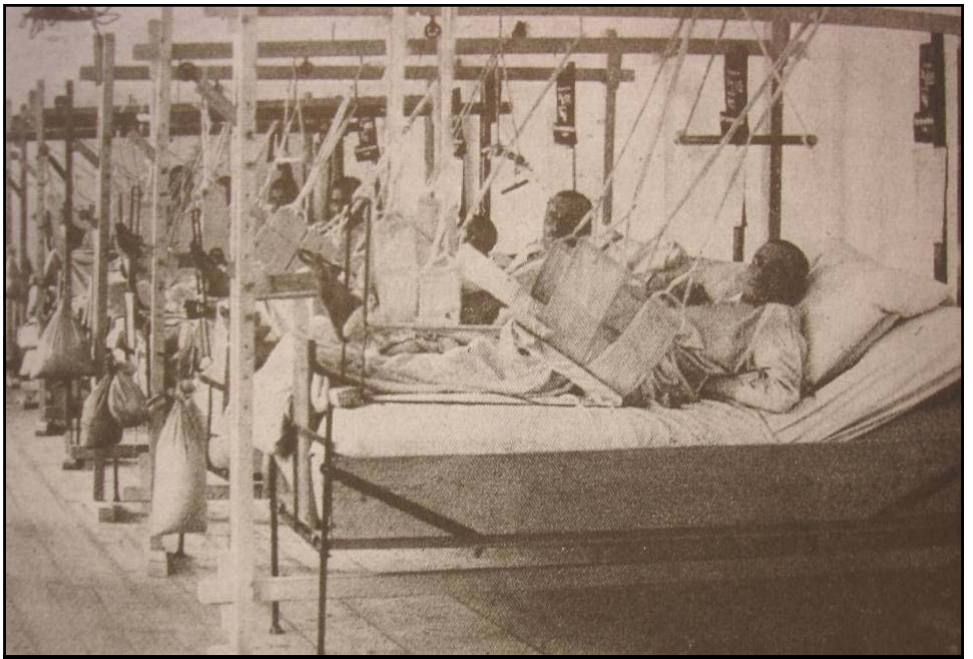
Aims of treatment
Long-term outcome

Reduce morbidity:

- Chronic pain
- Inability to work
- Reduced QOL

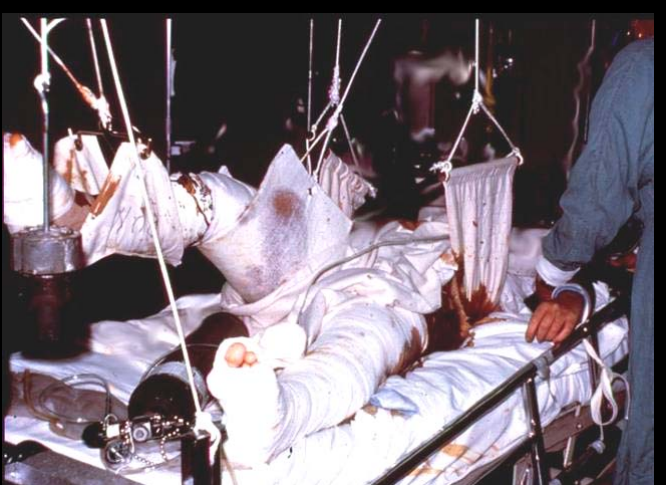
Management of extremity injuries - History

<1970 Conservative treatment



The ”femur-room”, WWI

Conservative treatment, <70:ies



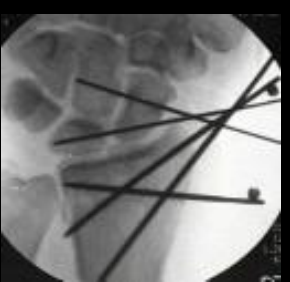
The horizontal crucifixion...

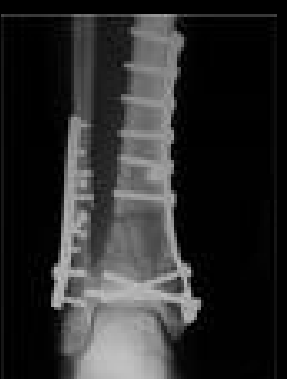
Courtesy Chris Colton

<1970 Conservative treatment

1976- ”Early total care”

Early total care





Why early total care?

Allows early mobilization

Reduces fracture pain (less opioids)

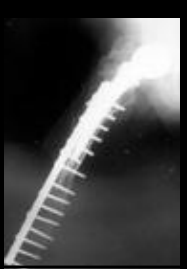
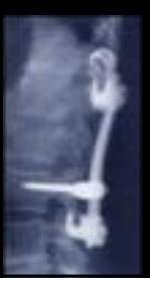
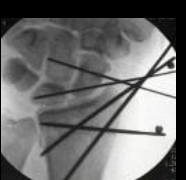
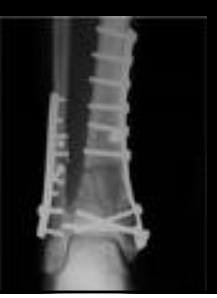
Technically easier to operate

Why NOT early total care?

Early total care

”Patient fully repaired, but dead ”

=Good in many cases, but not applicable to all

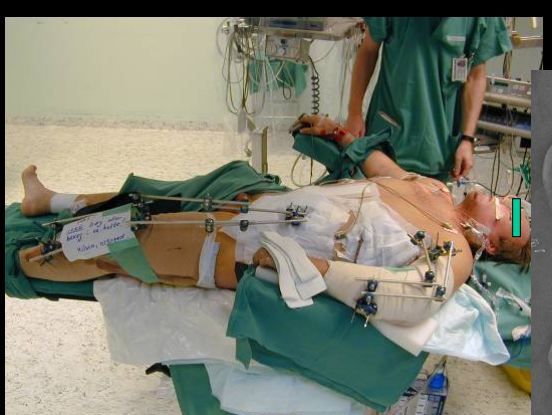





<1970 Conservative treatment

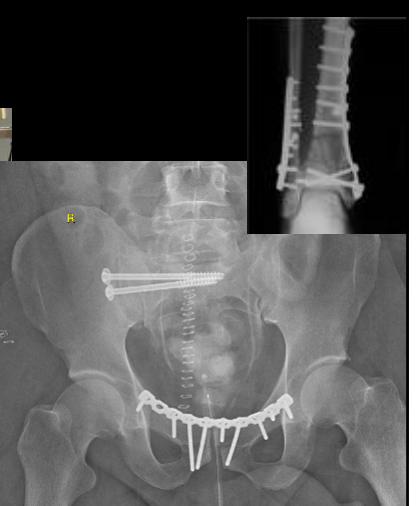
1976- Early total care

>1992 Staged sequential surgery

”Staged sequential surgical management”

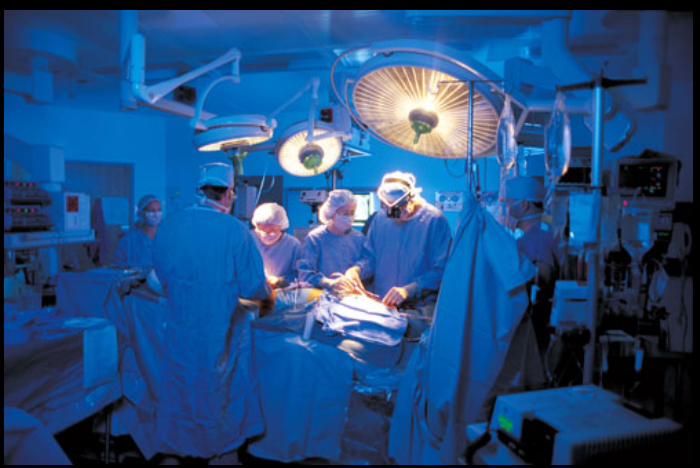


Day 1

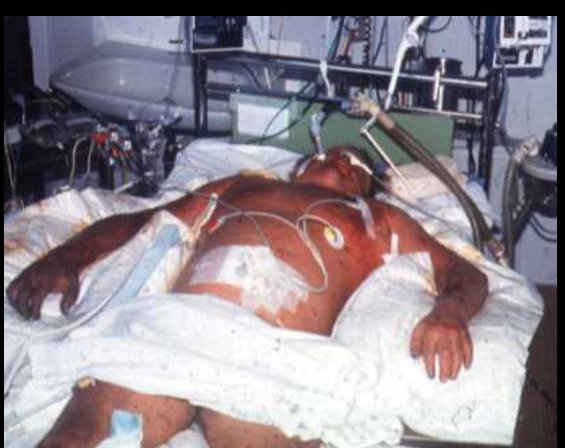


Later

However, no class I-evidence studies available on the optimal timing of definite surgery



.. nor on who tolerates early total care



”An individual surgeon should be encouraged to do what (s)he thinks is best for the patient using the ”art” of medicine, since in this case the ”science” of medicine is inconclusive”

R. Meek & P. O´Brian in AO Dialogue, 2006

Personal practice

Polytrauma patients who are severely injured should be:

- Haemodynamically stable before undergoing definite orthopaedic surgery
- Preferably operated on within a few days

Summary

Background

- Extremity injuries are common in polytraumas
- Important determinants of outcome

Summary

Management

Historical:

Conservative – Early total care

Present:

Seq. surgery


Thank you!
Helsinki, Finland