The Polytraumatized Patient: Staged Treatment & Provisional Stabilization

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I. Who is the Polytraumatized patient?
   a. Multiple injuries, typically from a high-energy mechanism
      i. May involve intraabdominal, neurologic, musculoskeletal, cardiovascular, etc.
   b. Requires involvement of multidisciplinary team
      i. Trauma, critical care surgeon (runs the show)
      ii. Orthopedic trauma surgeon
      iii. Vascular surgeon
      iv. Neurosurgeon
      v. Other specialties as needed
   c. May benefit from staged management

II. Why consider Staged Management??
   a. Theory: **Injury is "first hit"**
      i. Massive inflammatory response
      ii. Inflammatory markers increased (IL-6, CRP, TNF)
      iii. Pulmonary vascular permeability increases
      iv. Increased clotting activity (unless overwhelmed)
      v. Fluid resuscitation alters system response
   b. Theory: **Surgery is "second hit"**
      i. As the inflammatory response of the first hit abates, the body may be acutely sensitive to secondary insults and mount an exaggerated inflammatory response with resultant adult respiratory distress syndrome (ARDS) and/or multiple organ dysfunction syndrome (MODS)

III. **Provisional Stabilization**: Temporizing care until 'stable patient'
   a. Skeletal traction of long bones (external fixation vs. traction pin)
   b. Pelvis binder (simple sheet) vs. external fixation for unstable pelvis fractures
      i. Consider for most "open book" pelvis fractures (APC injuries)
      ii. Recognize the most severe pelvis fxs (APC3, LC3, Vertical shear)
   c. Monitor patient closely
      i. VS, GCS, Fluid responses (appropriate Hgb response?)
      ii. Specific markers: Lactate, Base deficit (ABG), Hgb/Hct

IV. Definitive stabilization
   a. Often 3-7+ days from injury
   b. Assess adequacy of resuscitation: vital signs, response to fluid replacement, urine output, base deficits, serum lactate, bicarbonate levels
   c. Conducted in concert with trauma team input daily
      d. Consider staged management if still labile (i.e. one extremity per day)