Hemorrhagic Shock Resuscitation Protocol

Temperature management:

- Warm OR to 90°F
- 2 Bair Huggers
- Belmont versus fluid warmer primed
- Goal patient temp >36°C

Prepare for transfusion:

- Ensure T&S sent
- Vocera "Blood bank legacy"
- Scan bracelet for Little App
- Blood ordering packet on wall if app down

Diagnosis

- Blunt or penetrating trauma
- Low CO/High SVR
- ScvO2 low
- High pulse pressure variation ≥12%
- POCUS shows underfilled LV

Hemodynamic target

SBP 80-90

Fluid choice

- ***AVOID crystalloid (limit to carriers/flushes)***
- ***AVOID albumin***

4 units whole blood → **1:1 or 2:1 RBC : FFP** + **1 plt (6 pack) for each 6 RBC** + **1 cryo for each plt**

Vasopressor choice

- ***Blood administration to achieve hemodynamic targets!***
- Vasopressin as first line pressor

Resuscitation endpoints

- Cleared lactate (<2 mmol/L)
- Normalized base deficit (+/- 1.0)
- Normotension
- NOT to hemoglobin

Adjuncts

- Calcium repletion with blood (~1 g CaCl / 4 units blood)
- Tranexamic acid (TXA) if <3 hr from injury: 1g over 10 min, then 1g over 8 hrs
- TEG can guide blood product administration

Communication is CRITICAL

Goals of operation (damage control versus definitive)
Critical changes in patient status
(hemodynamics, labs, EBL, resuscitation, temp)

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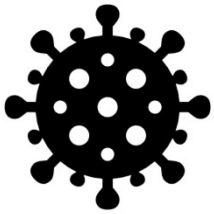
Septic Shock Resuscitation Protocol

Pre-operative evaluation:

- Likely source(s)?
- Planned procedure?
- Antimicrobials given? (timing/dose)
- Gaps in coverage (based on likely source and/or culture data)?



Diagnosis	• Likely infectious source • High CO/Low SVR • ScvO2 normal or high • Low pulse pressure variation (<12%) • POCUS shows hyperdynamic LV
Hemodynamic target	***MAP >65*** ***(consider MAP >75 in chronic hypertensives)***
Fluid choice	• ***Consider EARLY vasopressor >> more fluid*** • ***Crystalloid: target 30mL/kg in TOTAL resuscitation (inclusive of ED/floor/ICU)*** • ***Albumin prn***
Vasopressor choice	• *EARLY norepinephrine* • *Consider vaso 0.04 units/min* • *If refractory, methylene blue 2 mg/kg over 20 minutes, then 0.5-1 mg/kg/hr*
Resuscitation endpoints	• Cleared lactate (<2 mmol/L) • Normalized base deficit (+/- 1.0) • May not wean off pressors
Adjuncts	• Antibiotics: broad spectrum coverage unless known source/speciation/sensitivities; consider antifungal if immunocompromised • Ensure cultures sent (blood x2, sputum, urine) • Steroids: hydrocortisone 50mg q6h + fludrocortisone 50mcg daily (enteral) x7 days

Communication is CRITICAL

Intra-op findings? Source control? Expected translocation?
Critical changes in patient status
(hemodynamics, labs, EBL, resuscitation, temp)

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