Invasive Protocol

Who

Septic Patient with Lactate ≥ 4 or MAP < 65 after 2 liters crystalloid

and

Goals of care are curative

Initial Resus

- Administer 20-30 ml/kg isotonic **crystalloid bolus** over 20 minutes
- Send **cultures** of any possible source
- Think of **source control** (Infected catheter? Operative intervention for infection? Drainable pus?)
- **Administer antibiotics** to cover any possible source (See abx rec sheet)
- Place **full-sterile central line** in the IJ (preferably with ultrasound) or subclavian vein

SpO2

If patient's O2 saturation is < 90% on supplemental oxygen:

- Intubate (Beware, the patient may drop their blood pressure precipitiously)
- Place on lung protective ventilation
- Place on pain control regimen, administer sedation after pain controlled

Fluids

Choose 1 Strategy

Best: **Dynamic IVC Ultrasound**-Keep giving 500-1000 ml boluses of isotonic crystalloid until there is < 30 % change in IVC size (See IVC UTS training sheet & video)

OK: **CVP**-Administer fluids until CVP > 10 mm Hg in non-intubated patients and > 14 mm Hg in intubated patients

Re✓ MAP

- If MAP is < 65 after adequate fluid loading, **start Vasopressors**
- Titrate vasopressors to achieve a MAP > 65

Tissue Ox

- Send repeat lactate **AND** ScvO2
- If lactate has cleared by ≥ 10 % **AND** ScvO2 ≥ 70%, go to disposition
- If ScvO2 < 70 **OR** lactate hasn't cleared by ≥ 10%

  Choose 1 Option:

  If Hb < 7: transfuse 1 unit of PRBC

  or

  Additional Fluids: if you were using CVP to determine fluid status, administer an additional liter of isotonic crystalloid

  or

  Inotropes: especially if heart appears hypodynamic on echo. If calcium is low, try that first. If not, administer dobutamine 5-20 mcg/kg/min.

  or

  Intubate: to decrease pulmonary metabolic load

  or

  If Hb 7-10: consider transfusion. Especially in elderly patients or patients with coronary artery disease

- Send repeat lactate & ScvO2, If ScvO2 < 70 or if lactate still has not cleared by ≥10%, continue with the above, trending lactates and ScvO2 every 1 hour until these two goals are met.

Dispo

- Patients should get ICU consultation. If not an icu candidate, should go to monitored bed
- Periodically recheck patient for MAP > 65, good mental status, and good urine output
- Consider trending lactate every Q 2-4 hours. If it starts rising again, restart protocol