DIVISION OF TRAUMA SURGICAL CRITICAL CARE
GUIDELINE FOR THE EVALUATION, DIAGNOSIS, AND EMPIRIC TREATMENT OF INFECTION

Temp >38.5° for > 4hrs AND >24hrs post-admission/post-op
(IF evidence of organ dysfunction, it is permissible to being immediate work-up)

PULMONARY SOURCE

A. New, persistent, or progressive infiltrate
B. Respiratory
   a. Purulent secretions
   b. Decline in pulmonary status
      i. Worsening hypoxemia
      ii. Reduced TV
      iii. Elevated inspiratory pressures
C. Inflammatory
   a. Fever (>38.5°)
   b. Unexplained leukocytosis
   c. New onset delirium

** Presence of A plus 2 additional symptoms **
(see Ventilator Associated Pneumonia guideline)

Directed clinician physical exam and evaluation of clinical parameters

OTHER SOURCE

Infectious

Evaluate for:
- Delayed abdominal source
- Sinusitis
- Need for new radiologic imaging
- Wound source
- Rectal exam
- C-diff (if diarrhea & leukocytosis present)
- Source control of known infection

Non-Infectious

- VTE
- Phlebitis
- Delirium tremens
- Pancreatitis
- Acute cholecystitis
- Drug fever
- Sympathetic storm
- Adrenal insufficiency
- NMS
- Malignant hyperthermia

CATHERETER / LINE SOURCE

Central line >72 hrs with purulence at site

OR

One or more signs and symptoms
UTI >12hrs
(See UTI guideline)

YES

NO

ETT or Tracheostomy

YES

NO

Perform bronchoscopy w/ BAL

Obtain tracheal aspirate

Start empiric pneumonia antibiotics per current guidelines

** Consider size of airway and ability to tolerate procedure **

Change line and replace at NEW site OR
Obtain UA w/ reflexive culture and follow UTI guideline

Investigate other source

Adjust/De-escalate therapy per culture and sensitivity:
≥ 10⁴ CFU/mL → narrow spectrum
≤ 10⁴ CFU/mL → discontinue antibiotics

** Blood cultures should only be obtained when other potential sources have been ruled out **
References


Jones, A. E., Trzeciak, S., & Kline, J. A. (2009). The Sequential Organ Failure Assessment score for predicting outcome in patients with severe sepsis and evidence of hypoperfusion at the time of emergency department presentation. *Critical Care Medicine, 37*(5), 1649–1654. [https://doi.org/10.1097/CCM.0b013e31819def97](https://doi.org/10.1097/CCM.0b013e31819def97)

