FEVER IN THE ICU

Fever is a common problem in the ICU and warrants immediate assessment

- Critically ill patients, with complex underlying illnesses and thereby are less likely to survive serious nosocomial infections
- Organisms common in nosocomial infections may cause necrotizing destruction of tissue and blood infections and are relatively resistant to antibiotics

Definition of fever – an increase in body temperature exceeding normal circadian variation. Normal core temperature is 36.8^0C +/- 0.4^0C and varies in a circadian fashion by approximately 0.6^0C, being lowest in the morning

Not all fever is due to infection. Causes of fever

- Infectious
  - Influenced by patient population (medical vs surgical, immunocompromised vs immunocompetent, community vs nosocomial)
  - Most common sources in ICU – lungs, urinary tract, wounds, lines. GIT – acute acalculous cholecystitis, antibiotic-associated pseudomembranous colitis, mesenteric ischaemia, intraabdominal abscess
  - Do not forget fungal infection if negative cultures and patient fails to improve on antibiotics
- Non-infectious
  - Post-surgery
  - CNS – SAH, stroke, post-convulsions
  - CVS – dissection aortic aneurysm , AMI, pericarditis, mesenteric ischaemia, vasculitis
  - Lungs – atelectasis, pulmonary embolism
  - GIT - pancreatitis
  - Endocrine – hyperthyroidism, adrenal insufficiency
  - Drug fever
  - Transfusion reactions
  - Neoplasm
  - Heatstroke
  - Neuroleptic malignant syndrome
  - Malignant hyperthermia
  - Withdrawal syndromes

Diagnosis

- Thorough physical examination – look at line sites, skin, wounds, examine CVS, lungs, abdomen
- CXR
- Lab studies - 2 blood cultures, septic work-up with urine, sputum, sampling of any abnormal fluid collections (pleural effusion, ascites)

- Lumbar puncture should be considered if fever associated with sudden and unexplained change in mental status or in patient post-neurosurgery or head injury

Approach to the febrile patient

- If patient febrile, acutely ill and unstable, may be necessary to begin empiric broad-spectrum antibiotics therapy before and infectious cause is established
- Make every effort to distinguish infectious from noninfectious cause of fever to minimize use of antibiotics
- Consider changing medications if suspect drug-induced fever