The Febrile Surgical Patient
Surviving Sepsis…
What temperature should I be concerned about infection

- 101.0° in all populations OR
- 2° F increase over baseline for 4 hours OR
- Hypothermia ≤ 94°
- Transplant patient > 100.5°
Where do you take a temperature?

- Intravascular thermistor
- Bladder thermistor
- Esophageal thermistor
- Oral thermistor
- Rectal Thermistor
- NOT axillary!
What is the setting of the fever

- Pre-op
- Post-op
- ICU
- Home
Sources of FEVER!!

- Atelectasis
- Wound
- Bacteremia
- Urine
- DVT
- Pneumonia
- Thrombophlebitis
- Drugs
- Meningitis
- Sinusitis
- Catheter related blood infection
- Abcess
- Anastomotic breakdown
- Pancreatitis
- Cholecystitis
- SIRS
Atelectasis

- Occurs with minutes of loss of spontaneous breath and mechanical ventilation
- LOSS FRC
Atelectasis
Atelectasis

- Can last 48 hours
- Prevention
- Incentive spirometry
- Deep breathing and coughing
- Ambulation
Wound Infection

- <24 hours from surgery
- >3 days
Wound Infection

- **<24 hours from surgery – Clostridium or Group A Strep**  **EMERGENCY**
  - Redness, “dish water” drainage
  - Needs immediate debridement (associated with >75% mortality)

- **>3 days – Skin bugs – Staph and Strep**
  - Can give antibiotics
  - Or just open wound
Urinary Tract Infection

- Simple – at home
  - Can treat based on symptoms
  - Leukocyte, Nitrite positive
  - Culture unnecessary
  - 3 days Cipro or Bactrim

- Complicated – catheter related
  - Leukocyte, nitrite not diagnostic – might be elevate because of the catheter without infection
  - Use Micro – # of WBC compared to # RBC and Culture
  - 5 days of treatment
  - Gentamycin or broad spectrum
  - *****TAKE OUT CATHETER****
DVT

- Increase risk of DVT in all surgical patients
- Prevention
- Early ambulation
- Lovenox 40 mg qd – FIRST DOSE GIVE PREOP!
- If high risk (trauma) 30 mg BID
- Heparin 5000u TID an alternative for low risk patients
- SCDS
FEVER WORK-UP

- CBC
- 2 peripheral blood cultures
- Urinalysis and urine culture
- Chest X-ray
- If in the vent – Bronchial alveolar lavage
- Look at wound

Consider – Stool sample of C diff
- CSF if open skull
- Review Lines – remove unneeded
C. diff

- Can be caused by ANY ANTIBIOTIC
- Only need ONE DOSE!!!!!!
- Treatment
  - PO or IV flagyl
  - PO vanc
  - Vanc enemas
Is your patient immunosuppressed?

- Cancer
- Chemo
- Chronic disease
- Steroids
- HIV
- Transplant
- LOWER YOUR THRESHOLD!
SIRS

- At least 2 of the following
  - Temp > 38 or < 36
  - Pulse > 90
  - Resp rate > 20 or mechanical ventilation
  - WBC > 12 or < 4 or > 10% Bands

- **if infection present = SEPSIS**
- SIRS can happen after surgery without infection
Medications that cause Fevers

- Dilantin
- Almost any high blood pressure medication
- Almost any Abx
WATER, WIND, WALK, WOUND, & WEIRD DRUGS!

- WATER = urinary tract infections
- WIND = atelectasis or pneumonia
- WALK = deep vein thrombosis
- WOUND = surgical wound infection
- WEIRD DRUGS = drug fever
What is the most common cause of fever in the first day after surgery?

A. UTI  
B. atelectasis  
C. DVT  
D. surgical wound infection  
E. drug-induced fever
A patient is diagnosed with C. diff colitis. What antibiotic is highly associated with this condition?

A. Clindamycin
B. Vancomycin
C. Flagyl
D. Penicillin
E. Ancef
Question

- T/F
- A Texas (condom) catheter is associated with a lower risk of UTI than a foley catheter