

A decorative border of black footprints surrounds the central text. The footprints are arranged in a roughly rectangular shape, with some footprints pointing towards the center and others pointing outwards. They vary in size and orientation, creating a dynamic and playful frame for the content.

# Diabetic Infection

Ready. Set. Go!

If you can get through this round of hard core interview questions, you can get through anything. These are tough but remember the basics, be methodical.

# Case

- HPI: A 59 year old Male presents to the clinic with a wound on the tip of his LEFT big toe.

*What else do you want to know?*

# Past History

- **Illnesses:** DMII, CKDII, HTN, HLD,
- **Meds:** Glyburide, Metformin, Lisinopril, Amlodipine, Atorvastatin
- **Allergies:** none
- **Operations:** LEFT 2<sup>rd</sup> toe partial amputation (2010)
- **FamHx:** DMII
- **SocHx:** drinks ETOH socially
- **ROS:** negative

*What do you want to know next?*

# Objective

- Vitals:
  - BP = 148/92
  - HR = 87
  - RR = 27
  - T = 38.5 C (101.3 F)

*What is SIRS criteria? Define Sepsis? Does this patient meet either?*

# Physical Exam

## VASC:

- DP/PT pulses non-palpable b/l
- Biphasic PT and monophasic PT on Doppler b/l
- No digital hair present

## NEURO:

- Loss of protective sensation distal to ankle b/l

## MSK:

- s/p LEFT 2<sup>rd</sup> digit amputation
- 5 degrees DF at ankle joint b/l with knee extended and flexed

## DERM:

- Full-thickness ulceration (2.5 x 2.2 x 0.9 cm) distal LEFT hallux.
  - Has necrotic and fibrous base, moderate peri-wound edema
  - Probing to bone
  - hyperkeratotic borders, mild serosanguinous drainage
  - No active purulence, marked malodor

# Clinical Image

– What would you like next?



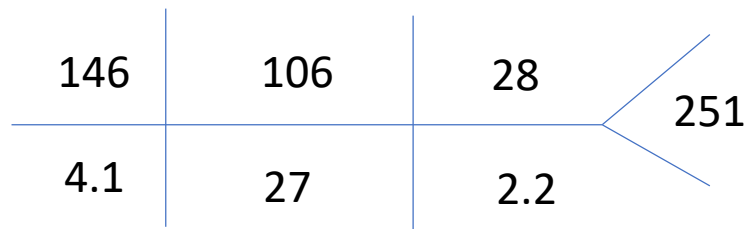
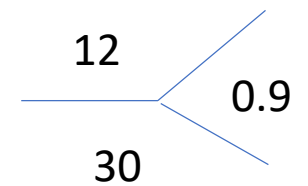
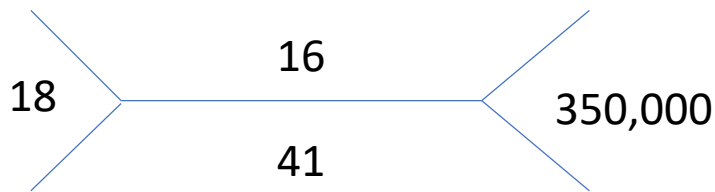
Read this x-ray



What would you like to do next?

# Labs

ESR = 70 mm/hr  
CRP = 50 mg/dl  
HbA1c = 10.0%



*What labs are abnormal?*



# Assessment

What is your full assessment?



# Plan

What is your plan doctor?

Do you think it is infected?

Will you admit the patient?

Would you perform surgery?

What abx would you give?



# Surgery

- What are the surgical goals for this case?

# Pimp Questions

Diabetic Infection

# Pimp Questions

1. What antibiotics would you use for Staph or strep?
2. What is a 2<sup>nd</sup> generation cephalosporin
3. What oral Abx used against MRSA?
4. What ABI values indicate poor healing
5. TcPO<sub>2</sub> values for poor healing?

# Pimp Questions

1. What are Gram (+) gas producing bacteria?
2. Gram (-) gas producing bacteria?
3. Name one anaerobic bacteria.
4. Antibiotics against pseudomonas?
5. After surgery you noticed the patient bleeds poorly, what is your next step?
6. When do you admit a patient?

# Answers

# Case

- HPI: A 59 year old Male presents to the clinic with a wound on the tip of his LEFT big toe.

*What else do you want to know?*

*NLDOCAT, IMAHO. Does patient have fevers, chills, nausea, vomiting. Last meal he ate?*



# Objective

- Vitals:

- BP = 148/92
- HR = 87
- RR = 27
- T = 38.5 C (101.3 F)

SIRS: 2 of the following criteria

- HR > 90
- RR > 20 or PaCO<sub>2</sub> <32 mmHg
- T <36 C (96.8 F) or >38 C (100.4 F)
- WBC <4 or >12, or >10% bands

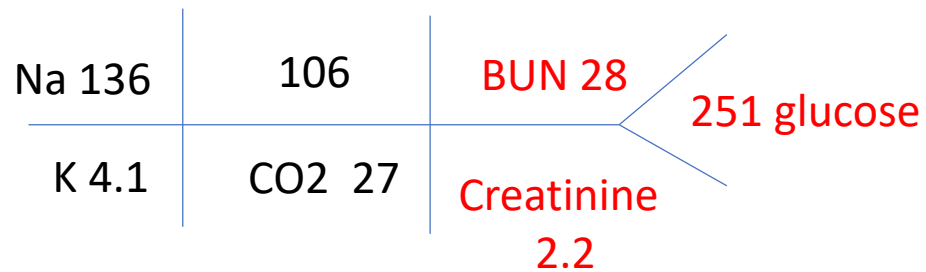
*What is SIRS criteria? Define Sepsis? Does this patient meet either?*

-Sepsis: SIRS + source of infection

-Septic shock: Severe sepsis with hypotension

# Labs

ESR = 70 mm/hr  
CRP = 50 mg/dl  
Lactose = 2.9 mEq/L  
HbA1c = 10.0%



What labs are *abnormal*?

# Labs

- Increased **leukocyte count (>15,000 cells/ul)** indicates increased inflammation, not necessarily infection. Getting CBC with differential—band cells (**>10% bands**)
- **ESR** is a non-specific marker of infection/osteomyelitis, as it increases in any inflammatory state. extremely elevated (**>60 mm/hr**)
- **CRP (>0.6 mg/dl)** is found more in acute inflammation, not specific for infection/osteomyelitis.
- Normal **lactate** of venous blood is 0.5-2.2 mEq/L. The mortality rate significantly increases after lactate **>4 mEq/L**.

# Surgery

- What are the surgical goals for this case?
  1. Culture and sensitivity
    1. Would culture – deep wound specimen
    2. I & D with pulse lavage
    3. Blood cultures for bacteremia
    4. Bone biopsy – “gold standard”
  2. Hallux amputation or TMA based on blood flow
  3. TAL or gastric lengthening

# Pimp Questions

1. What are most common Gram positives in osteomyelitis? *S. aureus*, *S. epidermidis*
2. What is a 2<sup>nd</sup> generation cephalosporin? Cefaclor (Ceclor) or cefuroxime (Ceftin)
3. What oral Abx used against MRSA? Linezolid, Minocycline, Ciprofloxacin, Bactrim
4. What ABI values indicate poor healing?  $ABI < 0.40$
5. TcPO<sub>2</sub> values for poor healing? TcPO<sub>2</sub> <20-30 mmHg are severely ischemic

# Pimp Questions

1. What are Gram (+) gas producing bacteria?
  - Clostridium perfringes
  - Staph
  - Strep
  - Peptostreptococcus
2. Gram (-) gas producing bacteria?
  - Bacteroides
  - E. coli
  - Klebsiella
  - Serratia
3. Name one anaerobic bacteria. MRSA, C. Diphtheria, Listeria monocytogens, Bacillus anthracis, C. perfringes, C. tetani, C. difficile
4. Antibiotics against pseudomonas? (FAT CIAZ) Fortaz, Aminoglycosides, Timentin, Cipro, Imipenem, Axtreonam, Zosyn
5. After surgery you noticed the patient bleeds poorly, what is your next step? Consult vascular, possible TMA or BKA.
6. When do you admit a patient? Wet Gangrene, Gas Gangrene, Necrotizing Fasciitis, Compartment Syndrome, Sepsis, SOB, pregnant with foot wound

# Great Job!

Don't stop, keep it up!