Clinical Sleuthing: Looking for Clues to the Trauma Diagnosis in the ICU

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Objectives

• Identify the components of differential diagnosis in critical care
• Learn how to apply inductive reasoning to identify the cause of the patient’s deterioration
• Develop a systematic method for assessing the patient and identifying possible differential diagnoses.
Differential Diagnosis and Diagnostic Error
How big is the problem of diagnostic error?

- Accounts for 17% of the preventable errors in hospitalized patients

- Autopsy studies show 9% of patients had undiagnosed major diagnostic error
How is a diagnosis commonly determined

• Use of differential diagnosis - “heuristics”
• Heuristics are experienced-based problem solving techniques like
  – Rule of thumb
  – an educated guess
  – an intuitive judgment
  – common sense
What causes Errors?

• Heuristics applied incorrectly lead to errors in diagnosis
• Cognitive bias is the primary cause
Examples of Diagnostic Errors caused by Cognitive Bias

• **Availability Heuristic**
  (diagnosis of this patient biased by experience with past patients)

• Patient with left shoulder pain treated for AC separation and discharged home from the ED, when instead, he had a splenic rupture
Examples of Diagnostic Errors caused by Cognitive Bias

- Anchoring (premature closure/settling on a diagnosis)...

  *Relying on initial diagnostic impression despite subsequent information to the contrary*

- Repeated positive blood cultures dismissed as contaminants; patient eventually diagnosed with endocarditis
Examples of Diagnostic Errors caused by Cognitive Bias

- Framing

  *Diagnostic decision-making is unduly biased by subtle clues and collateral information*

- Patient with nausea and vomiting treated for ileus and constipation but has a delayed bowel perforation
Examples of Diagnostic Errors caused by Cognitive Bias

• Blind obedience
  Placing undue reliance on test results or “expert” opinion

• Patient diagnosed with delayed hip fracture when Orthopedics consult says all films and CT scans are negative
The Other Primary Contributing Factor for Diagnostic Errors

- Poor teamwork and communications between providers
The ICU Nurses Role in decreasing diagnostic errors?

- Develop your own list of possible differential diagnoses backed up by sound data
- Speak up on rounds and highlight the subtle clues you notice
- Carefully identify your own cognitive biases
- Seek out opportunities for hearing outcomes
  - Interdisciplinary M&M
  - Trauma Conference, etc.