Teaching Clinical Reasoning

Teaching of Tomorrow
November 2018

Clinical Reasoning Strategy

The following teaching paradigm is appropriate for these scenarios:

• Case Conference discussions
• Robust case presentations such as a new H&P
• Extended discussion re: a patient with a new complex problem

Clinical Reasoning Strategy

› How do doctors think?
› How do doctors learn to think?
› Can we teach doctors how to think?
How Do Doctors Think?

Novice vs Expert Clinicians?

How Do Doctors Think?

Hypothesis Testing vs Pattern Recognition

Can We Teach Doctors How to Think?

- Database (Hx / PE / Data)
- Broad DDX (Unprocessed)
- Hypothesis Testing
- Prioritized DDX
Can We Teach Doctors How to Think?

Database

Summary Statement (processed)

Comparison of “Illness Script” to Disease

Prioritized DDx

Processing Key Features

› Eliminate non-specific/redundant symptoms
› Identify most important symptoms
› Group those symptoms/signs that explain the most important symptom (identify patterns)
› Descriptively process all items on the list

Summary Statement (Illness Script)

› Key features of the database (processed)
› Time course
› Epidemiology
Compare and Contrast
- Generate potential diagnoses to consider
- Define the key or classic features of proposed disease
- Compare and contrast these features with the features and patterns in current patient
- Prioritize the DDx based on the comparison process

Prioritized DDx
- Type 1 Diagnosis

Prioritized DDx
- Type 2 Diagnosis
CC: Headache and Confusion

- 32 yo African American woman with AIDS, (CD4=22) presents with four weeks of worsening headache and fever. The headache is over her entire head, throbbing and unremitting and is associated with photophobia and stiff neck. Over the past two days she has stopped eating. She also complains of blurry vision and general aches and pains.

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CC: Headache and Confusion

- PMH:
  - AIDS on no meds (ran out)
  - PCPx2
- SH:
  - Prior IVDA (none for past year)
  - No tobacco
  - No ETOH
- MEDS: none
- NKDA
CC: Headache and Confusion

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› NKDA

Physical Exam

› VS: T=103.5  BP: 139/72  P=100  RR:=20 (+orthostasis)

› GEN: Lethargic

› HEENT: dry membranes, + photophobia, + papilledema, + meningismus

› NEURO: oriented x1, no motor deficits, unable to test sensory or cerebellar fxn
Processed Key Features

- Poor po Intake
- Orthostasis
- Vol Depletion
- Dry Oral Membranes

Summary Statement

**Epidemiology:** 35 yo woman with AIDS

**Time Course:** Sub-acute

**Key Features:**
- Meningitis
- Delirium
- Increased ICP
- Volume Depletion

Prioritized DDx

- Type 1
  - 1b
- Type 2
- Type 3
Prioritized DDx

› Type 1: Cryptococcal Meningitis
  TB Meningitis
  1b: Bacterial Meningitis

› Type 2: Toxoplasmosis
  CNS Lymphoma

› Type 3: Sarcoidosis
  Pseudotumor Cerebri

Now your turn!

EMedicine Vomiting Case

Read the case and list key findings – 3 min
EMedicine Vomiting Case

CPS: Steps (Think like an Expert)

- List Key Findings - Done
- Process Key Features – 5 minutes
  - Eliminate non-specific/redundant features
  - Group Findings according to...
- Summary Statement (Gist) – 3 minutes
  - Epidemiology
  - Time course
  - Key Features
- List and Prioritize DDx – 5 minutes