



Illness Scripts: The Right Script for Diagnostic Reasoning

Connecting the dots for symptom-based PBL cases

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Goals

- Discuss “symptom” anchored problem based learning and illness script creation
- Review creation of an illness script
- Discuss value added of illness script in NP education

Problem-based Learning (PBL)

- PBL makes hypothetico-deductive reasoning process explicit
- Initially students follow guided steps
- Goal – to become a natural approach or way of thinking

Online PBL Approach

- Our Approach:
 - Four cases based on single symptom unfold over 2 weeks ending in 4 different diagnoses
 - Students review all four cases comparing and contrasting salient features

Steps of PBL Process

- Brief CC introduced
- List working hypotheses (HO)
- List what is expected on Hx & PE by HO
- Data is obtained from Hx & PE
- Salient data identified
- HO refined via rule-in/rule-out process

Connecting the dots.....

Illness Scripts

- Needed means of tying cases together to build robust mental models of cases with similar characteristics
- Take the hypothetico-deductive reasoning process one step further
- Make the process of organizing cases in schemas more explicit
- Promote development of diagnostic reasoning

Definition of Illness Script (IS)

Previously acquired network of relevant knowledge and experience anchored by a sign or symptom and enriched by a scenario of events that occur in a certain order.

(Charlin et al, 2007)



Components of an IS

- Chief Complaint
- Working hypotheses
- Predisposing condition
- Pathophysiological insult
- Clinical consequences or distinguishing features
- Defining features
- Problem representation

Refer to handout for exemplar

Example

Chief Complaint: 54 y/o male with CC of right knee pain

Working hypotheses

Predisposing conditions

Pathophysiological insult (Describe key patho)

Discriminating features (Expected findings on Hx, PE, or dx tests)

Defining features (Qualifiers)

Infectious arthritis

Seeding of joint from puncture wound may be evident

Acute infectious process

Acute onset
Warm, red joint
Effusion present
Febrile & ill

Acute, monoarticular, painful, single episode

Problem representation :Acute onset of monoarticular inflammation associated with fever and prostration.

Gout

Acute ETOH ingestion in susceptible individuals
Diet?, Trauma, surgery

Inflammatory process caused by monosodium urate crystal deposition in a joint

Acute, Episodic
Warmth, joint-Effusion
Exquisitely painful
Male > female,
MSUC found on aspirate

Acute, monoarticular, recurrent

Problem Representation: Acute onset of recurrent, exquisitely painful monoarticular process



Illness Script (con't)

Chief Complaint: 54 y/o male with CC of right knee pain

Working hypotheses	Predisposing conditions	Pathophysiological insult (Describe key patho)	Discriminating features (Expected findings on Hx, PE, or dx tests)	Defining features (Qualifiers)
Pseudogout	Trauma, surgery	Acute, recurrent inflammatory process caused by calcium pyrophosphate crystal deposit	Acute onset Warm, red joint Effusion CPPD crystals found on aspirate	Acute, may begin as monoarticular, but will involve multiple joints eventually

Problem representation for Pseudogout: Acute onset of monoarticular joint pain

OA	Trauma (acute or chronic)	Non-inflammatory, cartilage destruction caused by wear and tear	Chronic process with occ. acute pain. Bony proliferation without heat, redness; small effusions	Chronic, decline in functioning; may be mono or polyarticular
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Problem representation for OA: Monoarticular onset without signs of inflammation

The final step: Naming the Illness Scripts

- Develop brief descriptive title
- Summarizing common features of all potential working hypotheses.
- Example – *Acute monoarticular inflammatory arthritis*

or
- *Acute onset unilateral knee pain*

Outcome – Fluid approach to CC

Phases

- *Script activation* – automatic phase triggered by CC
- *Script processing* or hypothesis testing
 - controlled & deliberate
 - Search cases in memory for default value
 - Retrieve knowledge of pathophys
- *Organization* for case summary

Questions?



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