Introduction:

Welcome to CUGH's bi-weekly clinical case-series, "Reasoning without Resources," by Prof. Gerald Paccione of the Albert Einstein College of Medicine. These teaching cases are based on Prof. Paccione's decades of teaching experience on the medical wards of Kisoro District Hospital in Uganda. They are designed for those practicing in low resource settings, Medicine and Family Medicine residents, and senior medical students interested in clinical global health. Each case is presented in two parts. First comes a case vignette (presenting symptoms, history, basic lab and physical exam findings) along with 6-10 discussion questions that direct clinical reasoning and/or highlight diagnostic issues. Two weeks later CUGH will post detailed instructors notes for the case along with a new case vignette. For a more detailed overview to this case-series and the teaching philosophy behind it, see Introduction to "Reasoning without Resources". Comments or question may be sent to Prof. Paccione at: gpaccion@montefiore.org

Note: If you would like to be notified when a new case is posted (along with instructor notes for the previous one), send your e-mail to Jillian Morgan at jmorgan@CUGH.org.

About the Author:

Dr. Gerald Paccione is a Professor of Clinical Medicine at the Albert Einstein College of Medicine in the Bronx, New York. His career has centered on medical education for the past 35 years – as a residency Program Director in Primary Care and Social Internal Medicine at Montefiore Hospital, and director of the Global Health Education Alliance at the school. He has served on the Boards of Directors of Doctors for Global Health, Doctors of the World USA, and the Global Health Education Consortium. Dr. Paccione spends about 3 months a year in Uganda working on the Medicine wards of Kisoro District Hospital where he draws examples for the case studies.

Gerald Paccione, MD
Professor of Clinical Medicine
Albert Einstein College of Medicine
110 East 210 St., Bronx, NY 10467
Tel: 718-920-6738
Email: gpaccion@montefiore.org

CASE 14 – COMA II

A 25 year old woman, in good health with only rare "fevers" in the past and no weight loss, was admitted to the hospital 4 days ago with fever for 2-3 days associated with a dry nonproductive cough and diffuse muscle aches. You are asked to consult urgently because of a change in her status.

She had initially been given co-artem at a health center for malaria, but after one dose her treatment was changed at the hospital to amoxicillin for pneumonia because of the cough. The cough and fever persisted on the second hospital day, and abdominal pain began, accompanied by a few loose stools. On physical exam at that time, her lungs were clear and her abdomen benign without guarding or right-upper quadrant tenderness. On the 3rd hospital day she complained of headache but reportedly was fully conversational, but today (the 4th day post-admission), she was found nearly unarousable in the morning, breathing deeply and regularly at 26/minute. Her attendant (her sister) says she hasn't urinated for 2 days.

PE: Breathing deeply without a "fruity" odor; barely arousable to pain

BP 125/70	HR 100	T 100.5	RR 26

skin:	no petechiae, rash or eschars
conjunctiva:	pale, icteric
fundi:	Roth spot noted R eye; peri-macular whitish areas and patchy whitening of arterioles; no papilledema appreciated
mouth:	no gingivitis, petechiae, or thrush,
neck:	increased resistance to movement in all directions; no LAD
JVP:	visible 2 cm above angle of Louis
lungs:	clear to percussion and auscultation

heart: S1, S2; Gr 1/6 systolic murmur, early, without radiation to clavicle or neck;

abdomen: soft; no hepatomegaly, span 9 cm; spleen tip palpable, soft 1 cm below costal margin

neuro: responding only to deep pain

no asterixis elicited with hands supported and fingers extended

dysconjugate, slowly roving gaze; EOM full, PERRLA; CN grossly intact; Corneal reflexes and Doll's eyes intact; grinding teeth spontaneously; ⊕ pout reflex; diffusely increased tone with clonus; ⊕ Babinski

A catheter is inserted in the bladder, and 60 cc of clear urine passes.

1. **What is the "frame" of this case? (i.e. key clinical features that the final diagnosis must be consistent with?)**

2. **What is the most urgent bedside test/therapy in this patient and why?**

3. **Why was the bladder catheter passed?**
   How would a dipstick urinalysis (U/A) be relevant in diagnosis?

The U/A is unremarkable (except for trace protein) with a specific gravity of 1.010.

4. **What is the likely cause of the respirations observed on exam, and their pathogenesis in this case?**
   What is the relevance of the normal BP in that context?

5. **What diagnosis ties everything together, why was the diagnosis delayed, and how does it explain all the key findings?**

6. **What are the prognostic indicators in this disease, and the patient's prognosis for recovery?**

   With recovery, when should resolution of coma be anticipated?

   Are there any neurologic sequelae seen after recovery from this disease, and if so what are they and how frequently do they occur?

7. **How should this patient have been treated?**