Introduction:

Welcome to the 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 4-10 discussion questions that direct clinical reasoning and/or highlight diagnostic issues. A month 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

About the Author:

I'm a Professor of Clinical Medicine at the Albert Einstein College of Medicine in the Bronx, New York, where my career has centered on medical education for the past 40 years – as a past residency Program Director in Primary Care and Social Internal Medicine at Montefiore Hospital, and global health advisor and program leader at the school. I've served on the Boards of Directors of Doctors for Global Health, Doctors of the World USA, and the Global Health Education Consortium. I spend about 3-4 months a year in Uganda working on the Medicine wards of Kisoro District Hospital which, like most hospitals in the world that serve most of the world's population, has (almost) no resources. "At the bedside", I teach Internal Medicine residents and medical students how to assimilate the elements of history, physical exam and epidemiologic probability into a diagnostic impression that, even without definitive testing, can lead to appropriate therapeutic strategies in the field.

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 66: Company Dark and Quiet, Suspicion Required

An 80 year old woman is carried to the hospital too weak to walk, complaining of cough and stomach and back pain for “over a week”.

For the past year she has been declining. About 2-3 times per month she has sought medical attention for sundry complaints similar to her presenting illness - diffuse abdominal and back pains, intermittent diarrhea, sometimes fevers and sweats, and a mostly-non-productive cough with occasional white sputum. She has received malaria treatment frequently as well as courses of antibiotics with occasional response, but the sickness keeps recurring a week or two later. She’s had decreased appetite and been losing weight for 2 years while living with and being cared for by her daughters. She and her daughters say that she has not been feeling unusually sad or depressed. She has never smoked.

This time she is weaker than usual and the abdominal and back pain and the cough seem worse. She has had no fevers recently. She comes to the hospital carried by her concerned daughters seeking another opinion and “different medicines”.

Physical Exam:

Sitting on the bed, gaunt, cachectic and tired appearing, in no acute distress

T: 92 p.o, repeated, 93 F rectal; BP 70/45 lying, 65/40 sitting; HR 80 to 95 sitting; R: 28

Skin: dark, particularly face and back of her hands; no rash
HEENT: no thrush, no proptosis/lid lag; fundi normal;
Neck: supple, no lymphadenopathy, thyroid normal without goiter; no JVP/HJR
Breasts: normal, without masses
Lungs: right base, dullness to percussion and tubular breath sounds without crackles; otherwise clear
(patient says she is “too weak” to cough)
Heart: normal PMI in 5th ICS, MCL; S1, S2; no murmurs
Abdomen: no masses, no hepato-splenomegaly; no tenderness; normal bowel sounds
Extremities: no edema, cyanosis, clubbing; pulses weak but palpable
Neurologic: slow mentation, difficult to assess mental status; sensory (pin, vibration, position) intact; cerebellum, cranial nerves intact; reflexes +2 diffusely; motor: diffusely weak, 5-/5; no fine tremor of outstretched hands; gait weak, slow, not broad-based
1. What is the “frame” of this case (the key clinical features the diagnosis must be consistent with)?

2. Identify and explain briefly the clinical significance of 6-10 key features of the physical exam, both positive and negative, given the patient’s complaints?

3. Which exam finding should be followed by more in-depth questioning and more focused examination? Specify the question(s) and the additional findings to be sought.

4. Identify some of the primary, broader “meta-diagnostic” questions - the differentials for which are concepts or processes and not diseases - that are germane to this patient’s presentation?

What are the relevant differential diagnoses appropriate to each?

5. In African district hospitals, certain provocative maneuvers, observations and simple labs can help diagnose the physiologic derangements considered here. What are the physiologic explanations for the following observations in this patient, and what other maneuver is called for?

BP became unmeasurable when the patient stood up, and the HR increased to 130; (N.B. Blood pressure in rural Africa tends to run low, more so in malnourished, cachectic patients. The expected systolic BP of a patient like this would be expected to be 75-100 baseline.)

500cc NS over 15 min led to a BP increase of only 5mm systolic, to 75/45 which, within 30 minutes, returned to its baseline 70/45 supine.
A urinalysis on admission (before fluids) showed a clear urine with a specific gravity of 1.010, which didn’t change with the fluid administered. No casts or cells were seen. The patient excreted all fluid administered promptly, with the urine remaining isosthenuric and the BP ~65-70/40-45.

… and one other maneuver was done and a confirmatory result was obtained…!?. What was it and what disease did it diagnose?

6. What other tests would be appropriate in this patient?

7. With this patient, the CXR showed an alveolar right lower lobe consolidation without a cavity. Describe your treatment strategy and how the possibility of two diagnoses may complicate its interpretation.

Are there any drug effects to be mindful of in diagnosing and/or treating patients with one or both diseases?

8. How commonly do the diseases considered in this patient coexist? To what degree do their symptoms overlap and are there any symptoms that signal that both diseases might be present?