



## **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](mailto: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 Katherine Unger at [kunger@CUGH.org](mailto:kunger@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](mailto:gpaccion@montefiore.org)

## **CASE 53 – Body Swelling II**

---

A 75 year old woman presents with increasing body swelling and abdominal discomfort for 1-2 months. She was previously well, the mother of 3 adult children, had no past medical history of significance, and was digging in her fields with her usual vigor 3 months ago.

Two and a half months ago she noted leg swelling bilaterally followed by abdominal swelling and discomfort, and about a month ago felt too sick to leave her house. She then developed a dry cough and some shortness of breath when walking and lying down, needing 2 pillows to feel comfortable. She never saw the color of her urine (uses a pit latrine). She had no weight loss but felt heavier and bloated. Upon direct questioning, she recalled having had a sore throat (that “lasted a month”) and fever a few months ago, but couldn’t specify when in relationship to her present illness.

She had never had her blood pressure checked before, always lived in the Kisoro district (not by a lake), never received blood transfusions, takes/took no medications or herbs, doesn’t have allergies or recent fever, rash, headache or joint pains other than in her knees at the end of a work-day, has no known liver disease or heart disease, has been widowed for 10 years and not sexually active since, and was fully active until 3 months ago.

**Physical Exam:** Elderly, pleasant woman sitting upright in bed in no distress

BP: 192/116... 5 minutes later, 220/120... 5 minutes later repeated again, 212/120;  
HR 92; RR 20; T: 97.2 p.o. Weight 53 kilos

Skin: diffuse anasarca with pitting in legs, thighs, arms and abdomen;  
“puffy” face with trace edema; no rash;

Eyes: conjunctiva: non-icteric without petechiae; mild pallor;

Fundi: no papilledema, vessels with A/V 4/5 without tortuosity or nicking; two 1mm dot hemorrhages right eye at 2 and 3 o’clock, 1 and 2 disc diameters away; 1 flame hemorrhage left eye at 11:00, 1.5 disc diameters;

Neck: no thyromegaly or nodes >1 cm; no bruits;  
+JVP sitting up 10 cm above angle of Louis, with +HJR

Lungs: bibasilar crackles

Heart: PMI forceful, not prolonged (<half systole); ~2 cm in 5 ICS, 1 cm lateral to MCL; normal-loud S1, narrowly split S2; +S4; no S3 (in left lateral decubitus); no murmurs or rubs;

Abdomen: mildly distended, active bowel sounds, no bruits;  
+1-2 anasarca of abdominal wall; ?shifting dullness, no fluid wave;  
liver percussed ~15 cm., 6 cm below costal margin, and tender to percussion and gentle punch;  
no spleen or masses; no bladder fullness or pain on percussion/palpation;

Extremities: +2 pulses bilaterally, edema to thighs, 3 mm depression lower leg over shin; joints normal;

Neurologic: mental status, cranial nerves, motor, sensory, cerebellum, gait intact; reflexes +2 diffusely

1. What is the “*frame*” of this patient’s presentation from history and exam (i.e. the key 3-4 clinical features the final diagnosis must be consistent with)?
  
2. Identify 3 *fundamental diagnostic* questions raised by this patient’s clinical presentation that pertain to *which organ* is failing and *which disease process* is responsible. How are the answers to these questions important therapeutically?
  
3. How does the *history and physical exam* inform these general diagnostic questions?
  
4. The following *lab tests and empiric trial*, feasible in a district hospital, are performed and the following results are reported. What are their diagnostic implications?
  - EKG: normal sinus rhythm, intervals and axis, normal P waves, normal R wave progression, no LVH by voltage, non-specific T wave flattening in I, L, V5, V6.
  - U/A: s.g. 1.020; 4+ blood, 4+ protein on dipstick; microscopic: RBCs too many to count, some “dysmorphic”; scattered granular and RBC-granular casts around perimeter of coverslip.
  - Hematocrit: 33
  - Ultrasound: unavailable, machine “not working”;
  - Diuretic challenge: 200 cc output in response to 40 IV furosemide after 2 hours; then (at 2 hours), additional 80 mg furosemide led to 400 cc. more after 3 more hours;
  
5. What is the likely primary *organ-system diagnosis* in this patient (to be called “Disease X”)? Explain your reasoning.

6.
  - a) How common is Disease X in Africa in comparison to the West? Why the difference?
  - b) What are the 4 most common *etiologic* causes of Disease X that lead to death in Africa?
  - c) What does the future portend vis-à-vis mortality from Disease X in Africa?
  
7.
  - a) What are the *principle BEDSIDE diagnostic classification schemes or categorizations of Disease X* that carry prognostic and/or therapeutic significance?
  - b) How can one differentiate among the categories by simple “bedside tests” (history, physical and basic lab)?
  - c) Which of the general categories of Disease X does our patient best fit?
  
8. What are *specific etiologies* of “Disease X” that are unique to Africa or much more prevalent in Africa than in the West?

**9. What is the most relevant *differential diagnosis in our patient*?**

**10. Which oral medications are potentially available for our patient, when should they be used, and what are the problems in using them in Africa?**

**11. What would be the most appropriate management strategy for our patient? Explain.**

**12. What are the realities of treating late-stage Disease X in Africa?**

**13. What are the recommended screening and prevention modalities available in Africa for Disease X?**