



## **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 Jillian Morgan at [jmorgan@CUGH.org](mailto: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.

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## **CASE 36 – Problems Working, Walking, Speaking**

A 50 year old plumber, originally from Kisoro but working in Entebbe for the past 20 years, returns to his sister's home in town and comes to the hospital because of difficulty controlling his left arm and speaking clearly for the past 3 weeks.

He had been in good health his whole life with only occasional bouts of malaria until 3 weeks ago when he noticed that he was having problems controlling his left hand while working. Over the week it got worse, and he felt that he couldn't properly direct his hand to pick things up – that his whole left arm would seem to shake getting to its intended object. The following week he started having problems walking, stumbling off balance; to prevent falling he began to walk with his legs apart. He stopped going to work. This past week he began developing problems speaking. His sister was concerned when, over the phone, he was slurring his words, and she sent her son to bring him to Kisoro.

Although his brother-in-law claims he drinks “heavily”, all agree that's been 2-3 beers a day for most of his adult life. He's rarely been drunk, and has no history of unanticipated trauma or accidents, withdrawal symptoms or liver disease. He's not been tested for HIV, has been divorced for 10 years, has 2 older children, and is intermittently sexually active usually without condoms. He doesn't have frequent infections, but a year ago had a chest cold with fever and cough for which he was given antibiotics. Since then, he's not had fevers, headaches or pain anywhere, trauma, seizures, weight loss, skin rashes, problems seeing, feeling, or with his bladder or bowels.

**Physical Exam:** Well developed, middle-aged man in no distress sitting on the bed

BP 120/70      HR: 78      R: 16      T: 98

Skin: no rashes, no zoster scars

Eyes: normal, PERRLA, fundi: benign, without exudates or papilledema

Mouth: no thrush, leukoplakia, purple nodules, petechiae

Neck: supple, no lymphadenopathy, thyromegaly, JVP; Lungs: clear; Heart: normal S1, S2, no murmurs

Abdomen: no hepato-splenomegaly, or masses; Extremities: no edema; pulses normal

Neurologic:

- Mental status: cognition: decreased ability to follow commands, perseverating and intermittently not making sense, unaware of and/or not upset by difficulties
- Cranial Nerves: dysarthric speech, slurring many words;
  - left upper temporal quadrant anopsia
  - unable to raise shoulder on left
  - extra-ocular movements, facial sensation and movement intact
  - gag reflex and pharynx and tongue movements normal
- Motor: 4(+)/5 left arm flexion; otherwise normal (repeated many times)
- Sensation: intact to touch, pin, position; (vibration hard to assess)
- Cerebellum: finger-to-nose, marked sway and past-pointing, left>right; dysdiadokinesis abnormal l>r;

- Gait: wide, ataxic; Romberg: (+), can't stand up
- Reflexes: hyper-reflexic upper and lower extremities, mild clonus

1. What is the “frame” in this case (the key clinical features from the history and exam that the final diagnosis must be consistent with)?
2. What is the most important *test* to do promptly, and why?
3. What area of the nervous system is affected in this patient: brain, spinal cord, nerve roots, or peripheral nerves? Explain.
4. a) What are the principle causes of neurologic disease in this anatomic location in patients with HIV?  
b) Which of them present with focal neurologic dysfunction?  
c) How does residence in Africa influence the relative probabilities of disease?
5. What is the *differential diagnosis* in this patient, the diagnostic *pros and cons* for each of the diseases mentioned, and the *most likely etiology* in this patient?
6. What diagnostic “tests” (beyond history and physical exam) are indicated?
7. What treatment should be offered, and what is the prognosis for this patient?