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 60: Headache in a Health Man

A 29 year old male presents to Kisoro District Hospital complaining of headache for 8-9 days. For the past 10 years he has worked in both Kisoro and Kampala as a migrant farmer, and is married with two healthy children. He had been fine, without a history of headaches prior to this. The headache began gradually about 8-9 days ago, initially at night and has gotten worse ever since. For the first few days he was able to fall asleep, but would wake up about 5-7 hours later with a more severe headache. For the past 2 nights he has been unable to sleep at all because of the pain.

He has had no weakness or double vision, dizziness, problems walking, speaking or swallowing; he has had diffuse pain "in his muscles" on the right, and upon direct questioning says that bright light hurts his eyes. Two days after headache onset he started feeling nauseated, and has vomited 1-2 times a day. He has had no seizures, fever, weight loss or cough. He had been sexually active outside of his marriage while in Kampala, but not for at least 5 years and has never been HIV tested. He has had no STDs, penile ulceration, or urethral discharge.

Physical Exam: Muscular young man sitting up in bed looking sleepy, yawning; holding his head;
T 37; BP 135/85; R 15; HR 60

Skin: no nodules, papules, or pustules
Eyes: normal conjunctiva, no pallor or icterus; +/- photophobia to light;
Fundi: no hemorrhages; blurred right disk margin;
Neck: supple in all directions; no lymphadenopathy
Mouth: no thrush; skin normal
Lungs clear;
Heart: PMI normal 5th ICS, MCL; S1 S2 normal, no murmurs, rubs, gallups;
Abdomen: normal without masses or hepato-splenomegaly
Musculo-skeletal: no muscle tenderness; joints normal
Neurologic: CN: EOM intact; pupils equal, dilated in dim light, right pupil responds sluggishly but equally to light, accommodation, and convergence;
CN7: left lower face, partial palsy (when provided a mirror, patient confirmed that the asymmetric grin was new)
Motor: left triceps 5-/5, right 5/5; biceps 5/5 bilaterally
left hamstring 5-/5, right 5/5; quadriceps 5/5 bilaterally;
other muscle groups in forearms, hands, calves, feet 5/5
Sensory, Cerebellar, Gait: all normal

N.B. Patient himself was quite surprised by his left-sided weakness.

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

2. **What *general cerebral process* is suggested by the clinical features of the frame? Explain.**

3. **The initial neurologic exam by the resident did not pick up any focal neurologic signs, but the attending's exam later did. After the attending elicited the signs, they were confirmed by both resident and student multiple times.**
   What factors might explain the differences between the resident's and attending's initial exams?

4. **What test is key in "orienting" the differential diagnosis?**

5. **What is the *differential diagnosis* in this patient?**

6. **What are the "*pros" and "cons*" for each of the potential diagnoses named?**
   What is the *most likely diagnosis* clinically, and why?
   N.B. The HIV test was POSITIVE.

7. **What *tests*, available in an African district hospital, would you order in this case?**

8. **How would you *treat* this patient? Explain/defend your treatment strategy.**