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.

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CASE 9 – BACK PAIN

A 24 year old man, a farmer, was in his usual, fully functional state of health until 3 months ago when he began feeling pain in his lower back and buttocks. The pain would begin at night during sleep, be worse in the morning before going to the fields, and seem better by mid-day. At first, he could dig the rest of the day without problems, but over the past 2 months the pain has gotten gradually worse and he's felt "hot" and increasingly weak. Getting up and walking around at night helps lessen the pain in the morning. Sometimes the pain is worse in the right buttocks, sometimes in the left. He tried aspirin, which provided some relief, but despite taking more aspirin the pain has increased over the past few weeks such that it's now too painful to walk at all, and he's had to stop working.

He's had no other problems like this before, nor has anyone in his family, and no recent rashes, joint swelling or pain, weight loss, abdominal pain, diarrhea, cough or lung problems, weakness in his legs or arms, or problems with his urine. He's been sexually active with his wife of 3 years, and over the past year when in Kampala with 3 other women, but has not had any sexually-transmitted diseases nor noted a penile discharge. He's not had any problems with his vision, and he has had only1 episode of "red eyes" (with yellow crusts sealing his eyes in the morning) about 4 months ago, which lasted 2 weeks and went away without treatment (neither wife nor his 2 children had red eye at the time).

P.E. Well-nourished muscular young man, walking slowly supported by 2 other men, one on either side.
V.S. T: 99 p.o.; BP 100/70; HR 88 and regular; R: 16
Skin/palms/soles: without rash or lesions
Eyes: not injected, PERRLA, no photophobia; fundi, normal with flat discs and no exudates
Mouth: no thrush or ulcers
Neck: no adenopathy, JVP, or thyromegaly
Lungs: clear
Heart: S1, S2, no murmurs or rubs;
Abdomen: no hepato-splenomegaly or tenderness, masses;
Rectal: guiuac (-), prostate palpable and soft/boggy, non-tender;
Musculo-skeletal: peripheral joints normal, with full range of motion; hands normal without swelling; hips: normal internal and external rotation without pain for the first 30 degrees but pain elicited at the extremes of motion in the buttocks and back bilaterally; palpation: tender to firm palpation with thumb 2-3 cm to right and left of lower LS spine, 3-6 cm below level of iliac crest pelvic compression at iliac crests bilaterally with patient supine: pain in mid-lower back
Neurologic: normal mental status, sensory, reflexes, cerebellar; motor normal 5/5 upper extremities, ~ normal motor lower extremities if no/minimal movement during quadriceps/hamstring/psoas evaluations; gait: limited by pain, clutching lower back.
U/A (post prostate exam): s.g. 1.025, protein -, blood +2, leuk est +2, nitrates (-), WBC 15-20, RBC 10-20, no casts seen;

VIGNETTE "FRAME"

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

2. **As with most diagnostic challenges in Medicine there are 2 "levels" of the differential diagnosis in this case: what and where is the *pathology*, and what's causing it?**

   a. **What pathologic process is causing this patient's pain? How do you know?**

   b. **<u>Where</u> does the pain originate from in this patient? How do you know?**

   c. **What other exam maneuvers can help localize the origin of LBP to this area?**

   d. **What are the most common misdiagnoses made by novice diagnosticians in this type of presentation?**

3. **What is the differential diagnosis of this condition in the West (i.e. specific etiologies)? How does the differential differ between the developed "West" and Sub-Saharan Africa?**

4. **What are the most useful diagnostic clinical criteria to apply to this condition in Africa?**

5. **What common diseases are eliminated from diagnostic consideration in this case by the timing criteria, i.e. chronicity and onset of disease?**
   How frequently are the various clinical features associated with this disorder *actually* seen in patients with it?

6. **How would you diagnose/classify his illness? Explain.**
   What is the significance of him being African?

7. **What further diagnostic tests would be warranted in this patient in rural Africa?**

8. **What is the appropriate treatment and prognosis for this patient?**