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.

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 39 – A 45 year old male presents with 3 days of fever and cough

He was previously well without prior hospitalizations or known chronic illnesses, working as a Church-school teacher and farmer, always monogamous since marriage, and the father of 5 healthy children 10 to 25 years old. He’s never left Kisoro for work.

Three days ago he returned early from the fields feeling weak, “hot and cold”, with intermittent chills. He slept uncomfortably, and the next morning was nauseated, vomited twice and had 2 loose bowel movements that then turned watery (without blood) with his 3rd episode. He was too weak to work. The next day he developed a mild dry cough that later became productive of scant white-yellow sputum with streaks of blood. On the day of admission, he awoke confused, talked non-sense to his wife, couldn’t get out of bed, complained of abdominal pain and some shortness of breath, and was incontinent of diarrhea. He had no chest pain. His wife became alarmed and called the village health worker who arranged for transport to the hospital.

He never had such symptoms before, hadn’t had unusual problems with abdominal pain, cough or wheezing in the past, doesn’t smoke, drinks socially1-2 times/week without becoming drunk, and hasn’t lost consciousness, weight, or appetite recently.

Physical Exam:

Sitting up in bed in moderate respiratory distress, occasionally speaking incoherently

BP 78/40 without orthostatic change; HR 156, regular; Temperature, 103.2 axillary; RR 36; pulse oximetry, 88% sat.

Skin: normal, without rash or herpes zoster scar
Eyes: conjunctiva without icterus or pallor;
Mouth: dry mucous membranes; no thrush
ENT: no pharyngeal exudates/erythema; no nasal discharge or sinus tenderness;
Neck: supple, no lymphadenopathy, thyroid palpable/normal; no JVP except when lying flat;
Lungs: dull to percussion and increased tubular breath sounds with I/E ~ 1:2, egophony, and scant crackles over the right lower lung field;
Abdomen: mildly distended, normal bowel sounds, no guarding/rigidity/tenderness or masses noted to superficial or deep palpation; liver span 10 cm to percussion with percussion tenderness noted in RUQ, no edge palpated; spleen non-palpable.
Rectal: soft/watery brown stool, guaiac negative;
Neuro: disoriented to place and time, incoherent, unable to assess attention span; grossly non-focal and moving all extremities; reflexes +2 throughout.
1. What is the “frame” of this case? i.e. the key clinical features the final diagnosis must be consistent with?

2. a) What is the most likely organ-specific diagnosis in this patient, and why?
b) What is the likely explanation for the patient’s gastrointestinal symptoms – vomiting, diarrhea and abdominal pain – and the RUQ percussion tenderness on exam?

3. a) What are the usual clinical features (i.e. from the history and physical exam) of this disease in adults and children?
b) What is their diagnostic accuracy (likelihood ratios, and/or sensitivity/speciﬁcity) from studies in developed countries?
c) How would these parameters likely change if assessed in African cohorts with this disease?

4. a) What organisms cause this disease in adults and children?
b) What clinical features suggest a higher likelihood of (which) speciﬁc microorganisms, and how predictive are they?
c) Can you apply them to this patient?

5. In patients with this illness, how reproducible and accurate is radiologic imaging (i.e. imaging that might be available in rural Africa) for making a) the organ-specific diagnosis and b) identifying the organism?

6. a) Which tests should be ordered in rural Africa for this illness, and how does your recommendation differ for patients in the U.S.?
b) Describe briefly the accuracy and/or utility of non-radiologic non-invasive diagnostic tests available in the U.S., and in Africa.

7. a) Clinically relevant predictive indexes have been published for this disease: what questions do they address?
b) When you apply these indexes to this patient, what do they predict?

8. a) What principles guide the treatment of patients with this disease?
b) How would you treat this patient? [N.B. his HIV test was negative]
c) What response should you expect, over what period of time and what clinical features determine that response?
d) What should be considered if the patient is still febrile (e.g. >100.5) after a week of treatment?