



## **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 27 –DIARRHEA x 2 Vignettes**

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**Please read the following brief vignettes and answer the questions that follow:**

A. A 20 year old woman is carried to the hospital by her husband, too weak to walk. Last night she had the sudden onset of loose stool followed by watery diarrhea and an hour later, profuse vomiting. The diarrhea soon became watery grey with flecks of mucous in it without blood, and over a few hours it increased in frequency to 2-3 times an hour and to a volume estimated at “half a liter bottle of Coke” each time. Over the night, the vomiting began to subside although the diarrhea continued. She experienced neither fever nor abdominal pain apart from intermittent abdominal cramps.

Physical Exam: Clothing slightly stool-soiled with a vague fishy smell.

Extremely weak and listless;

Afebrile; HR 160, BP barely detectable at 60/palp;

RR 22 and deep;

Eyes shrunken/deep and dry; mouth dry; turgor poor,

Abdomen:slightly distended; bowel sounds decreased with intermittent long “gushes”; no tenderness;

- 1. From which section of bowel does the diarrhea originate? Explain. What are clinical clues to the location and pathophysiologic mechanism of diarrhea?**
  
- 2. a) What is the likely diagnosis and relevant epidemiology of this infection?  
b) What is the differential diagnosis?  
Why in this patient, now?**
  
- 3. How should this patient be treated?**
  
- 4. Two days later, the woman’s husband and her sister begin to have diarrhea, 3-4 times/day, watery, without cramps. They take no medications, and in 3 days they’re fine.  
What caused their illness?**

B. A 4 year old girl is carried to the hospital by her father. Over the past 2 days her legs felt weak and today she couldn’t walk without falling.

She has been well except for an episode of fever, abdominal pain and diarrhea that started 2 weeks ago. The fevers came first for 1-2 days, followed by diarrhea which was watery with mucous but no blood, 8-10 times a day, associated with abdominal pain but no vomiting. She was given an unknown antibiotic and the episode subsided after about 4-5 days. She recovered about a week ago and now has a good appetite and no pain anywhere. None of her older siblings or relatives had a similar illness. Her family members are farmers and raise chickens and goats.

Two days ago she couldn't run and began tripping, and today she had a difficult time walking without falling.

Physical Exam:

Anxious girl, in no distress: T: 98; HR 92; RR 20;

ENT, lungs, heart, and abdomen benign and normal

Neurologic: Cranial Nerves intact;

3/5 weakness LE below knees bilaterally, symmetric

normal sensation, normal finger to nose and dysdiadokinesis

absent knee jerk and ankle reflexes

- 1. What is the “frame” of the case – the key clinical features the final diagnosis must be consistent with?**
  
- 2. What is the likely cause of the girl's inability to walk?**
  
- 3. What are the diagnostic criteria for this neurologic entity, and what is its range of clinical presentation and severity?**
  
- 4. What is the differential diagnosis of the neurologic dysfunction and what are the features that distinguish these other disorders from the likely diagnosis in this patient?**
  
- 5. What is the relationship of the child's neurologic dysfunction to her preceding diarrhea, if any?**
  
- 6. a) What are the usual clinical characteristics of this cause of diarrhea?  
b) How does its clinical presentation differ between patients in developed and developing countries?**

**7. What spectrum of complications of this infection can be seen?**