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Antibiotics in Suspected Infectious Diarrhea

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Empiric Antibiotics in Infectious Diarrhea

Question: When should antibiotics be given for suspected infectious diarrhea?

Bottom line answer:

Antibiotics have been shown to be beneficial in the following groups based on randomized clinical trials (SORT A):

- Moderate to severe traveler's diarrhea (more than four unformed stools, fever, blood, pus or mucus in the stool).
- More than eight stools per day, dehydration, symptoms of more than one week, and those in which hospitalization is considered.
- Avoid antibiotics in some infections (bloody diarrhea and abdominal pain, but little or no fever – consistent with possible STEC infection).

Empiric treatment:

- Oral fluoroquinolone (ciprofloxacin, ofloxacin, levofloxacin) for 3-5 days OR
- Azithromycin, erythromycin.

Case: A 22 year old healthy male who ate a meal of fish and chips at a local restaurant, and began having vague sensation of feeling poorly soon afterwards. 48 hours later, he began having severe vomiting, watery diarrhea and high fever to 103. He presented to the ER with 5 days of these symptoms, with persistent high fever and dehydration. He had no travel history, no recent antibiotics, and only other relevant exposure was a pet snake and tarantula.

Background and supporting evidence:

Was this Food Poisoning or Foodborne infection?:

Food Poisoning: Due to preformed toxins, symptoms begin hours after ingestion, abrupt onset, severe vomiting, toxins are heat resistant, ex: *Staph aureus*, *Bacillus cereus*

Foodborne infection: Bacteria produce toxins after ingestion, symptoms begin days after the meal, diarrhea is predominant, gradual onset, proper cooking can kill the bacteria, ex: *Campylobacter*, *Salmonella*, *Shigella*, *E.coli*

What is the concern about giving antibiotics?:

- Source of infection is rarely identified, most gastroenteritis is viral
- No benefit shown in unselected populations
- Risk of *C. diff* infection due to antibiotics
- **Increased risk of development of Hemolytic Uremic Syndrome in patients infected with STEC (suspect this in cases of bloody diarrhea, abdominal pain, but little or no fever)

Reference: http://www.idsociety.org/uploadedFiles/IDSA/Guidelines-Patient_Care/PDF_Library/Diarrhea.pdf

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