Acute diarrhea in adults and children beyond infancy

1. Definition of Acute Diarrhea for this summary – acute onset (not recurrent) frequent loose or watery stools <= 30 days

2. History

   - Onset, duration, and frequency of loose or watery stools.
   - Previous history and frequency of diarrheal illness (important to know if isolated episode or recurrent).
   - Associated symptoms including fever, chills, vomiting, postural lightheadedness.
   - Presence of blood or mucous in stools.
   - Recent exposures to contacts with diarrheal disease, including work, school, day care.
   - Recent travel, consuming unusual foods at home or away from home, swimming or other water activities – If any of these are positive, obtain details such as travel destination, nature and location of food ingestion (a picnic or a booth at the state fair, for example).
   - History of antibiotic use within 2 months.
   - History of immunosuppressed condition, immunosuppressive drugs.
   - Sexual practices associated with STD risk.
   - Ability to maintain and retain fluid intake, limitations (if any) of solid food intake.

2.1. Exposure clues typical of specific pathogens (In the U.S. no organism can be identified in about 50% of cases, likely to be viral or toxin):

   - Salmonella – food borne
   - Campylobacter – food borne, undercooked poultry
   - Shigella – person to person
   - E. coli O157:H7 – food borne, undercooked hamburger and raw sprouts
   - C. difficile – nosocomial, antibiotic use
   - Vibrio – seafood
   - Yersinia – food borne
   - E. histolytica – travel to tropical regions
   - Cryptosporidium – waterborne, immunocompromised hosts
   - Cyclospora – food, travel
   - Giardia – water borne
   - Norovirus – winter outbreaks in school, day care, nursing home, cruise ships

3. Physical examination

   - Height, weight, temperature.
   - General appearance and mental status.
- Inspection of mucous membranes for appropriate moisture, and (primarily in
children) skin turgor. Skin turgor can be reduced in Geriatric Patients due to loss of
elasticity in the skin as a result of aging.
- Blood pressure, including orthostatic measurements as indicated. Important in the
elderly.
- Abdominal examination: bowel sounds in all quadrants, palpation, percussion.
- Skin pigmentation and lesions are rarely helpful.

4. Tests to be considered

- In general, routine laboratory tests are not indicated for acute, non-recurrent,
episodes of diarrhea of fewer than 7 days duration, unless one or more of the
following is noted along with diarrhea:
  - Known exposure to diarrheal disease or recent community outbreak – consider stool
testing for bacteria or parasites, stool WBC
  - Blood in stool – consider culture for bacteria
  - Consider clostridium toxin testing if recent antibiotic use, including hospital-
acquired diarrhea
  - For acute diarrhea that persists longer than about 7 days, consider tests for protozoa
(ova and parasite examination).
  - If patient is immunocompromised (especially if HIV+), consider adding tests for
Microsporidia, Mycobacterium avium, cytomegalovirus.
  - If the patient is over 65 years of age, has orthostatic hypotension, or has other signs
of dehydration or electrolyte imbalance, consider a basic chemistry panel.

5. Management

- The mainstay of treatment is rehydration or maintenance of hydration. Unless the
patient is comatose or severely dehydrated, a glucose-based oral rehydration solution
is preferred over intravenous methods (supported by evidence in multiple studies).
  - Examples include oral rehydration treatments approved by the World Health
Organization, and Gatorade. A general recommendation to drink fluids and take in
salt in soups or salted crackers is also adequate for most adults and older children
with diarrhea.
  - Home remedy oral rehydration solution: one liter of water, one teaspoon of table
salt, 8 teaspoons of sugar, and one cup of orange juice (NEJM as cited below for
anti-microbial therapy)
  - Variations of the “BRAT” diet are commonly recommended (bananas, rice,
applesauce, and toast), though supporting evidence is limited.
  - Avoidance of milk products is reasonable, since diarrhea may result in transient
lactase deficiency. It is not practical to test for this during acute diarrhea.
  - Nonspecific symptomatic therapy with anti-motility and anti-secretory agents:
Sufficient evidence of safety and efficacy exists for loperamide (Immodium) and
bismuth subsalicylate (Pepto Bismol, Kaopectate) to reduce abdominal cramping and
stool frequency. Evidence does not clearly confirm that benefits outweigh risks for
diphenoxylate with atropine (Lomotil).
- Other sources – Stanford Guide to Antimicrobial Therapy.

5.1. Considerations for empiric antibiotic treatment

- Evidence supports the use of empiric ciprofloxacin or another fluoroquinolone for severe or febrile community-acquired disease (excluding suspected E. coli) and for traveler’s diarrhea – reduces average duration of illness by 1-2 days. An example is ciprofloxacin 500 mg twice daily for 1-5 days. Evidence does not support the use of prophylactic antibiotics during travel, but travelers may consider taking a small supply for use if illness occurs.
- Metronidazole can be started pending results of C. difficile toxin for severe nosocomial diarrhea.
- Metronidazole can be started pending tests for suspected Giardia.

Follow up:

Depends on the severity, age and other co morbid conditions.

Generally you need to get some kind of follow up with in 24-48 hrs – either a follow up or by phone.

Shelley Roaten, M.D.
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