ID CORNER

Infectious Diarrhea Guideline Update

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Clinical vignette

A 38 year-old male with a history of end-stage renal disease from IgA nephropathy underwent kidney transplantation a year ago and is currently on immunosuppressive medications. He presents with diarrhea and dehydration. A molecular "gastrointestinal panel" for 22 targets was ordered and the results came back negative. This panel does NOT include which of the following potential etiologic agents in this patient?

a. Giardia
b. Cryptosporidium
c. Cystoisospora
d. Cyclospora
e. Entamoeba

This commercially available gastrointestinal panel does not include *Cystoisospora* and microsporidia, which are also in the differential diagnosis for this immunocompromised patient. Clinicians need to order tests for these organisms separately.

Key recommendations from the 2017 Infectious Diseases Society of America Clinical Practice Guidelines for the Diagnosis and Management of Infectious Diarrhea

1. A detailed clinical and exposure history should be obtained from people with diarrhea, under any circumstances, including when there is a history of similar illness in others.
2. People with fever or bloody diarrhea should be evaluated for enteropathogens for which antimicrobial agents may confer clinical benefit, including *Salmonella enterica* subspecies, *Shigella*, and *Campylobacter*.
3. Enteric fever should be considered when a febrile person (with or without diarrhea) has a history of travel to areas in which causative agents are endemic, or has consumed foods prepared by people with recent endemic exposure.
4. People of all ages with acute diarrhea should be evaluated for dehydration.
5. When the clinical or epidemic history suggests a possible Shiga toxin-producing organism, diagnostic approaches should be applied that detect Shiga toxin (or the genes that encode them). It is important to distinguish *Escherichia coli* O157:H7 from other Shiga toxin-producing *E. coli* (STEC) in stool. In addition, *Shigella dysenteriae* type 1 and, rarely, other pathogens may produce Shiga toxin and should be considered as a cause of hemolytic uremic syndrome (HUS).
6. Stool testing should be performed for *Salmonella*, *Shigella*, *Campylobacter*, *Yersinia*, *C. difficile*, and STEC in people with diarrhea accompanied by fever, bloody or mucoid stools, severe abdominal cramping or tenderness, or signs of sepsis. Blood cultures should be obtained from people with signs of sepsis,

with immunocompromising condition, or when enteric fever is suspected.
7. A broad differential diagnosis is recommended in immunocompromised people with diarrhea. Additional testing may include *Cryptosporidium*, *Cyclospora*, *Cystoisospora*, microsporidia, *Mycobacterium avium* complex, and cytomegalovirus.
8. Diagnostic testing is not recommended in most cases of uncomplicated traveler's diarrhea unless treatment is indicated.
9. The optimal specimen for laboratory diagnosis of infectious diarrhea is a diarrheal stool sample (i.e. a sample that takes the shape of the container).
10. Fecal leukocyte examination and stool lactoferrin detection should not be used to establish the cause of an acute infectious diarrhea.
11. Follow-up testing is not recommended in most people for case management following resolution of diarrhea.
12. Noninfectious conditions, including IBD and IBS, should be considered as underlying etiologies in people with symptoms lasting 14 or more days and unidentified sources.
13. Empiric therapy for the immunocompetent adults with bloody diarrhea is not recommended except for people with fever documented in a medical setting, abdominal pain, bloody diarrhea, and bacillary dysentery (frequent scant bloody stools, fever, abdominal cramps, tenesmus) presumptively due to *Shigella*; or for people who have travelled internationally with body temperatures ≥ 38.5˚C, and/ or signs of sepsis who are suspected of having enteric fever.
14. Empiric antibacterial treatment should be considered in the immunocompromised people with severe illness and bloody diarrhea.
15. Antimicrobial therapy for people with infections attributed to STEC O157 and other STEC that produce Shiga toxin 2 should be avoided.
16. The empiric antimicrobial therapy in adults should be either a fluoroquinolone such as ciprofloxacin, or azithromycin, depending on the local susceptibility patterns and travel history.
17. In most people with acute watery diarrhea and without recent international travel, empiric antimicrobial therapy is not recommended, with the exception of people who are immunocompromised.
18. Empiric therapy should be avoided in people with persistent watery diarrhea lasting 14 days or more.
19. Antimotility drugs should be avoided in suspected or proven cases where toxic megacolon may result in inflammatory diarrhea with fever.
20. Probiotic preparations may be offered to reduce the symptom severity and duration in immunocompetent adults with infectious or antimicrobial-associated diarrhea.

Notes

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Reference

1. Shane et al. 2017 Infectious Diseases Society of America Clinical Practice Guidelines for the Diagnosis and Management of Infectious Diarrhea. Clin Infect Dis 2017. https://doi.org/10.1093/cid/cix669