

Please read this bit first

The HPCSA and the Med Tech Society have confirmed that this clinical case study, plus your routine review of your EQA reports from Thistle QA, should be documented as a “Journal Club” activity. This means that you must record those attending for CEU purposes. Thistle will **not** issue a certificate to cover these activities, nor send out “correct” answers to the CEU questions at the end of this case study.

The Thistle QA CEU No is: **MT00025**.

Each attendee should claim **THREE** CEU points for completing this Quality Control Journal Club exercise, and retain a copy of the relevant Thistle QA Participation Certificate as proof of registration on a Thistle QA EQA.

Cycle 22 Organism 10:

Yersinia enterocolitica

Yersinia enterocolitica is a pleomorphic Gram-negative bacilli in the family Enterobacteriaceae. They are non-lactose fermenters, urease-positive organisms that grow at a wide range of temperatures. They are motile at 25°C but not at 37°C. These organisms grow on MacConkey, and SS agars at room temperature and at 37°C. Colonies are difficult to detect after incubating for 24 hours but are readily apparent at 48 hours.

Most strains from patients belong to serotypes O: 3, O: 5, O: 8 and O: 9 and to biotypes 2, 3, and 4.

Y. enterocolitica is distributed widely throughout the world, and can be isolated from multiple environmental sources, including fresh water, contaminated foods, and a wide range of wild and domestic animals. Infections are relatively common in northern Europe, and infections have been documented in other parts of the world, including South America, Africa, and Asia.

Enterocolitis accounts for two thirds of reported cases of symptomatic *Y. Enterocolitis* infections and is characterized by fever, diarrhea, and abdominal pain lasting for 1 to 3 weeks. Nausea and vomiting occur in 15% to 40% of cases. Leukocytes, blood, or mucus may be present in the stool.

A reactive polyarthrititis occurs in adults with *Y. enterocolitica* infection and begins a few days to a month after onset of acute diarrhea and may involve knees, ankles, toes, fingers, and wrists. After 12 months most patients are asymptomatic, but a few have persistent back pain, which has been specifically related to the presence of HLA-B27.

Public health measures to control *Yersinia* infection should focus on safe food handling, processing, and preparation practices, especially involving pork and pork products.

Y. enterocolitica is usually susceptible *in vitro* to cotrimoxazole, fluoroquinolones (ciprofloxacin), aminoglycosides, tetracycline, and third generation cephalosporins. Because they produce beta-lactamases, isolates are often resistant to ampicillin and first generation cephalosporins.

Questions:

1. How will you isolate and identify *Y. enterocolitica*?
2. What clinical manifestations are associated with *Y. enterocolitica* infections?
3. What are the antibiotics of choice when treating infections?
4. What are the antibiotics of choice when treating *Y. enterocolitica* infections?

S A N A S



PROFICIENCY
TESTING

SANAS Accredited to ISO Guide 43 / ILAC G13