Yersinia enterocolitica O:3 mesenteric lymphadenopathy in an apparently healthy adult

Dear Sir,

Yersinia enterocolitica, a Gram-negative aerobic bacterium, is associated with various clinical manifestations, including acute gastroenteritis, abdominal pain, fever, weight loss, fatigue and, occasionally, mesenteric lymphadenopathy. Important serotypes for human pathology are O:3, O:5, O:8, O:9 and O:27. These infections have usually been reported in patients with haematological diseases, such as thalassemias, sickle cell disease and haemochromatosis.

We recently observed a case of Yersinia enterocolitica infection, without gastrointestinal symptoms, in an apparently healthy 19-year-old female. The patient suffered from fever for 20 days, usually in the evening, and complained of fatigue, loss of appetite and significant weight loss. History and physical examination were unremarkable; laboratory investigation revealed anaemia, leucocytosis and elevated inflammatory indices. Blood and urine cultures were negative, as was serology for certain pathogens. Computed tomography (CT) of the abdomen revealed liver-spleen enlargement and mesenteric lymphadenopathy with ‘sandwich sign’, indicative for non-Hodgkin lymphoma. Histopathology showed that lymphadenopathy was reactive, possibly due to infection with no signs of malignancy. Twenty days later, under second-generation cephalosporins, the patient presented with an acute abdomen; CT additionally revealed abscess formation in the right mesenteric region. Repeated laparotomy was performed; histopathology showed infiltrates of neutrophils, histiocytes, eosinophils, plasma cells and giant cells indicating reactive lymphadenopathy, due to Yersinia enterocolitica or pseudotuberculosis. Serology confirmed Yersinia enterocolitica type O:3 infection. The patient was given ciprofloxacin 500 mg/twice daily for 20 days and recovered completely.

Yersinia enterocolitica is transmitted via the enteric route or by direct inoculation through blood transfusions. Iron overload diseases and desferrioxamine favour Yersinia by providing the necessary iron for bacterial growth; these patients have a higher possibility of septicaemia. Symptomatology may mimic acute appendicitis, Crohn’s disease, ileum perforation or lymphoma. Further manifestations include reactive arthritis, especially in HLA-B27 positive individuals. Diagnosis is based on positive cultures of biological specimens. Serology may detect O:3 and O:9 serotypes, responsible for more than 90% of Yersinia infections in Europe; these serotypes have been proven resistant to penicillins and second-generation cephalosporins. Fluoroquinolones and third-generation cephalosporins are effective, while combinations with aminoglycosides or trimethoprim-sulfamethoxazole have
been successfully used in septicaemia; surgical treatment is required for rare complications.\textsuperscript{1,4}

\textit{Yersinia enterocolitica}-related mesenteric lymphadenopathy with no gastrointestinal symptoms in this apparently healthy adult is considered to be extremely unusual. However, \textit{Yersinia enterocolitica} should be included in the differential diagnosis of atypical abdominal symptoms combined with mesenteric lymphadenopathy.

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\textbf{REFERENCES}