

A case of *enterococcus avium* colitis with endoscopic finding

Abstract

A 58-year woman with a 1 month history of diarrhea, mucoid stool and abdominal pain was referred for intractable diarrhea. Sigmoidoscopy was done in primary care clinic and showed mucosal edema, whitish patchy and less than 5mm sized multiple inflammatory papules at sigmoid colon. *Enterococcus avium* (*E. avium*) was cultured in biopsy sample. Complete resolution of the colitis with *E. avium* required two weeks of antibiotics and probiotics. Many *E. avium* cases have been reported in the blood culture. However, it has never been proven that *E. avium* infection has caused colitis. In addition, the endoscopic finding of *E. avium* colitis was not known. Herein we report our case of *E. avium* colitis with biopsy culture proven.

Keywords: *Enterococcus avium*, colitis, biopsy culture

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Introduction

Enterococcus avium, formerly known as “group Q streptococcus”, is a gram-positive, catalase-negative coccus-shaped organism. *Enterococci* are generally regarded as the normal intestinal flora of humans. It is normally found in the urogenital and intestinal tracts of human beings and animals.^{1,2} Some species cause serious infections. Endocarditis, intraabdominal infections and urinary tract infections are common clinical manifestations. Most of infections are caused by either *Enterococcus faecalis* or *E. faecium*. *E. avium* rarely infects man. Being regarded as a pathogen of low virulence, *E. avium* are seen mostly in patients with underlying immunosuppressive conditions and are usually of a polymicrobial character because of the typically intra-abdominal source.³ Although a few case reports of *E. avium* infection exist, no previous cases of stool culture positive for *E. avium* have been reported. Herein we report a case of endoscopically document *E. avium* colitis with biopsy culture proven.

Case

A 58-year woman with a 1 month history of diarrhea and abdominal pain was referred from local clinic for evaluation of diarrhea. She had dyslipidemia and taking anti hyperlipidemic agents. She had no history of diabetes mellitus, intravenous drug use, or other immunosuppressed conditions. She had no recent abroad travel history and surgical history. Her physical examination was unremarkable. The patient was alert and did not appear to be in poor physical health. Her abdomen was soft and mild hyperactive bowel sound. Her height was 160cm, and her weight was 61kg, with no recent episode of malnutrition or weight changes. On arrival our hospital, she had a still mucoid stool and abdominal discomfort with taking two weeks of antibiotics. All routine laboratory tests were within the reference ranges. Sigmoidoscopy performed in primary care clinic 2 weeks ago showed mucosal edema, whitish patchy and less than 5mm sized multiple inflammatory papules at sigmoid colon. Sigmoidoscopic finding looked like pseudomembranous colitis (Figure 1). Sigmoidoscopic tissue biopsy revealed chronic nonspecific colitis. The biopsy cultured performed at the local clinic revealed Group D *Enterococcus avium*. These species are susceptible to Ampicillin, gentamycin, penicillin G, Vancomycin. After 2 weeks treatment of probiotics, and ciprofloxacin,

we planned to perform follow up sigmoidoscopy. Mucosal edema and multiple white inflammatory papules were improved on sigmoidoscopy (Figure 2). Follow up biopsy and stool culture was done. Biopsy revealed chronic inflammation with lymphoid follicles and stool culture result was detected normal intestinal flora. After two weeks treatment of ciprofloxacin, she returned to an outpatient clinic for follow-up. Her mucoid stool was subsides and general condition was improved. At present, patient is on regular follow up based at outpatient clinic.

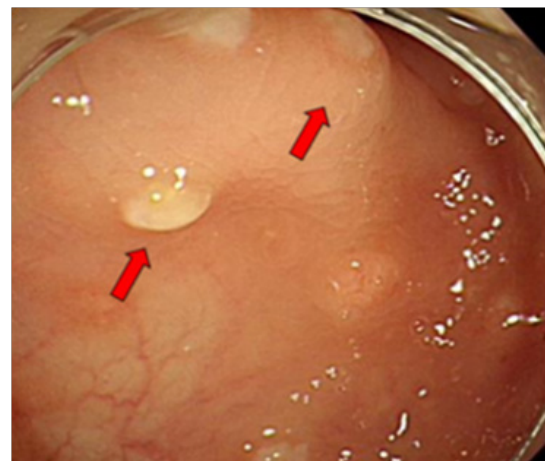


Figure 1 Local sigmoidoscopy performed in 2017.7.1.

Discussion

Enterococcus species have emerged as the major pathogens causing nosocomial infection including bloodstream, and intraabdominal infections, as well as urinary tract.^{4,6} *Enterococcus faecalis* and *Enterococcus faecium* accounting for more than 90% of cases of enterococcal bacteremia. *Enterococcus avium*, originally called group Q streptococcus owing to the presence of the group Q antigen, were most prevalent in chicken feces.⁷ *E. avium* is rarely reported as a pathogen, accounting for fewer than 5% of cases of enterococcal bacteremia.⁸ The biliary tract, followed by the abdomen, is the most commonly reported site of entry. The risk factors for *E. avium* infection

include contact with animals, especially birds. Nevertheless, our patient did not have a history of eating raw chickens or contact with birds or other animals. Although these bacteria were thought to have low virulence,⁹ *E. avium* seems to be less virulent than *E. faecalis*. Most of patients with bacteremia had serious underlying disease. *E. avium* bacteremia reflecting the serious underlying disease and may be a marker of poor prognosis.¹⁰ Further studies are needed to define the pathogenesis and virulence of *E. avium* prognosis. There have been some case reports about *E. avium* bacteremia in Korea.¹⁰ These observations suggest that *E. avium* bacteremia most often originated from a gastrointestinal tract source. This case is first time isolated *E. avium* from sigmoid lesion from endoscopic document colitis. After antibiotics treatment, patients recovered from colitis completely. Compared with other *Enterococci*, *E. avium* show relatively showed resistant to penicillin G and ampicillin.¹¹ Furthermore, these days, the emergence and spread of vancomycin-resistant *Enterococcus* species has focused greater attention on this genus.¹² Depending on the results of susceptibility testing, ampicillin, aminoglycoside, vancomycin should be considered as a treatment for *E. avium* infection.

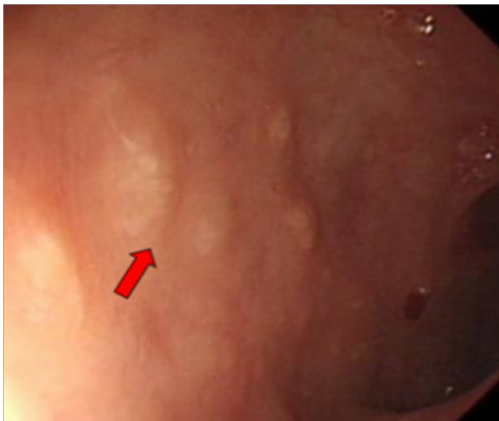


Figure 2 Follow up sigmoidoscopy after two weeks of antibiotic treatment 2017.7.27.

Conclusion

In summary, we herein described a case of endoscopically confirmed colitis caused by *E. avium* infection in a immunocompetent patient.

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None.

Conflicts of interest

There is no conflict of interest with this manuscript.

Acknowledgments

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