

Jasna Bacalja^{a,*}, Lada Zibar^{b,c}, Danica Galešić Ljubanović^{a,d}

^a Clinical Department of Pathology and Cytology, Dubrava University Hospital, Zagreb, Croatia

^b Department for Nephrology, Internal Clinic, University Hospital Osijek, Osijek, Croatia

^c Department for Pathophysiology, School of Medicine, University Josip Juraj Strossmayer, Osijek, Croatia

^d Institute of Pathology, School of Medicine, University of Zagreb, Zagreb, Croatia

*Corresponding author.

E-mail address: jesenbac@yahoo.com (J. Bacalja).

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Eikenella corrodens and Prevotella oralis peritonitis in patients on peritoneal dialysis[☆]

Peritonitis por Eikenella corrodens y Prevotella oralis en pacientes en diálisis peritoneal

Dear Editor,

Eikenella corrodens is an anaerobic Gram-negative bacillus which colonises the flora of the oral cavity, upper respiratory tract and mucosal surfaces of the digestive and genitourinary tract. The most common infections caused by this bacterium are head and neck infections followed by pulmonary, intra-abdominal, skin and bone infections, endocarditis and pelvic abscesses. It tends to present as a polymicrobial and opportunistic infection in immunocompromised patients and is more common if patients have associated morbidity.

It is a difficult bacterium to grow in non-selective media. Its culture, isolation and identification are therefore complex. Third-generation cephalosporins, carbapenems and fluoroquinolones are the treatment of choice.¹ It does not produce beta-lactamases and it is resistant to first- and second-generation cephalosporins, metronidazole, clindamycin and aminoglycosides.²⁻⁵

Prevotella oralis is an anaerobic Gram-negative bacillus which forms part of the oral, gastrointestinal and vaginal mucosa. It mainly causes episodes of periodontitis, although it can also be the cause of gynaecological and urinary infections, osteomyelitis and soft tissue infections, among others.⁶ It is sensitive to penicillin and cephalosporins, although in recent years up to almost 40% of beta-lactamase-producing bacteria have been observed.⁷ It tends to present as a co-infection with other bacteria, especially those which are anaerobes.

We describe the case of a 50-year-old Caucasian male with chronic kidney disease secondary to Berger's disease who started peritoneal dialysis at the age of 41. After one year, he received a kidney transplant from a deceased donor with early loss of the graft due to arterial thrombosis. The second transplant took place two years later with an initial immunosuppression regimen of prednisone, mycophenolate and tacrolimus, with withdrawal of corticosteroids after six months due to avascular necrosis of both hips. He re-started peritoneal dialysis six years after the transplant due to chronic graft failure.

The patient presented with an episode of peritonitis, diagnosed by cloudy peritoneal fluid and a cell count of 124 cells/ μ l with 88% of polymorphonuclear cells. Empirical treatment was therefore started with cefazolin and intraperitoneal (IP) tobramycin, in accordance with the peritonitis infection protocol at our site. *E. corrodens* grew in the culture, which, in our case, was susceptible to aminoglycosides. Treatment was therefore continued with aminoglycosides, and cephalosporin was withdrawn. The patient presented initial improvement and a peritoneal fluid cell count <100 cells/ μ l after five days of treatment. A week after the episode he came again due to cloudy fluid and 234 cells/ μ l in peritoneal fluid associated empirically with IP vancomycin. A new batch of cultures was performed, in which *P. oralis* resistant to penicillin and *Enterococcus faecalis* grew. The patient continued to do poorly make poor progress, reaching values of 1962 cells/ μ l. It was

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therefore decided to perform an abdominal CT scan, observing diffuse parietal thickening of the ascending colon and caecum and inflammation of the adjacent mesenteric fat. As he did not show signs of improvement and in light of the radiological findings, metronidazole was added to the treatment with tobramycin and vancomycin in addition to performing a new peritoneal fluid culture. *Escherichia coli* and *Bacteroides merdae* grew in this culture after a few days, and the latter was resistant to metronidazole. All the previous antibiotic treatment was withdrawn, and intraperitoneal imipenem was started with a loading dose of 500 mg and subsequently with 200 mg/exchange for 15 days. The symptoms completely resolved without needing to remove the catheter.

E. corrodens and *P. oralis* are two anaerobic bacteria in the normal flora of the oral and gastrointestinal mucosa. They normally present infection with other anaerobic bacteria.⁸ Starting treatment, for at least three weeks, with more than one drug to which they are normally susceptible over a prolonged period is therefore recommended.

REFERENCES

1. Rivas Castillo FJ, Gómez Martínez JR, López Álvarez F, García Velasco F. *Eikenella corrodens*: a rare case of deep neck infection. *Acta Otorrinolaringol Esp*. 2015;66:e33-4.
2. Udaka T, Hiraki N, Shiomori T, Miyamoto H, Fujimura T, et al. *Eikenella corrodens* in head and neck infections. *J Infect*. 2007;54:343-8.
3. Sheng WS, Hsueh PR, Hung CC, Teng LJ, Chen YC, et al. Clinical features of patients invasive *Eikenella corrodens* infections and

microbiological characteristics of the causative isolates. *Eur J Clin Microbiol Infect Dis*. 2001;20:231-6.

4. Sofianou D, Kolokotronis A. Susceptibility of *Eikenella corrodens* to antimicrobial agents. *J Chemother*. 1990;2:156-8.
5. Vay C, Almuzara M, Barberis C, Rodriguez C, Togneri A, et al. Activity of 14 antimicrobials against *Eikenella corrodens*. *Rev Argent Microbiol*. 2012;34:230-4.
6. Goyal H, Arora S, Mishra S, Jamil S, Shah U. Vertebral osteomyelitis and epidural abscesses caused by *Prevotella oralis*: a case report. *Braz J Infect Dis*. 2012;16:594-6.
7. Brook I. *Prevotella* and *Porphyromonas* infections in children. *J Med Microbiol*. 1995;42:340-7.
8. Nadeau-Fredette AC, Bargman JM. Gastroscopy-related peritonitis in peritoneal dialysis patients. *PDI*. 2014;34:667-70.

Beatriz Millán Díaz*, Lourdes González Tabarés, Carmen Cobelo Casas, Sonia Cillero Rego, Margarita López Vázquez, Jesús Calviño Varela

Servicio de Nefrología, Hospital Universitario Lucus Augusti, Lugo, Spain

* Corresponding author.

E-mail address: beatriz.millan.diaz@sergas.es (B. Millán Díaz).

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Vascular endothelial growth factor concentrations in peritoneal dialysis patients: Influence of biochemical and dialysis quality parameters and peritoneal transport rate

Concentraciones del factor de crecimiento endotelial vascular en pacientes en diálisis peritoneal: influencia de los parámetros bioquímicos y de calidad de diálisis y tasa de transporte peritoneal

Dear Editor,

Peritoneal dialysis (PD) is an established and beneficial replacement treatment for patients affected by end-stage renal disease (ESRD).¹ Long-term peritoneal dialysis (PD) is associated with the progressive development of functional and structural alterations of the peritoneal membrane affecting the outcome, such as angiogenesis, the formation of new blood vessels from pre-existing endothelium.¹ Vascular

endothelial growth factor (VEGF), an angiogenic and vascular permeability factor, is a major mediator of increased angiogenesis.²

The aim of this study was to examine the factors influencing the serum (s) and drained dialysate (dd) VEGF concentrations in chronic PD patients and their correlations with biochemical findings, quality of PD, peritoneal membrane transport rate, dialysis modality and vintage, peritonitis and diabetes mellitus, use of erythropoietin stimu-