and a skin lesion or portal of entry should be heeded as a potential warning, especially in patients with a history of exposure to seawater.

Conflicts of interest

The authors declare that they have no conflicts of interest.

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http://dx.doi.org/10.1016/j.nefroe.2016.06.008

Paracoccus yeei peritonitis in peritoneal dialysis☆

Peritonitis causada por *Paracoccus yeei* en diálisis peritoneal

Dear Editor,

Peritonitis is defined as peritoneal inflammation caused by microorganisms, with the presence of cloudy peritoneal fluid, a leukocyte count of more than 100 per microlitre and leukocytes accounting for more than 50% of polymorphonuclear cells. It remains the most significant complication deriving from the dialysis technique itself. It is generally caused by Gram-positive skin bacteria such as *Staphylococcus epidermidis* and *Staphylococcus aureus*, or by enterobacteria and fungi. An intact peritoneum and the defence mechanisms of the mesothelium are probably the most significant barriers that help prevent the development of peritonitis. Prevention is the fundamental weapon, and the routes by which microorganisms enter the peritoneal cavity should be acted on: peritoneal access, connection systems, dialysis solutions and examinations that help enable infection.

Paracoccus yeei is a non-fermenting bacterium in the environment that is present in soil. It is the bacterium that caused the episode of peritonitis in the case that we are reporting.

Our case is a 46-year-old woman diagnosed with adult polycystic kidney disease, on a regimen of automated peritoneal dialysis for the last 3 years, with no prior episodes of peritonitis. The patient lived with a small dog she routinely take out for walks.

She visited the dialysis unit because she noticed cloudy fluid in the peritoneal effluent drainage. There was no fever or nausea, and her bowel movements were normal. She had slight abdominal discomfort, and an examination showed signs of peritoneal irritation. A peritoneal fluid cell count was performed and found 790 leukocytes/mcl, with 75% polymorphonuclear cells. Samples were sent for the performance of a Gram stain, and cultures in blood culture and conventional media. A diagnosis of peritonitis was confirmed and treatment was started according to our site's protocol, with intraperitoneal vancomycin and ceftazidime. Empirical treatment of peritonitis was to be done with a combination of broad spectrum antibiotics targeting Gram-positive and Gram-negative microorganisms. The patient continued on an outpatient regimen, since her general condition was good, with daily self-administration of intraperitoneal ceftazidime and visits to the hospital to undergo follow-up cell counts. At 48 h she received a positive culture in a blood culture medium for *Paracoccus yeei*. No bacteria were seen on a Gram stain, and a conventional culture was negative. Peritonitis results in morbidity and mortality, and is a cause of hospitalization in the most impaired patients. However, it can generally be treated on an outpatient basis, as in our case.

Paracoccus yeei was formerly classified as a eugonic oxidizer group 2 (EO-2) strain. In 2003, new molecular techniques iden-

☆ Please cite this article as: Sastre A, González-Arregoces J, Romainoik I, Mariño S, Lucas C, Monfá E, et al. *Paracoccus yeei* peritonitis in peritoneal dialysis. Nefrología. 2016;36:445–446.

tified this new species. It consists of small non-fermenting aerobic Gram-negative coccobacilli, with O-shaped morphology. The bacterium is catalase- and oxidase-positive. Its phenotype is identified by PCR and confirmed with 16S rRNA gene sequencing. It was identified for the first time in the peritoneal fluid in a peritoneal dialysis patient in Pennsylvania[1] and subsequently anecdotally identified in other cases.[2] It mainly affects immunodepressed patients and may cause skin infections,[3] myocarditis,[4] arthritis,[5] keratitis and corneal graft rejection.[6,7]

It is found naturally in soil. Given that our patient had a small dog, we thought this could have brought the bacteria to her house, that the patient could have contaminated herself with it if she failed to comply with strict handwashing and it could have passed to the peritoneum during connection.

The *Paracoccus yeei* bacterium is sensitive to beta-lactams, especially aminopenicillins and carbapenems, as well as third-generation cephalosporins. Intraperitoneal administration of antibiotics achieves improvement, as there is a higher concentration of bacteria at the infected site, and easily leads to eradication of the bacterium.

The course of our patient's peritonitis was good, with a gradual drop in leukocytes in the effluent from the time when she received the culture. Vancomycin was suspended and treatment was completed with ceftazidime for 14 days.

This bacterium is rarely identified in clinical samples. Animals such as a horse[8] or, in our case, a dog may be the vehicle for human contamination.

We believe this to be the first reported case of *Paracoccus yeei* peritonitis in Spain.

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http://dx.doi.org/10.1016/j.nefroe.2016.09.011

Severe hypocalcemia following denosumab injection in patient with chronic kidney disease☆

Hipocalcemia severa tras la administración de una dosis de denosumab en un paciente con insuficiencia renal avanzada

Dear Editor:

Denosumab is a human monoclonal antibody (IgG2) that binds with great affinity and specificity to RANKL and blocks activation of RANK, its receptor, on the surface of osteoclasts and their precursors, thereby reducing their activity and causing a decrease in bone resorption of trabecular and cortical bone. It is used for the treatment of osteoporosis and is administered every 6 months.[1,2] It is not necessary to adjust the dose in renal failure, but there is an increased risk of hypocalcaemia.[1]

☆ Please cite this article as: Monge Rafael P, Arias M, Fernández-Fresnedo G. Hipocalcemia severa tras la administración de una dosis de denosumab en un paciente con insuficiencia renal avanzada. Nefrología. 2016;36:446–448.