

## Septic Arthritis Without a Clear Focus Due to *Eikenella corrodens*\*



### Artritis séptica sin foco por *Eikenella corrodens*

To the Editor,

*Eikenella corrodens* is a small, Gram-negative coccobacillus or bacillus that is a component of normal human flora; it is primarily detected in the oral cavity and upper respiratory tract, although it can also be found in the gastrointestinal and urogenital tracts.<sup>1</sup> This microorganism is considered an opportunistic pathogen and has been described as the causative agent of infections affecting the head and neck, sinusitis and arthritis.<sup>2</sup>

We report the case of a 31-year-old man, with no significant personal medical history, who presented at the emergency department of our hospital with a 2-week history of gonalgia involving left knee. We obtained a sample of articular fluid and the patient was discharged to be seen thereafter by his primary care physician who, in turn, consulted with the rheumatology department. Anti-inflammatory therapy was prescribed, because the microbiological culture of the sample had been negative. Given the persistence of the clinical signs and symptoms, the patient returned to the emergency department 8 days later, and underwent arthrocentesis, which yielded a viscous, yellow fluid, that was neither cloudy nor purulent. It was injected into an aerobic blood culture bottle, and the patient was discharged and was asked to continue taking the anti-inflammatory therapy. Days later, the patient was examined in the rheumatology department, where he insisted on the persistence of pain and commented on the progressive swelling; he mentioned noting a feeling of chilliness during the evening (not measured by thermometer). He was admitted to the hospital and began to take cloxacillin (2 g/4 h) plus ceftriaxone (2 g/24 h), and arthrocentesis was again performed. The culture of the 2 samples resulted in the isolation of Gram-negative bacilli, which grew in blood agar and chocolate agar forming convex colonies, with rounded borders, but not in MacConkey agar; Gram staining revealed small, Gram-negative coccobacilli. The microorganism was not identified by manual means (API 20 NE<sup>®</sup>) or by automatic techniques (MicroScan<sup>®</sup>). The samples were sent for identification to a referral center (*Instituto de Salud Carlos III*, Madrid). The patient improved and was discharged 17 days later. He began to take oral levofloxacin (500 mg/12 h) plus rifampicin (300 mg/24 h), a treatment that was replaced by amoxicillin/clavulanic acid (500 mg/8 h) after the identification of *E. corrodens*, which was maintained for 1 month. The patient remained asymptomatic until the treatment had been completed.

The major causative agents of septic arthritis are *Staphylococcus aureus* and streptococci (60%–80% of cases depending on the series), followed by 20%–25% of cases due to Gram-negative bacilli (extreme ages of life, immunosuppression, etc.) and 5% of cases produced by anaerobic organisms (injuries, extension of abdominal infection, etc.).<sup>3</sup>

*E. corrodens* is rarely isolated as a cause of septic arthritis; in the review by Nolla et al.<sup>4</sup> on pyogenic arthritis affecting native joints,

the prevalence of infection by this microorganism was 1/268. Due to the presence of *E. corrodens* in the human oral cavity, most cases of septic arthritis and osteomyelitis produced by this microorganism are directly related to human bites or dental infections<sup>5</sup>; in the literature, there are also reports of cases of osteomyelitis secondary to a prick with a used toothpick.<sup>6</sup> Our patient reported no recent injury or bite, but he had lost some teeth. This led us to suppose that the origin of the infection could have been a bacteremia that could be traced to his own oral cavity, although he had not had any dental treatment of late. He mentioned having been pricked by a rosebush days before the onset of the clinical signs, but there are no reports in the literature of transmission of this microorganism by that route.

*E. corrodens* is resistant to metronidazole, cloxacillin, oral first- and second-generation cephalosporins, clindamycin and macrolides, and  $\beta$ -lactamase-producing strains have been reported; the strain isolated in our patient was sensitive to amoxicillin/clavulanic acid and was  $\beta$ -lactamase-negative. The treatment of choice was considered to be amoxicillin/clavulanic acid or ceftriaxone.

### Conflicts of Interest

The authors declare they have no conflicts of interest.

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