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LETTER TO THE EDITOR

Vibrio metschnikovii FROM A HUMAN INFECTED LEG ULCER

Albacete, July 23, 2008

Dear Sir:

Vibrio metschnikovii is a gram-negative bacillus that can be found in various aquatic habitats including fresh, brackish and marine waters and sewage, as well as shellfish, birds, poultry and domestic ungulates[2,3,7]. The first case of infection in humans was published in 1981[6] and very few cases have been reported since then. We did not find any reference to the isolation of *V. metschnikovii* in Spain. We report a case where *V. metschnikovii* was isolated from an infected ulcer in the leg.

The patient was a 49-year-old woman from Uruguay who had been living in our country for five months, with a 7-year history of fibromyalgia and frequently infected leg ulcers. She came to our hospital´s emergency service suffering from painful ulcers in both legs, which carried a chronic lymphoedema background. Swabs with exudates from ulcers were sent to the laboratory for microbiological study and a regular cure was prescribed. Mixed flora - consisting of multiresistant bacterial organisms - was isolated from both legs. In addition, *V. metschnikovii* was isolated from the left lower limb. This microorganism formed grey colonies (diameter: 2-3 mm) with complete hemolysis on blood agar after 24 hours of incubation at 36 °C. It formed lactose positive colonies on MacConkey agar and yellowish ones on thiosulfate-citrate-bile salts-sucrose agar. Gram staining of the colonies showed curved gram-negative rods. It was oxidase negative and did not reduce nitrate to nitrite. This strain was identified as *V. metschnikovii* with a Vitek 2 GN card (bioMérieux) and ID 32 E gallery (bioMérieux), and was confirmed by sequencing the 16S rRNA gene at the National Center for Microbiology. The strain was resistant to amoxicillin (MIC >16 μg/mL), cefalotine (MIC > 8), cefotaxime (MIC = 8), gentamycin (MIC > 8), tobramycin (MIC > 8), and sensitive to cefoxitin (MIC ≤ 8), amikacin (MIC = 16), amoxicillin / clavulanic acid (MIC ≤ 4/2), imipenem (MIC ≤ 1), ciprofloxacin (MIC ≤ 0, 12) and trimethoprim / sulfamethoxazole (MIC ≤ 2/38). The agar diffusion test with combined disks for the detection of extended spectrum β-lactamases was positive. One month after and following an initial improvement, the patient was admitted because of an increased pain and exudation from her ulcers, where multiresistant mixed flora was isolated without the presence of *V. metschnikovii*. A 16-day course of intravenous antibiotic therapy with imipenem and amikacina, as well as daily cures, was prescribed. The patients showed a good clinical outcome with a progressive decrease of pain and exudation, and improvement of inflammatory analytical parameters.

The isolation of *V. metschnikovii* from human clinical samples is very rare. Only four cases of bacteremia in adults[4-6] and one neonatal sepsis[9], a postoperative wound infection in a leg[7] and one case of pneumonia[10] have been reported. It has also been isolated from the urine of two patients[3], from an ulcer in the foot[3], from the feces of five children suffering from watery diarrhea[1] and in pure culture from the feces of a patient with diarrhea[8]. The source of infection could not be documented in any of the cases, but presumably the transmission was due to direct contact with the aquatic environment, consumption of contaminated food or manipulation of meat products[6,7]. The pathogenicity of this bacterium has not been clearly defined. A specific cytolysin with hemolytic properties could be a virulence factor of this microorganism[8]. The isolation of the bacterium from blood samples and the deadly result in one of the patients seem to confirm its pathogenicity in some cases[4], but its etiological role as a cause of diarrhea has not been shown[3]. In our case it is not possible to establish the clinical significance of the isolation of *V. metschnikovii* since it was obtained from a surface sample and mixed flora. However it is interesting to note that this bacterium has been isolated in three more cases from lesions in lower limbs[3,4,7]. Finally, it is noteworthy that the strain isolated in our case was resistant to cefalotine, cefotaxime and gentamicin, which is unusual in this organism[1,3,5,7-10].

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