

ampicilina, tetraciclina, rifampicina, gentamicina y ciprofloxacino, siendo, por el contrario, resistente a eritromicina y clindamicina<sup>3</sup>.

Los factores predisponentes presentes en casi la totalidad de los casos de queratitis microbiana son la incorporación de lentes de contacto, traumatismos no quirúrgicos, disfunciones del barrido lacrimal, defectos anatómicos y cirugía ocular<sup>1</sup>.

La implicación de bacterias corineformes en las úlceras corneales es un hecho excepcional, estando reducidos en la práctica a *C. diphtheriae*.

*C. mucifaciens* es una corinebacteria peculiar en cuanto a su morfología, que la hace fácilmente distinguible por el aspecto de sus colonias, ya que es la única representante del género que produce colonias amarillas y de extraordinaria consistencia mucosa<sup>4</sup>. Además, *C. mucifaciens* tiene un comportamiento no lipolítico y no fermentativo, la hidrólisis de la urea y de la esculina son negativas, no reduce los nitratos y la prueba de CAMP resulta negativa<sup>3</sup>. Sin embargo, la utilización de galerías comerciales para su identificación resulta equívoca, ya que los perfiles que se obtienen con el sistema API Coryne, por ejemplo, no ofrece resultados concluyentes y los taxones más próximos se corresponden con corinebacterias lipofílicas y/o fermentadoras cuyas características morfológicas obviamente no se corresponden con *C. mucifaciens*<sup>1,3</sup>. Tampoco la espectrometría, en ocasiones, facilita su identificación, probablemente por la presencia de sustancia mucosa en gran cantidad que impide la fragmentación de la colonia para su posterior análisis<sup>5</sup>. Por otro lado, la estrecha proximidad filogenética que mantiene con otras especies, como *C. afermentans* o *C. ureicelerivorans*, puede inducir a resultados equivocados si se emplean técnicas moleculares, como ocurrió con el primero de nuestros intentos de identificación taxonómica<sup>4,6</sup>. En conjunto, los resultados obtenidos a través de pruebas fenotípicas parecen ser más convincentes que el análisis molecular.

*C. mucifaciens* ha sido aislado de hemocultivos de pacientes inmunocompetentes y de aquellos otros en situaciones de inmunocompromiso o posquirúrgicas en líquido articular y en una herida producida por mordedura de gato<sup>3</sup>. En Canadá se han identificado 23 cepas de *C. mucifaciens*, 10 de las cuales fueron aisladas de hemocultivos<sup>4</sup>. Existe la descripción de 9 aislamientos procedentes del área ORL<sup>7</sup>. Finalmente, se ha descrito un caso fatal de bacteriemia producida por una cepa atípica de *C. mucifaciens*<sup>8</sup>, y un caso de bacteriemia en un paciente inmunocompetente con una neumonía cavitada<sup>9</sup>.

En nuestro caso, la existencia de un epitelio corneal dañado previamente y con otra úlcera antigua sin resolución definitiva incluye a este paciente entre los pertenecientes a grupos de alto riesgo, susceptibles de padecer infecciones corneales por microorganismos oportunistas como *C. mucifaciens*.

Por otra parte, es necesario advertir al microbiólogo clínico de las características de este microorganismo y las dudas que puede generar con las herramientas diagnósticas disponibles.

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## Catheter-associated bacteremia caused by *Ochrobactrum anthropi* in a patient on parenteral nutrition



### Bacteriemia asociada a catéter por *Ochrobactrum anthropi* en un paciente con nutrición parenteral

Dear Editor,

This is a case of a 63-year-old male admitted for 6 months in our hospital with a chronic enterocutaneous fistula, several surgeries (splenectomy, distal pancreatectomy and cholecystectomy) and carrier of a peripherally inserted central catheter (PICC) for total parenteral nutrition (TPN).

After 6 months with the PICC, he developed a high fever (38.5 °C) and chills; therefore we proceeded to extract 2 sets of blood culture. 72 h later, he suffered a new fever peak and another 2 sets of blood culture were obtained from both peripheral line and PICC. The blood cultures were processed by BACTEC 9240 (Becton-Dickinson).

After 24 h of incubation, a growth of gram negative rods was detected in both aerobic samples from the first set, which were sub-cultivated in blood and McConkey agar and incubated at 37 °C in CO<sub>2</sub> atmosphere. Furthermore, Vitek-2 (bioMérieux) cards were inoculated directly from one positive aerobic bottle to determinate its identification and its sensibility by means of GN and AST-112 cards, respectively.

24 h later, the Vitek-2 system identified the organism as *Ochrobactrum anthropi* with a concordance rate of 99.9%. Pale yellow colonies grew at subculture and they were processed in parallel by MicroScan WalkAway 96 plus (Siemens) automated system and Vitek-2 (bioMérieux) again. Again, both systems identified the isolated as *Ochrobactrum anthropi* with a concordance rate of 99.9%. Moreover, in the aerobic bottles from the second sets of blood cultures, *O. anthropi* was also isolated. The differential time to positivity of blood cultures from the reservoir catheter and the peripheral sites was at least 2 h; therefore the bacteremia was diagnosed as catheter-associated.

The confirmation of the isolate was made with BIOLOG GP2 panel (BIOLOG, Inc., Hayward, U.S.A.) with 95 carbon sources by the

Taxonomy Laboratory of the National Institute of Health Carlos III. It found a similarity of 99% ( $T=0.808$  with, and by 16s rRNA sequencing fragment of 1255 bp) by using a previously reported method.<sup>1</sup> The sequence obtained showed a homology of 99.8% with *Ochrobactrum anthropi* from the GenBank (accession nos.: NR074243, JQ435696, and others).

Susceptibility testing was performed according to the manufacturer's recommendations using the 54 broth microdilution panel from MicroScan WalkAway 96 plus and the AST-112 and 114 cards from Vitek-2. The isolated was susceptible to all aminoglycosides (CIM Tobramycin  $\leq 2$  mg/ml; CIM Gentamicin = 2 mg/ml; CIM Amikacin = 16 mg/ml), fluoroquinolones (CIM ciprofloxacin  $\leq 0.5$  mg/ml; CIM levofloxacin  $\leq 1$  mg/ml), trimethoprim-sulfamethoxazole (CIM  $\leq 2/38$  mg/ml) and Minocycline (CIM  $\leq 4$  mg/ml). But it was resistant to all betalactamics except for carbapenems (CIM Meropenem  $\leq 1$  mg/ml; CIM Imipenem  $\leq 1$  mg/ml).

Initially, it was decided not to start a treatment due to the fact that the patient's condition was healthy; but when the isolation was confirmed in subsequent extractions, it was decided to begin a treatment with intravenous ciprofloxacin. During the next days, the patient's condition improved and the subsequent blood cultures were negative.

The *Ochrobactrum* genus is formed by nonfermentative gram, strictly aerobic negative rods, positive oxidase, positive trypsinase, positive urease and negative indole. Taxonomically, this genus belongs to the  $\alpha$ -2 subgroup of the domain *Proteobacteria* and it is very close to the highly pathogenic *Brucellae*.<sup>2</sup> *Ochrobactrum* spp. was created by Holmes et al.<sup>3</sup> in 1980 to assign the organisms that formerly were known as *CDC group Vd*. At first, *O. anthropi* was the only one species from the genus, but subsequent studies showed genetic and phylogenetic differences among the strains. Currently, 13 strains have been described, but only 2 species, *O. anthropi* and *O. intermedium*, have been reported as opportunistic pathogens in human beings.<sup>4</sup>

*Ochrobactrum anthropi* is ubiquitous in nature and it can be found in hospital environments. Therefore, the exposure to this pathogen is common. In fact, nosocomial infections due to this pathogen are increasing since the first case in human beings in 1980.<sup>5</sup> Like *Staphylococcus* genus,<sup>6</sup> *O. anthropi* has surface proteins which play an important role as a mediator of adherence. Thus, most of the cases reported are catheter-related infections in immunocompromised patients.<sup>6</sup> However, it has been also reported in immunocompetent patients.<sup>7</sup> Other reported cases have been pelvic abscess,<sup>7</sup> endophthalmitis, meningitis<sup>8</sup> and peritonitis.<sup>9</sup>

*O. anthropi* is resistant to all betalactamics except for carbapenems. This resistance is due to an AmpC betalactamase described as chromosomal, inducible and resistant to inhibition by clavulanic acid. It is considered susceptible to quinolones, aminoglycosides and colistin.

In conclusion, *O. anthropi* is an opportunistic pathogen which mainly causes catheter-related infections in immunocompromised patients. Even nowadays, this genus is of low virulence; its ubiquity in hospital environments, the increase of reported cases and the organism's intrinsic multiresistance to the most frequently used antibiotics put us on alert, as this microorganism can become a potentially problematic nosocomial pathogen similar to the current case of *Acinetobacter* spp.<sup>10</sup>

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## Comparación de las características clínicas y pronósticas de la neumonía por *Pneumocystis jiroveci* en pacientes con y sin infección por el virus de la inmunodeficiencia humana



### Comparison of *Pneumocystis jiroveci* pneumonia characteristics in patients with and without HIV infection

Sr. Editor:

La neumonía por *Pneumocystis jiroveci* (NPJ) es una infección oportunista que afecta principalmente a pacientes infectados por el

virus de la inmunodeficiencia humana (VIH) con inmunosupresión avanzada, aunque puede afectar también a pacientes inmunosuprimidos por otras causas (pacientes trasplantados, con neoplasias o con enfermedades autoinmunes)<sup>1-4</sup>. Existen algunas diferencias en la presentación clínica y el pronóstico entre estos 2 grupos de pacientes, aunque son pocos los estudios publicados al respecto<sup>5,6</sup>. Realizamos un estudio retrospectivo entre enero de 2009 y agosto de 2012 en nuestro centro en el que revisamos los datos demográficos, las características clínicas y el pronóstico de todos los pacientes diagnosticados de NPJ con el objetivo de comparar el grupo de pacientes VIH con el grupo de pacientes seronegativos. Durante este periodo, 29 pacientes fueron diagnosticados de un primer epi-