

dant circular, convex, moist, pale yellow non-hemolytic colonies were observed in pure culture on both plates. These colonies proved to be catalase- and oxidase-positive. Application of MALDI-TOF MS version 9 (8468 msp) (Bruker Biotyper, Billerica, MA) was not able to identify the strain. Only three *Paracoccus* species have inputs in its database (*P. dentrificans*, 1; *P. versutus*, 2; and *P. yeei*, 7). No other identification system was applied for this strain, and the isolate was submitted to the National Center of Microbiology (ISCIII, Madrid, Spain) and identified by means of 16S rRNA sequence analysis using a previously reported method.⁴ The obtained fragment of 1382 bp showed 99.93% similarity (1358/1359 nucleotides) with *P. sanguinis* strain 05503 (GenBank accession number NR_135883.1), with only one discrepant nucleotide (1345A→G). The sequence was deposited in GenBank under accession number MT827286.

Antimicrobial susceptibility testing was performed by Etest[®], obtaining the following MIC values: amikacin (0.25 mg/L), cefepime (0.5 mg/L), piperacillin-tazobactam (<0.016 mg/L), ceftazidime (0.75 mg/L), meropenem (0.012 mg/L), ertapenem (0.006 mg/L), gentamicin (0.023 mg/L), tobramycin (0.125 mg/L), ciprofloxacin (0.003 mg/L) and colistin (0.75 mg/L). To date, neither EUCAST nor CLSI have defined breakpoints for this microorganism, but this isolate seemed to be susceptible to all antimicrobials tested when EUCAST breakpoints for *Pseudomonas* spp. or *Acinetobacter* spp. were applied.

The clinical course of the newborn was favorable, and she was discharged one month later.

P. sanguinis is a facultative anaerobe Gram-negative rod of 0.5–1 mm that appears in pairs or chains in the Gram stain and, to our knowledge, it has not been associated with human infection to date. We report the first case of bacteremia due to *P. sanguinis* isolated in pure culture in Spain. A key question related to this case report is whether the isolate corresponds to a true pathogen, given the delayed growth of the bacterium (after 4 days of incubation) and the recovery of the patient in absence of a specific treatment, although the patient previously received ampicillin plus gentamicin, according to the treatment protocol for respiratory distress in premature newborns. The *Paracoccus* genus is a microorganism of low pathogenicity and mainly causes infections in immunocompromised patients, such as premature newborns.

MALDI-TOF MS can be highly useful for the identification of bacteria and the detection of new species responsible for infections. However, in some circumstances, as in the present case, it yields no results. Frequent updating of MALDI software update is recommended to introduce new inputs and to optimize the diagnosis of

new microorganisms that can cause potentially severe infections. In the meantime, species identification must be confirmed using other diagnostic techniques such as 16S rRNA gene sequencing.

In conclusion, this is the first report of *P. sanguinis* isolated in pure culture as a cause of bacteremia and indicates that this new pathogen could be responsible for human infections. This case highlights the need to confirm results when MALDI-TOF scores are inadequate.

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Conflict of interest

Authors declare no conflict of interest.

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Occult bacteremia due to *Kingella kingae* associated with herpetic gingivostomatitis^{*}



Bacteriemia secundaria por *Kingella kingae* asociada a gingivostomatitis herpética

Dear Editor,

We present the case of a previously healthy 18-month-old female infant who was brought to our hospital's emergency department with a clinical picture of fever during 48 h, lethargy and lesions of the oral mucosa. On examination she presented an axillary temperature of 38.5 °C, normal cardiopulmonary auscultation, no visceromegaly, normal acute phase reactants, no signs of exan-

thema and no signs of neurological alterations. A urine culture was ordered, which was negative, and also a blood culture. A lumbar puncture was performed, and cytochemical and microbiological analyses of the cerebrospinal fluid were normal. No culture of the oral lesions was performed. The patient was hospitalised with a diagnosis compatible with herpetic gingivostomatitis and treatment was initiated with cefotaxime and aciclovir. At 48 h, the blood culture came back positive, with growth observed of a gram-negative coccobacillus that was identified as *Kingella kingae*. The child did not present signs of osteoarticular or cardiological infection, and the control blood culture at four days was negative. After five days, the IV cefotaxime treatment was suspended, and treatment was continued for a further week with oral amoxicillin-clavulanic acid at home for five days. There was no recurrence of the process in the following six months.

Currently, *K. kingae* is the pathogen that most commonly causes septic arthritis in children under 2 years of age.¹ In this group, it

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has been reported that 10% of children are oropharyngeal carriers of this bacteria.² In these carrier children, invasion of the respiratory mucosa and access to the skeletal tissue via the circulatory system would appear to be facilitated by the destruction of the epithelial barrier caused by viral infections.³ El Houmami et al.⁴ studied nine outbreaks caused by *K. kingae* in 27 children, 24 of whom suffered osteoarticular infections, with associated viral infections causing mouth ulcers being identified in the majority of patients.

The taking of blood cultures for the diagnosis of bacteraemia without focus in these patients with damage to the oral mucosa would enable us to pre-empt the severe pathologies that result from this microorganism's tropism for osteoarticular and endocardial tissue. In fact, bacteraemia without focus is the second most common presentation of *K. kingae* in paediatric patients.⁵ However, suspicion of this pathology on the part of clinicians is complex, as the clinical picture is often mild.⁶ Dubnov-Raz et al.⁷ studied a total of 322 infections with 140 cases of occult bacteraemia (43.6%) in children under 36 months. The patients studied did not have fever, leukocytosis or elevated acute phase reactants.

The relevance that this microorganism has taken on may be related to a reduction in skeletal infections caused by *Haemophilus influenzae* due to generalised vaccination,⁸ improved culture techniques such as inoculation of blood culture vials with samples of synovial fluid,⁹ and the development of several commercial methods to identify this microorganism, such as the Vitek2 NH card and mass spectrometry.⁶ Moreover, the use of nucleic acid amplification techniques on direct samples of synovial fluid has been a big advance.¹⁰ Nonetheless, these techniques are expensive, often laborious and are not available in all laboratories, and there is very little data on their use on positive blood cultures.

The *Clinical and Laboratory Standards Institute* (CLSI)¹¹ includes *K. kingae* in the HACEK group and recommends the same cut-off points for sensitivity to antimicrobial agents for difficult-to-grow microorganisms, including *K. kingae*. In 2020, the *European Committee on Antimicrobial Susceptibility Testing* (EUCAST) established specific cut-off points for *K. kingae*,¹² so in the case in question the strain was resistant to penicillin, since it presented an MIC of 0.064 µg/mL.

Our study is focused on the convenience of protocolising the taking of blood cultures in paediatric patients with oral involvement in order to rule out occult bacteraemia due to *K. kingae*, in view of the colonisation rate in children under 2 years of age and the benign clinical picture of this type of infection. The current diagnostic tool in positive blood cultures is still primarily identification of growth in conventional culture. For this, the microbiologist needs to be particularly aware of this type of microorganism to avoid deeming it a contaminant and thus to provide information for decision-making that will avoid complicated infections such as endocarditis and septic arthritis. EUCAST and CLSI differ on their cut-off points for sensitivity to penicillin for this microorganism. Given the relevance

that *K. kingae* has acquired as an invasive pathogen in recent years, we consider the use of the European criterion to be justified as it is tailored to this species.

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Voriconazole and tamsulosin: A clinically relevant drug–drug interaction^{*}



Voriconazol y tamsulosina: interacción farmacológica clínicamente relevante

Drug–drug interactions occur when one drug's activity is modified by the action of another, either increasing or reducing its effect.

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Certain interactions can lead to therapeutic failure or cause toxicity, so it is necessary to identify them early to optimise treatment, thus guaranteeing its efficacy and safety.¹

We present a clinical case in which a patient simultaneously received voriconazole and tamsulosin, an α -1A adrenoceptor antagonist, with a clinically relevant drug–drug interaction being observed.

A 66-year-old male smoker and active drinker was admitted for constitutional syndrome, feelings of dysthermia and productive cough lasting two months. His medical history included hypertension, dyslipidaemia, Leriche syndrome, hyperuricaemia and residual pulmonary lesions due to having suffered from pulmonary