amplification techniques were performed which are approved to be carried out on vaginal, endocervical, urine and urethral samples. In our population the results came from nasopharyngeal samples, whose use is not validated by the FDA, but whose result, interpreted together with the patient's clinical picture and, when possible, with the serological results, would allow for the establishment of the aetiological diagnosis of the infection.

Although we present a limited number of patients, it is useful to highlight the characteristics of this entity, which is potentially serious, and which must be one of the main diagnostic suspicions in infants admitted with lower respiratory tract infections, where microbiological isolation from other species is not obtained and they present with eosinophilia, as well as compatible epidemiological factors.

Funding

The authors declare that they have not received funding to carry out this work.

Acknowledgements

To Marta Illán Ramos, of the Paediatric Infectology Department of Hospital Clínico San Carlos [San Carlos Clinical Hospital], for her participation and review of the cases described. To Juan-Ignacio Alós Cortés, Head of the Microbiology Department of Hospital Universitario de Getafe [Getafe University Hospital], for his participation as a microbiologist and his collaboration in the review of the article, and to Ignacio Bonilla Hernández, of the Microbiology Department of Hospital Universitario Clínico San Carlos, for his participation in the microbiology section, as well as a review of the article.

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Role of *Staphylococcus caprae* in nosocomial infection☆

Papel del Staphylococcus caprae *en la infección nosocomial*

Staphylococcus caprae (S. caprae) is a gram-positive coagulase-negative, catalase-positive coccus, which was first described in 1958 as a skin and mammary glands coloniser in goats.[1] It is considered a saprophytic flora that usually resides on the skin, nails and nasal mucosa.[2] However, since the first case was described in 1983, its pathogenic role has been considered the cause of infections in different locations —peritonitis, meningitis, urinary tract infections, endocarditis, endophthalmitis, prosthetic joint infections, recurrent sepsis, bacteraemia, and osteomyelitis—. Risk factors include immunosuppressed states, obesity, traumatic or open fractures and especially contact with sheep or goats.[3]

As far as we can tell, the vast majority of cases are infections that settle on orthopaedic devices. The nosocomial origin of the infection, although difficult to prove, has been described within neonatal intensive care units, central line associated bacteraemia and after orthopaedic surgery.

Molecular techniques and matrix assisted laser desorption ionisation-time of flight mass spectrometry (MALDI-TOF MS) have led to an improvement in the identification of clinically relevant strains of *S. caprae*.[4]

In the last 10 years we have had the opportunity to attend to 13 cases of infections due to *S. caprae* (Table 1). Their mean age was 69 years (SD 12.9) with a clear male predominance (91%).

The most common location was in the lower limbs (77%), followed by central line catheter associated bacteraemia (15%) and vertebral involvement (8%). Bone and/or joint involvement was observed in 54% with orthopaedic prosthetic material involvement of 31%, finally resolving in all cases.

At diagnosis, 46% had immunosuppressed states, and of all of those 67% had type 2 diabetes mellitus, 50% chronic kidney disease and 33% pharmacological immunosuppression secondary to corticosteroid consumption. The Charlson Index was greater than 5 points in 61% of cases.

In 54% of the cases the infection turned out to be polymicrobial with a predominance of association with cocci and gram-positive bacilli, while in the remaining 46% it was monomicrobial. Regarding antibiotic sensitivity only 8% showed resistance to fluoroquinolones and 23% to penicillins. Patients were mainly treated with beta-lactams (46%) and fluoroquinolones(31%); to a lesser extent, the use of glycopeptides (8%) and oxazolidinones (15%) was observed. Antibiotics were maintained for a mean of 29 days, excluding the case of joint involvement due to transfer of the patient to the reference centre. In 31% of the patients sequential therapy was possible, thus making treatment on an outpatient basis possible. In 92% of cases it presented as a nosocomial infection. No case of death was documented during the infectious process or 30 days after medical discharge.

S. caprae has been described as a potential pathogen with special voracity for orthopaedic devices in immunocompromised hosts.[4] However, in our series we did not observe differences regarding

☆ Please cite this article as: Rodríguez Fernández L, Martín Guerra JM, Dueñas Gutiérrez CJ. Papel del Staphylococcus caprae en la infección nosocomial. Enferm Infecc Microbiol Clin. 2020. https://doi.org/10.1016/j.eimc.2020.02.030

Table 1
Characteristics of the series.

Case	Age/sex	Predisposing factor	Clinical picture	Prosthetic material involvement	Location	Culture	Accompanying polymicrobial/germ infection
1	73/M	No	Multiple trauma	Yes	Cervical spine	Superficial tissue surgical wound exudate	No
2	63/V	Pharmacological immunosuppression	Abscess	No	Thigh	Skin abscess exudate	Yes/*Streptococcus oralis*
3	57/V	Diabetes mellitus	Diabetic foot	No	Foot	Deep tissue ulcer exudate	Yes/*Actinomyces turicensis, Peptoniphilus, Parvimonas micra*
4	87/V	No	Aneurysm	No	Thigh	Superficial surgical wound exudate	No
5	89/V	Diabetes mellitus, Chronic kidney disease	Diabetic foot	No	Foot	Deep tissue ulcer exudate	No
6	61/V	No	Osteomyelitis	Yes	Leg	Deep tissue periosteal surgical wound exudate	Yes/*Staphylococcus epidermidis*
7	66/V	No	Osteomyelitis	Yes	Foot	Deep tissue periosteal surgical wound exudate	No
8	57/V	No	Pericardial effusion	No	Bacteriaemia	Blood	No
9	88/V	No	Osteomyelitis	Yes	Foot	Deep tissue periosteal surgical wound exudate	Yes/Methicillin resistant *Staphylococcus aureus*, *Staphylococcus epidermidis*
10	77/V	Diabetes mellitus, Pharmacological immunosuppression Chronic kidney disease	Arthritis	No	Foot	Joint fluid	Yes/*Staphylococcus epidermidis*
11	63/V	No	Lower limb ischaemia	No	Leg	Superficial tissue surgical wound exudate	No
12	62/V	Chronic kidney disease	Ischaemic heart disease	No	Bacteriaemia	Blood	Yes/*Staphylococcus hominis*
13	53/V	Diabetes mellitus	Diabetic foot	No	Foot	Deep tissue ulcer exudate	*Yes/ Staphylococcus capitis, Peptoniphilus harei, Fusobacterium gonidiaformans, Peptostreptococcus anaerobius*

the immunosuppression status, and in just 31% of cases did the infection involve orthopaedic prosthetic material. An association was observed in patients with greater comorbidity, but despite this, its mortality was low, which suggests low aggressiveness as a pathogen. Like other microorganisms in the coagulase-negative group,[5] *S. caprae* is mainly related to bone, joint and bacteraemia involvement. In summary, *S. caprae* is a primarily hospital-acquired microorganism whose pathogenic potential is currently underestimated, so knowledge and early detection would help to control this emerging pathogen.

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