

# LETTERS TO THE EDITOR



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# Lactococcus garvieae: still much to know

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#### **Dear Editor**

We appreciate the interest shown (1) in our recent publication of an unconventional case of fasciitis in an immunosuppressed patient, who had an adequate clinical response with the indicated antimicrobial therapy and was discharged with a skin graft without complications (2). With respect to the observations made, some points to consider are provided, which are mentioned below.

It is important to consider the budget limitation of public institutions in Peru in order to have equipment such as MALDI-TOF. The method used for the laboratory diagnosis was with the Vitek-2 system, which is valid for such purposes. The article cited by your reader (3) does not indicate that Vitek-2 is a nonrecommended method for diagnosis; on the contrary, it mentions that it is used in several international institutions for the same purpose. In addition, the literature indicates that Vitek-2 is included in the diagnostic methods used to successfully differentiate Lactococcus garvieae from other enterococci (4). Choksi et al (5), in a case of catheter-associated urinary tract infection, mention that a microorganism of the Enterococcus species was initially identified, to later be recognized as Lactococcus garvieae by the Vitek-2 equipment, which allowed treatment to be focused. Likewise, it is explained that there are no breakpoints for the resistance/susceptibility available for said

germ. Similarly, Kim et al (6) in their publication on the report of the first case of acalculous cholecystitis due to *Lactococcus garvieae* mentions that the samples used from the gallbladder were processed in sheep blood agar media, and that they were identified by the Vitek-2 system. Likewise, they mention that treatment options were multiple based on susceptibility by the cut-off points outlined by the CLSI guidelines for the date of publication. Added to this, the own resistance to Clindamycin by Lactococcus garvieae is reaffirmed, and it is proposed as a differentiation marker against *Lactococcus lactis* based on previous studies (7).

The susceptibility profile is variable for *Lactococcus garvieae*, so targeted treatment could not be standardized. The clinical response is what makes it possible to determine the success of the indicated therapy. Clinical microbiology emphasizes laboratory results such as the susceptibility profile, which are of paramount importance; however, in the care setting other variables are taken into consideration, which is why it is suggested that certain hospitals should handle syndromic antibiograms in addition to the conventional ones (8,9).

Our patient received parenteral treatment with Clindamycin and Vancomycin empirically without remission of the clinical picture, presenting persistence of pain in the affected limb and phlogosis, opting for treatment alternatives that the literature suggests (4). Additionally, in the publication cited by your reader (3) the susceptibility pattern indicated resistance to Clindamycin and sensitivity to Penicillin, Ceftriaxone and Vancomycin, which reaffirms what was stated with the susceptibility profile. We must take into account that CLSI in its document "M100 Performance Standards for Antimicrobial Susceptibility Testing" specifies that the studies are not yet adequate for definitive interpretation of results, as the evaluation by a specialist in infectious diseases is also recommended, which was carried out in this case (10).

Lactococcus garvieae is a pathogen that has been little studied at present, so publications should continue to be made in this regard, and diagnostic and susceptibility methods should be fine-tuned in order to have acceptable cut-off points to guide optimal treatment. We are sure that our publication can contribute to the better management of patients affected by this microorganism in health institutions.

# **Authorship**

All authors contributed equally to the preparation of this manuscript.

#### **Conflict of interests**

Authors do not have any conflicts of interests.

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#### References

- 1. Lopardo HA. Fasciitis presumptively due to Lactococcus garvieae. Microbes Infect Chemother. 2022;2: e1414.
- Valencia-Mesias GA, Cano-Calero IN, Castillo-Soto A. Fasciitis by Lactococcus garvieae on an immunosuppressed patient by Diabetes Mellitus. Microbes Infect Chemother. 2021;1: e1245.
- 3. Malek A, De la Hoz A, Gomez-Villegas SI, Nowbakht C, Arias CA. Lactococcus garvieae, an unusual pathogen in infective endocarditis: case report and review of the literature. BMC Infect Dis. 2019;19(1):301.
- 4. Tariq EF, Irshad Y, Khalil HB, Khakwani AS, Khan UA. Urinary Tract Infection Caused by the Novel Pathogen, Lactococcus Garvieae: A Case Report. Cureus. 2020;12(7):e9462.
- 5. Choksi TT, Dadani F. Reviewing the Emergence of Lactococcus garvieae: A Case of Catheter Associated Urinary Tract Infection Caused by Lactococcus garvieae and Escherichia coli Coinfection. Case Rep Infect Dis. 2017;5921865.

- 6. Kim JH, Go J, Cho CR, Kim JI, Lee MS, Park SC. First report of human acute acalculous cholecystitis caused by the fish pathogen Lactococcus garvieae. J Clin Microbiol. 2013;51(2):712–4.
- Elliott JA, Facklam RR. Antimicrobial susceptibilities of Lactococcus lactis and Lactococcus garvieae and a proposed method to discriminate between them. J Clin Microbiol. 1996;34(5):1296–8.
- 8. Klinker KP, Hidayat LK, DeRyke CA, DePestel DD, Motyl M, Bauer KA. Antimicrobial stewardship and antibiograms: importance of moving beyond traditional antibiograms. Ther Adv Infect Dis. 2021;8:20499361211011373.
- Gajic I, Kabic J, Kekic D, Jovicevic M, Milenkovic M, Mitic Culafic D, et al. Antimicrobial Susceptibility Testing: A Comprehensive Review of Currently Used Methods. Antibiotics (Basel) [Internet]. 2022;11(4). Available from: http://dx.doi.org/10.3390/antibiotics11040427
- 10. Free resources [Internet]. Clinical & Laboratory Standards Institute. [cited 2022 May 5]. Available from: https://clsi.org/standards/products/free-resources/access-our-free-resources/