



Letters to the Editor

Polymyxins susceptibility tests: we need talk about a solution

Dear Editor,

We read with interest the considerations of Karakonstantis and Lydakakis about our manuscript, recently published in this Journal (Girardello et al., 2018). The authors drew attention to the low number of isolates tested for *K. pneumoniae* and *E. coli* showing colistin MIC ≤ 0.5 . We agree with the authors about limitations present in our study; however, it is also necessary to draw attention to the few data available in the literature regarding the performance of automated methods for susceptibility testing for colistin (Chew et al., 2017; Lee et al., 2013; Lo-Ten-Foe et al., 2007; Singhal et al., 2018; Tan and Ng, 2007). This data lack creates a problem for the clinical laboratories that, in some cases, the automated methods end up being the alternative feasible to carry out the high number of tests performed day by day.

The EUCAST and CLSI committees have been warning for some time about the limitations regarding all tests commonly used in a clinical routine for the determination of susceptibility to colistin. Recently, it has been recommended that only broth microdilution is sufficiently accurate for drug testing of this class (Bakthavatchalam and Veeraraghavan, 2017). Unfortunately, not every clinical laboratory has the availability to use this tool as a routine test. In some countries, such as Brazil, the lack of structure of some laboratories, or even lack of expertise since the broth microdilution methodology is laborious method, makes it difficult to carry out polymyxins susceptibility tests. Although commercially manufactured broth microdilution plates are available for the test, they are still expensive in diverse countries, and their use is not common in Brazilian hospitals. At the same time, the need for the use of colistin has increased over time, so the polymyxins susceptibility profile knowledge is important and is daily requested by the clinical and infection control committee.

Based on all these problems faced by laboratories in detecting susceptibility to polymyxins, more studies are needed to have data available in the literature, considering their limitations, even if discordant results are obtained between them. In this way, based on diverse studies, we can better discuss this problem and find a possible solution for the laboratory so that the patient is not prejudiced. In this way, we also agree with the authors when they refer to the need for more studies, for longer periods, where it is possible to include a larger number of isolates. We added that, regardless of the results obtained in our study or in other studies, it is necessary for each laboratory to know the epidemiology of its hospital before implanting and validating any changes in the methodologies even if this validation is within the criteria required by the quality committees. Due to the variety of mechanisms of resistance presented by bacterial pathogens, according to the geographical distribution, different concordance results can be obtained among different studies.

In conclusion, more discussions are needed regarding the problem that the polymyxins test has become for the clinical laboratory to come up with a workable solution for everyone.

Conflict of interest

There is no conflicts of interest.

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6 September 2018

Available online 22 November 2018

<https://doi.org/10.1016/j.diagmicrobio.2018.09.018>

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