

Culture positivity for exact diagnosis of *Pseudomonas aeruginosa* endophthalmitis

Positividade de cultura para o diagnóstico exato de endoftalmite por *Pseudomonas aeruginosa*

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Dear Editor,

We read the article "An outbreak of forty five cases of *Pseudomonas aeruginosa* acute endophthalmitis after phacoemulsification" written by Guerra et al., with interest⁽¹⁾. They described an outbreak of *Pseudomonas aeruginosa* endophthalmitis post cataract surgery and discussed clinical findings, treatment and outcomes. We thank to the authors for their lightening analysis and we would like to make some contributions.

Postoperative endophthalmitis is one of the most destroying complication of intraocular surgery. *Pseudomonas aeruginosa* is a Gram negative, non-fermentative bacteria which causes severe endophthalmitis, ulcerative keratitis which are more rapidly progressive and visual acuity outcomes is generally poor^(2,3). *Pseudomonas aeruginosa* also causes severe life-threatening diseases such as meningoencephalitis, endocarditis, pneumonia and sepsis. The treatment of endophthalmitis usually empirical at the beginning. But the laboratorial diagnosis of the causative agent should always be pursued, in order to ensure a more specific treatment, to guide final therapeutic modifications and to prevent any visual impairment due to a wrong or delayed diagnosis⁽⁴⁾.

In this article authors reported that forty-five patients were diagnosed as *Pseudomonas aeruginosa* but also they informed that cultures for pseudomonas were positive in only twenty-six patients. In nineteen patients cultures for Pseudomonas were negative. We believe that the culture positivity is a necessity for diagnosis of "Pseudomonas aeruginosa endophthalmitis" and in these nineteen

culture negative patients the causative agent is not definite. Chen et al., reported a retrospective, noncomparative, consecutive case series of 71 patients and they had analysed medical records of patients only who had culture-proven *P. aeruginosa* endophthalmitis⁽²⁾. Goldschmidt et al., suggested as an alternative method "the real time-polymerase chain reaction" in rapid pathogens diagnosis of bacterial endophthalmitis⁽⁵⁾. Culture positivity is not possible everytime in all samples for endophthalmitis, but using such kind of new methods may facilitate to find causative agent and reduce the number of patients with culture-negative.

We celebrate Guerra and friends for the presentation and offer our respects.

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Authors' reply

Resposta dos autores

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Dear Editor,

We are pleased with the interest in our paper and appreciate the valuable comments that complements the presented article and provide usefull information. I would like to highlight one peculiarity of our presentation.

It is known that real-time polymerase chain reaction (PCR) has improved the diagnosis of bacterial endophthalmitis^(1,2), but conventional microbiology methods, such as culture, are routinely used for microorganisms laboratory characterization and the positivity range from 24% to 85% according to different studies⁽³⁾.

Indeed cultures were not positive in all the presented cases. However, due to diagnostic method limitations and analyzing the clinical findings and uniform response to the treatment, as well as all patients had been operated in two consecutive days in a single center by the same surgeon, lead the authors to believe that is acceptable the presumptive diagnosis in cases that culture was not positive.

We thank to the authors for their commendation of our paper.

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