

## Commentary: *Enterobacter* endophthalmitis: Clinical settings, susceptibility profile, and management outcomes across two decades

The trends in incidence, clinical features, antimicrobial susceptibility, or the management outcomes for a given organism-related endophthalmitis needs to be studied over a longer period of time, especially to verify the need for a change in the prevalent treatment approaches and prognostication.<sup>[1,2]</sup> We congratulate the authors for their current work to carry forward the study on the clinical settings, susceptibility profile, and management outcomes of *Enterobacter* endophthalmitis over a considerably long duration. Open globe injury remains the most common etiology of *Enterobacter* endophthalmitis in both the consecutive studies done by the authors.<sup>[3,4]</sup> Median presentation remains for 4 days emphasizing the need for more robust gram negative work-up, especially for cases presenting early post trauma or following ocular procedures. Though the final outcome remains unfavourable, the results of the scientific analysis of this data helps the peer ophthalmologists to be aware about the seriousness of the condition, need for proper counselling of the patient, and possibly try to explore alternate effective antibiotic regimens.

However, there are certain points to be commented in this study. First, it would have been better to report the resistance pattern in particular, since the susceptibility has already been reported in the previous study. The authors have mentioned about three cases of multidrug resistance in the discussion. Second, it would have been more interesting if the authors compared the minimum inhibitory concentration (MIC) of various antibiotics and compare it with their own previous

study (if data were available). The present study by Dave *et al* (Table 2 showing antimicrobial susceptibilities for the antibiotics tested) gives us a false sense of security of mild increase in antibiotic susceptibility.<sup>[4]</sup> Third, since the outcome is poor in the current study and their previous study published in 2012, it would have been better if they included other drugs e.g., imipenem, piperacillin, and tazobactam in the management of their cases.<sup>[3,5,6]</sup> Fourth, it would have been good to specify about the absence of any post pars plana vitrectomy procedure related *Enterobacter* endophthalmitis cases in this series. Furthermore, the authors did not find any case following anti-VEGF injections. A single centre large-scale retrospective case series from South India has recently found that gram negative bacilli were the most commonly found organisms in endophthalmitis following pars plana vitrectomy.<sup>[7]</sup>

Similar studies needs to be carried out over a longer duration to see the trends in incidence, clinical features, antimicrobial susceptibility, and the management outcomes, especially in endophthalmitis cases where the prognosis remains guarded and the treatment remains largely empirical. Open globe injury cases should be managed more meticulously, not only for trauma related structural damage, but also for poly microbial infections making the prognosis more unfavourable. There should be studies to find out more effective antibiotics in *Enterobacter* endophthalmitis cases, since the regular empirical antibiotics remains largely resistant.

**Chitaranjan Mishra, Kim Ramasamy**

Department of Vitreo-Retina, Aravind Eye Hospital,  
Madurai, Tamil Nadu, India

Correspondence to: Dr. Kim Ramasamy,  
Department of Vitreo-Retinal Services, Aravind Eye Hospital,  
Anna Nagar, Madurai - 625 020, Tamil Nadu, India.  
E-mail: kim@aravind.org

## References

1. Stringham JD, Relhan N, Yannuzzi NA, Miller D, Flynn HW Jr. Coagulase-negative staphylococcus isolates causing endophthalmitis: Changing patterns of vancomycin susceptibilities. *J Cataract Refract Surg* 2019;45:380-1.
2. Liu C, Ji J, Li S, Wang Z, Tang L, Cao W, Sun X. Microbiological isolates and antibiotic susceptibilities: A 10-year review of culture-proven endophthalmitis cases. *Curr Eye Res* 2017;42:443-7.
3. Pathengay A, Trehan HS, Mathai A, Jalali S, Majji AB, Das MK, et al. *Enterobacter* endophthalmitis. Clinicomicrobiologic profile and outcomes. *Retina* 2012;32:558-62.
4. Dave VP, Pathengay A, Behera S, Joseph J, Sharma S, Pappuru RR, et al. *Enterobacter* endophthalmitis: Clinical settings, susceptibility profile, and management outcomes across two decades. *Indian J Ophthalmol* 2020;68:112-6.
5. Singh TM, Pathengay A, Das T, Sharma S. *Enterobacter* endophthalmitis: Treatment with tazobactam-piperacillin. *Indian J Ophthalmol* 2007;55:482-3.
6. Bhat SS, Undrakonda V, Mukhopadhyay C, Parmar PV. Outbreak of multi drug-resistant acute post-operative endophthalmitis due to *enterobacter aerogenes*. *Ocul Immunol Inflamm* 2014;22:121-6.
7. Bhende M, Raman R, Jain M, Shah PK, Sharma T, Gopal L, et al. Incidence, microbiology, and outcomes of endophthalmitis after 111,876 pars plana vitrectomies at a single, tertiary eye care hospital. *Plos ONE* 2018;13:e0191173.

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