

A response to Yasri *et al.* comments on recurrent pneumococcal meningitis

We thank for the comments related to our paper “*Predisposing conditions and outcome in adult patients with recurrent pneumococcal meningitis*”.^{1,2} We do not think that our results are in contrast with those in the study published by *Maria Ugalde-Mejia et al.*³ in which the mortality (26.7%) was actually similar with the mortality in our study, where there were 43 deaths out of 194 pneumococcal episodes (22.1%). In our study, the mortality in recurrent pneumococcal meningitis was low (2.3%), in contrast with the mortality in the whole group. This finding was also reported by other authors.^{4,5} Indeed these patients were younger and with less comorbidities as stated in the conclusions.

In addition, it was not the objective of our study to assess the mortality according to the management including neurosurgery and/or pneumococcal vaccination and we lack these data, so we cannot reassess the mortality as suggested. On the other hand, the patient population in the study published by *Maria Ugalde-Mejia et al.*³ (with 46.6% out of 30 patients having previous neurosurgery and 40% patients having CSF fistula), was not similar with the patient population in our study. Very few of our patients had neurosurgery and about half of the pneumococcal meningitis episodes was related with sinusitis, otitis or hematogenous spread.

We agree that prevention for further episodes might include vaccination, CSF leak repair, control of infectious foci and other specific measures, but it was not the aim of our paper to discuss the management of pneumococcal recurrent meningitis.

Although detecting pneumococcal antigen could result in false positive results, we had few patients (n=17) in which the diagnosis was solely based on this criterion, so we think that it did not result in a bias in our study.

^{1,2}Ruxandra Moroti, ^{3,4}Ioana Diana Olaru, ¹Cristian-Mihail Niculae, ¹Eliza Manea, ¹Raluca Elena Jipa, ^{1,2}Adriana Hristea

¹National Institute for Infectious Diseases “Prof. Dr. Matei Balș”, Bucharest; ²University of Medicine and Pharmacy “Carol Davila”, Bucharest, Romania; ³Biomedical Research and Training Institute, Harare, Zimbabwe; ⁴London School of Hygiene and Tropical Medicine, London, UK

Adress correspondence to: Adriana Hristea, MD, PhD., National Institute for Infectious Diseases “Prof. Dr. Matei Balș”; 1, Calistrat Grozovici Street, sect 2, 021105, Bucharest, Romania. E-mail: adriana_hristea@yahoo.com

REFERENCES

1. Yasri S, Wiwanitkit V. Re: Moroti *et al.*'s Recurrent pneumococcal meningitis. *Neurol Asia* 2019;24:87
2. Moroti R, Olaru ID, Niculae CM, Manea E, Jipa RE, Hristea A. Predisposing conditions and outcome in adult patients with recurrent pneumococcal meningitis. *Neurol Asia* 2018; 23(4): 313-7.
3. de Maria Ugalde-Mejía L, Morales VA, Cárdenas G, Soto-Hernández JL. Adult Patients with pneumococcal meningitis at a neurosurgical neurologic center: Different predisposing conditions? *World Neurosurg* 2018;110: e642-e647.
4. Adriani KS, van de Beek D, Brouwer MC, Spanjaard L, de Gans J. Community-acquired recurrent bacterial meningitis in adults. *Clin Infect Dis* 2007; 45(5):46-51.
5. Durand ML, Calderwood SB, Weber DJ, *et al.* Acute bacterial meningitis in adults. A review of 493 episodes. *N Engl J Med* 1993; 328(1):21-8.