Brazilian Journal of Psychiatry
bjp
Revista Brasileira de Psiquiatria

LETTER TO THE EDITORS

Progressive multifocal leukoencephalopathy cannot be due to liver cirrhosis alone

Braz J Psychiatry. 2023 Nov-Dec;45(5):530
doi:10.47626/1516-4446-2023-3375

We read with interest the article by Almeida et al.[1] on a 57 year-old male with progressive, multifocal leukoencephalopathy (PML) attributed to liver cirrhosis. It was concluded that PML can have multiple clinical manifestations and affect patients with mild or transient immunosuppression.[1] The study is excellent but has concerning limitations that should be discussed.

The main limitation is that causes of immunosuppression other than HIV were not adequately ruled out. It is not mentioned whether the patient had leukemia, lymphoma (e.g., primary central nervous system lymphoma) or other diseases of the reticulo-endothelial system. Wiskott-Aldrich syndrome was also not excluded. Neither is it mentioned whether the patient had a history of multiple sclerosis, organ transplantation (e.g., bone marrow or solid organ), or autoimmune disease. In addition, it should be ruled out that the patient previously received natalizumab, rituximab, efalizumab, eculizumab, or brentuximab, drugs that have been associated with the development of PML.[2,3] Cytomegalovirus encephalitis and toxoplasmosis are other differential diagnoses of PML that must be ruled out.[4]

A second limitation is that the patient was not systemically screened for occult neoplasms. No mention is made of tumor markers, gastroscopy, colonoscopy, or computed tomography of the thorax and abdomen.

A third limitation is that the complete immune status of the index patient was not reported. Which values were measured when determining C-reactive protein, immunoglobulin G, immunoglobulin M, immunoglobulin A, antinuclear antibody, complete blood count, CD4 count, CD4/CD8 ratio, secondary humoral response to recall antigen, titers of isohemagglutinins, complement assay, examination of lymphocyte proliferation, cytokines (interleukins, interferon titers), and chemokines?[5]

A fourth limitation is that the long-term outcome was not reported. Since the prognosis of PML is generally poor, we should know for how long the index patient survived after receiving the diagnosis, as well as the treatment type. Did the patient receive dendritic cell vaccine?[4] Was the patient receiving anti-retroviral treatment and did he develop immune reconstitution inflammatory syndrome while on anti-retroviral treatment?

In summary, this interesting study has limitations that call the results and their interpretation into question. Addressing these issues would strengthen the conclusions and could improve the status of the study. Before PML can be attributed to liver cirrhosis, all alternative causes must be thoroughly ruled out.

Fulvio A. **Scorza**,[1] Josef **Finsterer**[2]
[1]*Disciplina de Neurociência, Escola Paulista de Medicina, Universidade Federal de São Paulo, São Paulo, Brazil.* [2]*Neurology and Neurophysiology Center, Vienna, Austria.*

Submitted Sep 03 2023, accepted Sep 24 2023.

Disclosure

The authors report no conflicts of interest.

How to cite this article: Scorza FA, Finsterer J. Progressive multifocal leukoencephalopathy cannot be due to liver cirrhosis alone. Braz J Psychiatry. 2023;45:530. http://doi.org/10.47626/1516-4446-2023-3375

References

1 Almeida AI, Sousa JM, Vedor S, Augusto L. Progressive multifocal leukoencephalopathy presenting with confusion and behavioral disturbances in an HIV-negative patient. Braz J Psychiatry. 2023;45:301-2.
2 Berkovich R, Eskenazi J, Yakupova A, Riddle EL. Progressive multifocal leukoencephalopathy risk perception in patients considering natalizumab for multiple sclerosis. Int J MS Care. 2022;24:13-7.
3 Carson KR, Newsome SD, Kim EJ, Wagner-Johnston ND, von Geldern G, Moskowitz CH, et al. Progressive multifocal leukoencephalopathy associated with brentuximab vedotin therapy: a report of 5 cases from the Southern Network on Adverse Reactions (SONAR) project. Cancer. 2014;120:2464-71.
4 Saji AM, Gupta V. Progressive multifocal leukoencephalopathy. In: StatPearls [Internet]. Treasure Island: StatPearls Publishing; 2023.
5 Institute of Medicine (US) Committee on Military Nutrition Research. Overview of immune assessment tests. In: US Committee on Military Nutrition Research, ed. Military Strategies for Sustainment of Nutrition and Immune Function in the Field. Washington, D.C.: National Academies Press; 1999.