

Neurologia i Neurochirurgia Polska

Polish Journal of Neurology and Neurosurgery 2022, Volume 56, no. 1, pages: 105-105 DOI: 10.5603/PJNNS.a2022.0001 Copyright © 2022 Polish Neurological Society ISSN: 0028-3843, e-ISSN: 1897-4260

Neoplastic meningitis — a puzzling case with important lessons

Maciej M. Mrugala

Department of Neurology, Mayo Clinic, Phoenix, Arizona, United States

Key words: lymphoma, neoplastic meningitis, subdural hematoma, cerebrospinal fluid (*Neurol Neurochir Pol 2022; 56 (1): 105*)

Dear Editors

I read with great interest the case report published in the last issue of the Polish Journal of Neurology and Neurosurgery entitled 'Unexpected infiltration of meninges by generalised diffuse large B-cell lymphoma manifesting as multiple cranial neuropathies in a patient with history of breast carcinoma' by Malá et al. [1].

The authors described the case of a patient with a dual cancer diagnosis posing a clinical challenge and causing potential delay in treatment initiation. The patient's presentation with multiple cranial nerve palsies was certainly suspicious for leptomeningeal involvement. In the setting of prior breast carcinoma, the relationship was plausible. Breast cancer is the second most common malignancy (after lung) leading to brain metastases and carcinomatous meningitis. A complicating factor was a subdural haematoma of uncertain aetiology (prior fall?,anti-coagulation?). What is puzzling is that MRI of the brain showed haematoma regression, thus making the diagnosis of lymphoma less likely, especially in the absence of steroid treatment. CSF analysis was abnormal and suggested malignancy. The authors did not specify whether flow cytometry was performed during the first or second spinal tap, although immunocytochemical typing was carried out with the third CSF analysis, and suggested lymphoma.

This case teaches us several important lessons:

- Cranial nerve involvement in a patient with a known diagnosis of cancer should always alert the clinician to the possibility of leptomeningeal carcinomatosis (LM);
- Work up for LM should be guided by primary malignancy and appropriate testing should be requested i.e. cytology

- for solid tumours and flow cytometry for haematological malignancies;
- Liquid biopsy assays to look for circulating tumour cells and tumour DNA are entering the clinical arena, and can facilitate the diagnostic process [2];
- Subdural haematomas of uncertain aetiology or unusual clinical course should raise a clinical suspicion for an underlying malignancy [3];
- When CNS lymphoma is suspected, prompt diagnostic evaluation is critical, as this disease is highly chemo- and radiosensitive and many patients, even those who are very ill, can be saved with prompt intervention.

I would like to thank the authors of this report for sharing their experience with the readers of the Polish Journal of Neurology and Neurosurgery.

References

- Malá E, Matějová K, Olejár T, et al. Unexpected infiltration of meninges by generalised diffuse large B-cell lymphoma manifesting as multiple cranial neuropathies in a patient with history of breast carcinoma. Neurol Neurochir Pol. 2021; 55(5): 499–501, doi: 10.5603/PJNNS. a2021.0049, indexed in Pubmed: 34346054.
- Yan W, Xu T, Zhu H, et al. Clinical Applications of Cerebrospinal Fluid Circulating Tumor DNA as a Liquid Biopsy for Central Nervous System Tumors. Onco Targets Ther. 2020; 13: 719–731, doi: 10.2147/OTT. S229562, indexed in Pubmed: 32158224.
- Semonche A, Gomez P, Kolcun JP, et al. Primary Central Nervous System Lymphoma Presenting As Chronic Subdural Hematoma: Case Report and Review of the Literature. Cureus. 2020; 12(2): e7043, doi: 10.7759/cureus.7043, indexed in Pubmed: 32211275.

Address for correspondence: Maciej M. Mrugala, Department of Neurology, Mayo Clinic, Phoenix, Arizona, United States, e-mail: Mrugala.Maciej@mayo.edu

Received: 5.11.2021 Accepted: 8.11.2021 Early publication date: 4.01.2022

This article is available in open access under Creative Common Attribution-Non-Commercial-No Derivatives 4.0 International (CC BY-NC-ND 4.0) license, allowing to download articles and share them with others as long as they credit the authors and the publisher, but without permission to change them in any way or use them commercially.

