

## Wernicke Encephalopathy after Total Gastrectomy

Fatima Zohra Benbrahim\*, Kaoutar Imrani, Fadwa Jaheddine, Nabil Moatassimbillah, Ittimade Nassar

Radiology Department, Ibn Sina University Hospital, Mohammed V University, Rabat, Morocco

### Abstract

Gayet-Wernicke encephalopathy is a complication of thiamine deficiency. The prognosis depends on the rapidity of thiamine supplementation. If left untreated, the disease may progress to death. The typical MRI presentation is characterized by hypersignals in the dorsomedian nuclei of the thalami, the mammillary bodies, and the tectal plate, in the periaqueductal region and around the third or fourth ventricle.

**Keywords:** Wernicke encephalopathy; thiamine; gastrectomy; Brain MRI

### Clinical Medical Image

We present the case of a 65-year-old man, without medical history or toxic habits, hospitalized in intensive care for the management of a confusional syndrome occurring 20 days after total gastrectomy for stomach cancer. Clinical examination reveals confused patient with GCS of 6. Thiamine levels dropped to 18 nmol/L (normal 70-180 nmol/L). Brain MRI revealed bilateral and symmetrical hyper signaling in dorsomedial nuclei of the thalami (Figure 1A), mammillary bodies (Figure 1B), periaqueductal region (Figure 1C) and around the third ventricle (Figure 1D). The patient was given a late thiamine supplement, but died.

### Discussion

Wernicke's encephalopathy is a medical emergency secondary to thiamine (vitamin B) deficiency [1], characterized by a clinical triad of ataxia, ophthalmoplegia and altered mental status [2]. Several clinical situations may explain thiamine malabsorption, such as excessive alcohol consumption, gastrointestinal surgery, prolonged vomiting,

chemotherapy, infectious and non-infectious systemic diseases and dietary imbalances [1].

Untreated, prognosis is poor, with the onset of serious neurological disorders such as Korsakoff's psychosis, and even death. The response is rapidly favorable with thiamine supplementation. MRI appearance is typical, characterized by symmetrical hyper signals in the dorsomedial nuclei of the thalami, mammillary bodies, tectal plate, and periaqueductal region and around the third or fourth ventricle [1, 3]. Differential diagnosis includes Leigh's disease if mammillary bodies are preserved, metronidazole-induced encephalopathy if cranial nerve nuclei, dental nuclei and splenium are affected, and Percheron's infarctus artery if only thalami are affected.

**Author's Contributions:** All the authors contributed to study concept, data analysis and writing the paper.

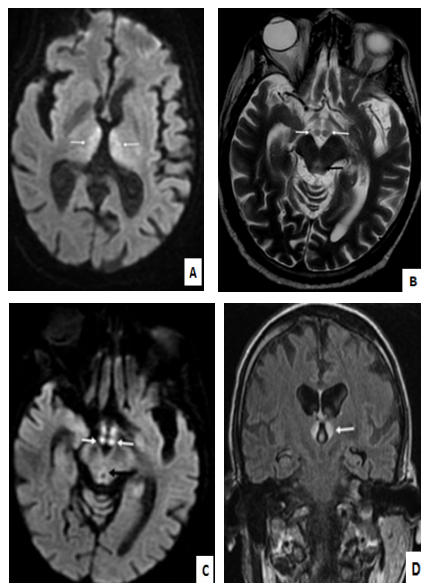
All authors read and approved the final version of the manuscript.

### Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this manuscript.

### References

- Zuccoli G, Pipitone N (2009) Neuroimaging findings in acute Wernicke's encephalopathy: review of the literature. *AJR Am J Roentgenol* 192: 501-508.
- Sechi G, Serra A (2007) Wernicke's encephalopathy: new clinical settings and recent advances in diagnosis and management. *Lancet Neurol* 6: 442-455.
- Sinha S, Kataria A, Kolla BP (2019) Wernicke encephalopathy-clinical pearls. *Mayo Clin Proc* 94: 1065-1072.



**Figure 1:** Brain MRI of a 65-year-old man with typical presentation of Gayet-Wernicke: Axial diffusion-weighted image (DWI) showing hyperintense signals in the dorsal medial nuclei of thalami (Image A) (arrow). Axial T2-weighted fast spin echo (B) and axial diffusion-weighted image (C) showing hyperintensity in mammillary bodies (white arrow) and in the periaqueductal grey matter (black arrow). Fluid attenuation inversion recovery sequence showing hyperintensity around the third ventricle (D).

\*Corresponding author: Fatima Zohra Benbrahim, Radiology Department, Ibn Sina University Hospital, Mohammed V University, Rabat, Morocco, E-mail: fzohrabenbrahim93@gmail.com

**Received:** 02-Nov-2023, Manuscript No: roa-23-120859, **Editor assigned:** 06-Nov-2023, Pre-QC No: roa-23-120859 (PQ), **Reviewed:** 20-Nov-2023, QC No: roa-23-120859, **Revised:** 24-Nov-2023, Manuscript No: roa-23-120859 (R), **Published:** 30-Nov-2023, DOI: 10.4172/2167-7964.1000507

**Citation:** Benbrahim FZ, Imrani K, Jaheddine F, Moatassimbillah N, Nassar I, et al. (2023) Wernicke Encephalopathy after Total Gastrectomy. *OMICS J Radiol* 12: 507.

**Copyright:** © 2023 Benbrahim FZ, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.