

Reversible Nonalcoholic Gaye Wernicke encephalopathy on imaging

Daoud Ali Mohamed^{1*}; Onka Behyamet¹; Amarkak Abdillahi Wais^{1,2}; J.El Fenni²; HassanEn-Nouali²

¹Radiology Department, University Hospital Ibn Sina, Rabat, Morocco.

²Radiology Department, Mohamed V military hospital, Rabat, Morocco.

Received Date : Apr 06, 2022
Accepted Date : May 10, 2022
Published Date : May 21, 2022
Archived : www.jcmimagescasereports.org
Copyright : © Daoud Ali Mohamed 2022

***Corresponding Author:** Daoud Ali Mohamed, Radiology Department, University Hospital Ibn Sina, Rabat, Morocco.
 Tel: +212766146254
 Email: daoudkabar88@gmail.com

Keywords: Gaye; Wernicke; encephalopathy; non-alcoholic; reversible.

Clinical Presentation

A 65-year-old woman, who underwent a gastric cancer gastrectomy 4/5 20 years ago, was admitted to the emergency department for confusion syndrome with speech disorder without any other associated signs. Brain MRI (Figure 1, 2) was performed showing hyperintensity on Flair and diffusion on both sides of the third ventricle that extends to the thalamus, periaqueductal, and mammillary bodies. The control MRI 3 months after treatment showed a disappearance of the lesions described on the initial MRI.

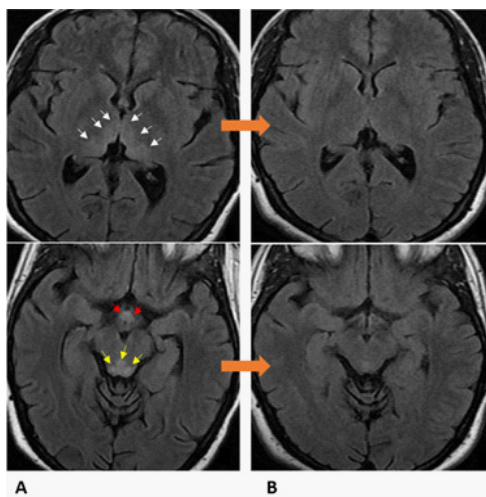


Figure 1: Axial Flair MRI showing (A) hyperintensity on both sides of the third ventricle extending to the thalamus (white arrows), at the periaqueductal (yellow arrows), alongside the mammillary bodies (red arrows), Control MRI 3 months after treatment showing (B) disappearance of the lesions described in the initial MRI.

Discussion

Gayet Wernicke's encephalopathy is a severe neurological disorder caused by vitamin B1 deficiency and remains a difficult diagnosis due to the variable clinical presentation, especially when the patient has no history of alcohol consumption. It is characterized by a clinical triad, often incomplete, that associates syndrome, ophthalmoplegia, and ataxia [1, 2]. Magnetic resonance imaging remains the gold standard for detection with a low sensitivity of 50% but a high specificity of 93% [2, 3]. However, patients with nonalcoholic Wernicke encephalopathy have highly variable neuroimaging results, making the diagnosis even more difficult. MRI shows a typical hypersignal on the T2, FLAIR and diffusion sequences, bilateral and symmetrical, on both sides of the third ventricle, of the medial part of the thalamus, the periaqueductal, the mammillary bodies, the tectal lamina, and the grey matter located in front of the fourth ventricle [3, 4]. These abnormalities reflect edema, necrosis, and the blood-brain barrier. The contrast enhancement in these same areas can be found after gadolinium injection. The prognosis is highly variable. It is favourable when the disease is diagnosed early and treatment is initiated promptly, there is complete remission of symptoms and the disappearance of signal abnormalities on MRI [3, 4].

Conflict of interest: The authors are contributed equally and declare no competing interest.

Contributions: All authors contributed equally in this work.

Funding statement: The authors received no specific funding for this work.

Acknowledgements: We would like to thank Prof. Jamal EL FENNI, chief of the Department of Radiology of Mohamed V Military Hospital, Rabat, Morocco, and Prof. Hassan EN-NOULI for their review of earlier drafts of the manuscript.

Citation: Daoud Ali Mohamed. Reversible Nonalcoholic Gaye Wernicke encephalopathy on imaging. J Clin Med Img Case Rep. 2022; 2(3): 1149.

Ethical Approval: Not required. CONSENT Written consent has been obtained.

Guarantor: Dr. Daoud ALI MOHAMED. Radiology Department, Ibn Sina University Hospital, Rabat, Morocco.

References

1. Wernicke C. Lehrbuch der Gehirnkrankheiten für Aerzte und Studierende, 2. Berlin: Fischer; 1881.
2. Khan F, Sharma N, Ud Din M, Bansal V. Isolated Pulvinar/Hockey Stick Sign in Nonalcoholic Wernicke's Encephalopathy. Am J Case Rep. 2020; 21: e928272. [DOI: 10.12659/AJCR.928272].
3. Santos Andrade C, Tavares Lucato L, da Graça Morais Martin M, et al. Non-alcoholic Wernicke's encephalopathy: broadening the clinicoradiological spectrum. Br J Radiol. 2010; 83(989): 437-446. [DOI:10.1259/bjr/27226205].
4. Zuccoli G, Santa Cruz D, Bertolini M, Rovira A, Gallucci M, Carollo C, et al. MR imaging findings in 56 patients with Wernicke encephalopathy: nonalcoholics may differ from alcoholics. AJNR Am J Neuroradiol 2009; 30: 171-6.