

## Non-Alcoholic Wernicke's Encephalopathy in a Post Bariatric Surgery Patient

## Jacob Vincent<sup>1</sup> and Stella Pak<sup>2\*</sup>

<sup>1</sup>Department of Medicine, Boonshoft School of Medicine, Dayton, Ohio, USA

<sup>2</sup>Department of Medicine, Kettering Medical Center, Kettering, Ohio, USA

\*Corresponding author: Stella Pak, Department of Medicine, Kettering Medical Center, Kettering, Ohio, 45429, USA, Tel: 19372984331, E-mail: stella.pak@ketteringhealth.org

Rec date: Dec 01, 2017; Acc date: Dec 04, 2017; Pub date: Dec 05, 2017

**Copyright:** © 2017 Vincent J, 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.

Citation: Vincent J and Pak S (2017) Non-Alcoholic Wernicke's Encephalopathy in a Post Bariatric Surgery Patient. J Mol Imaging Dynamic 7: i109. doi: 10.4172/2155-9937.1000i109

## **Clinical Image**



**Figure 1:** Magnetic resonance imaging of brain demonstrating contrast enhancement in the mammillary bodies (arrows).

A 38-year-old woman with benign essential hypertension and history of bariatric surgery 2 months ago presented with 1-month duration of worsening confusion, lethargy, and blurry vision. Urinalysis was positive for urinary tract infection (UTI). For preliminary diagnosis of acute encephalopathy secondary to UTI, she was treated with ceftriaxone and intravenous hydration. Physical exam was remarkable for a conjugate gaze palsy, horizontal nystagmus, ataxia, and confusion. Due to lack of improvement in mental status, magnetic resonance imaging (MRI) of her head was performed, which then revealed demonstrated contrast enhancement in the mammillary bodies **(Figure 1)**. This MRI finding and clinical presentation of the patient (extraocular dysfunction, ataxia, and altered mental status), were consistent with diagnosis of nonalcoholic Wernicke's encephalopathy. Thiamine level was found to be low at 30.7  $\mu$ g/dL. In response to intravenous thiamine (500 mg every 8 hours for 2 days, followed by 250 mg daily for 5 days) repletion therapy, she had significant improvement in her mental status, gait stability, and extraocular function.

Wernicke's encephalopathy is a neurological disorder thiamine deficiency, which manifests with the following symptoms: extraocular dysfunction, ataxia, and confusion [1]. Wernicke's encephalopathy typically develops from chronic malnutrition in patients with severe alcoholism, acquired immunodeficiency syndrome, or hyperemesis gravidarum. Wernicke's encephalopathy has been also reported to occur in some patients who had bariatric surgery [2-5]. This case reminds clinicians to consider Wernicke's encephalopathy as a differential diagnosis for post bariatric surgery patients presenting with altered mental status, ataxia, and extraocular dysfunction.

## References

- 1. Donnino MW, Vega J, Miller J, Walsh M (2007) Myths and misconceptions of Wernicke's encephalopathy: What every emergency physician should know. Ann Emer Med 50: 715-721.
- Aasheim ET (2008) Wernicke encephalopathy after bariatric surgery: A systematic review. Ann Surg 248: 714-720.
- Iannelli A, Addeo P, Novellas S, Gugenheim J (2010) Wernicke's encephalopathy after laparoscopic Roux-en-Y gastric bypass: A misdiagnosed complication. Obesity Surg 20: 1594-1596.
- 4. Milone M, Di Minno MN, Lupoli R, Maietta P, Bianco P, et al. (2014) Wernicke encephalopathy in subjects undergoing restrictive weight loss surgery: A systematic review of literature data. European Eating Disorders Review: The Journal of the Eating Disorders Association 22: 223-229.
- Singh S, Kumar A (2007) Wernicke encephalopathy after obesity surgery: A systematic review. Neurology 68: 807-811.