

CASE STUDY

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NON-ALCOHOLIC WERNICKE ENCEPHALOPATHY COMPLICATING WITH HYPEREMESIS GRAVIDUM

Bulla Sri Vidya^{1*}, Shaik Ameena¹, Nandyala Bhargavi Reddy¹,
Ramavathu Vijaya Shree¹, Dr. K. Lakshmi Prasanna²

1. Pharm-D Intern, Nirmala College of Pharmacy, Mangalgiri, Guntur, AP, India
2. MBBS, DGO, Consultant Obstetrics and Gynaecology Manipal Hospitals, Vijayawada, AP, India

Correspondence

Ameena Shaik

Department of Pharmacy Practice,
Nirmala College of Pharmacy,
Mangalgiri, Guntur, AP, India
✉ ameenashaik243@gmail.com

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ABSTRACT

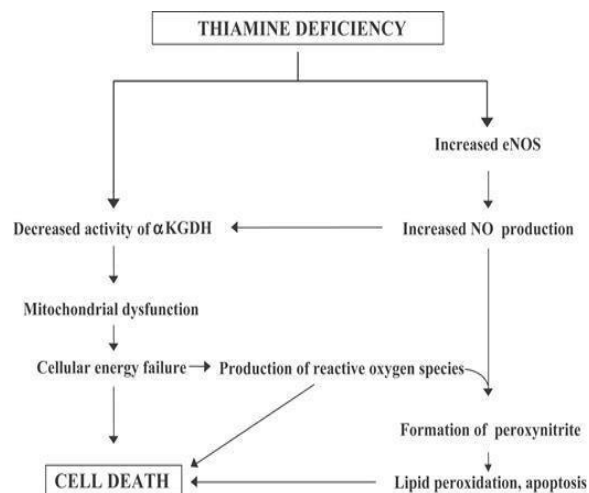
Wernicke Encephalopathy is a deadly illness mostly seen in alcoholics as a consequence of deficiency in thiamine intake, it primarily targets the nervous system. This article reports an unusual case of Non-Alcoholic Wernicke Encephalopathy in a 28 years old female patient, with 17 weeks of gestation, complaints of severe hyperemesis gravidum. Patient presented with SOB, Nystagmus, Ophthalmoplegia and altered speech since 2 weeks. MRI Brain has shown hyperintense signals on T2W FLAIR in bilateral thalami, periaqueductal grey matter and mammillary bodies. The case was managed with 500mg Thiamine given twice daily and other supplementary treatment, patient had underwent an Intrauterine fetal demise followed by cardiac arrest.

INTRODUCTION

Wernicke Encephalopathy is a neurological syndrome characterized by clinical prodromes of Ophthalmoplegia, with Nystagmus and other neurological symptoms. Wernicke encephalopathy is towering in emerging countries owing to malnutrition and vitamin deficiencies. 1:1.7 is the female to male ratio of Wernicke encephalopathy [1]

Wernicke Encephalopathy is mostly seen in alcoholic patients but can also occur in any malnourished state. [2] It should be reviewed in cases with anorexia nervosa, protracted vomiting induced with chemotherapy, geriatrics living alone, gastrointestinal disease, peritoneal dialysis, haemodialysis and HG [3] The daily requirement of thiamine is around 1.1 mg in women over 18 years and it increases to 1.4 mg in pregnant women and 1.5 mg in breast-feeding women and even more by the impaired absorption due to HG. [4] Deficiency of thiamine leads to metabolic imbalances which causes neurological complications leading to neuronal cell death [Fig-1] Neuronal cell death in the mammillary bodies, grey matter & thalamus were insinuated in major cases Wernicke encephalopathy [5]

Figure1: Neuronal loss owing to thiamine deficiency



CASE HISTORY

A 23-year-old female lady with 17th week gestation was referred to a local hospital, for breathing difficulty, palpitations after passing stools, blurring of vision, difficulty in walking, Nystagmus, altered speech since

2 weeks, complaints of Hyperemesis Gravidum since 6th week of gestation and was on antiemetic.

On examination, blood pressure was 140/90mmHg, pulse was 128/min, and respiratory rate was 22/min patient's chest X-Ray has shown left lower zone consolidations and Ultrasound of abdomen has shown a single live intrauterine foetus of 17 weeks gestation in breech presentation [Fig-2] MRI Brain has shown hyperintense signals on T2W FLAIR noted in bilateral thalami, periaqueductal grey matter, mammillary bodies and the findings are suggestive of Wernicke Encephalopathy [Fig-2] Routine blood investigations of the patient are normal [Table-1] Due to deterioration of consciousness (GCS at 8), the patient was intubated and artificially ventilated.

Figure.2: MRI and USG Scan Report

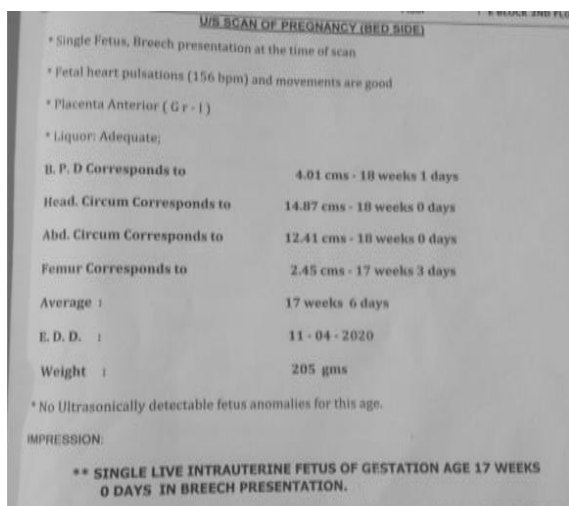
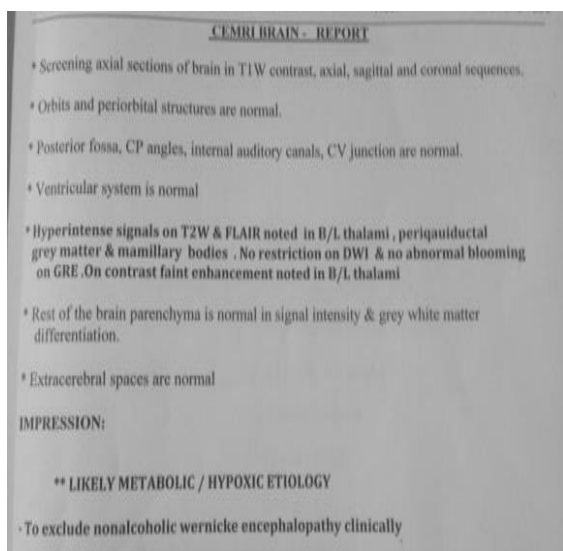


Table.1: Routine Laboratory Parameters

S.No	Lab Data	Day-1	Day-2	Day-3
1	Hemoglobin	10.3	11.5	10.4
2	WBC	12500	-	14300
3	Platelets	168000	-	121000
4	Creatinine	0.6	-	0.4
5	Sodium	155	145	143
6	Potassium	3.6	-	3.0
7	CRP	106.98	-	80.0
8	SGOT	68	-	42
9	SGPT	32	-	29

Based on subjective evidence (Ophthalmoplegia, Nystagmus, confusion, ataxia) and objective evidence (Table-1) the case was diagnosed as Wernicke Encephalopathy. Patients' heart rate was 84/min maintained on mechanical ventilator with Kcl, NORAD and VASO infusions, Meropenem, Optineuron-BD (Thiamine-200mg) and Epiliv injections. Her antenatal ultra-sonogram report shows a single nonvital fetus at 17th week of gestation, absence of heart rate and movements, so the features are indicative of Intrauterine Fetal Demise. Thiamine levels were 40N Mol/L (NR: 67–200N Mol/L). Patient continued to be on Ventilator support and placenta was expelled out in total. No PV bleed noted. Patient developed septic shock and small white dot like rash throughout the body, she was referred to dermatologist and was treated with Derma dew Aloe cream and Clonate Ointment and was diagnosed as Malaria Crystallina [Fig-3] Her condition has become critically ill and was unable to follow verbal Commands, she had an episode of cardiac arrest, saturation was gradually decreased, CPR was performed for 20mins and unfortunately we were unable to bring her back to senses and was declared dead.

DISCUSSION

This case suggests that Wernicke Encephalopathy may be associated with hyperemesis gravidum in non-alcoholic patients. Thiamine supplements in symptomatic patients may improve prognosis. Thiamine required to treat Wernicke Encephalopathy is 500 mg OD or BD through parenteral route [6]. If Wernicke Encephalopathy was left untreated may lead to long-term neurological abnormally or death.



Figure.3: Malaria Crystallina

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CONFLICT OF INTEREST

Authors of our study are not having any conflict of interest.

REFERENCES

1. Arts NJ, Walvoort SJ, Kessels RP, 2017. Korsakoff's syndrome: a critical review. *Neuro psychiatr Dis Treat*; 13:2875-2890.
2. W Sulaiman, O Azerin, M. Mohamad, H R Salleh, L Mushahar, *Malaysian Journal of Medical Sciences*, vol. 9, no. 2, pp. 43–46, 2002
3. Joel Thomas, Joshin Sara Cherian¹, Feba Susan Varghese¹, Shelina Hephzibah S, Vijay MC, Lijo James, 2018 on clinical adverse drug reaction of anti-neoplastic agents. *Journal of medical P'ceutical & allied sciences*, V 7 - I 2, 755, 1000-1007.
4. Daily requirement of Thiamine: Medline plus Supplements, Wernicke Encephalopathy – Star Pearls – NCBI Bookshelf.
5. Alan S. Hazell, Roger F. Butterworth, 2009. Alcohol & Alcoholism, Volume 44, Issue 2, Wernicke Encephalopathy Treatment and Management