World Journal of Pharmaceutical and Life Sciences
WJPLS
www.wjpls.org
SJIF Impact Factor: 6.129

WERNICKE'S ENCEPHALOPATHY AND PREGNANCY: A REVIEW OF THE LITERATURE ON TWO CASES

Dr. Laaboudi Rim*, Dr. Maria Hijji, Dr. Rania Nejjar and Pr. El Youssefi Mounia

Department of Gynecology-Obstetrics, Oncology and High Risk Pregnancy, Souissi Maternity Hospital Ibn Sina Rabat.

***Corresponding Author: Dr. Laaboudi Rim**
Department of Gynecology-Obstetrics, Oncology and High Risk Pregnancy, Souissi Maternity Hospital Ibn Sina Rabat.

Article Received on 27/02/2023 **Article Revised on 17/03/2023** **Article Accepted on 07/04/2023**

SUMMARY

Gayet-Wernicke encephalopathy is a rare neurological pathology due to a vitamin B1 deficiency. It is mainly encountered in alcoholics but several cases occurring in the context of incoercible gravid vomiting have been published.[1] Its frequency is probably underestimated as many autopsy cases have been described. The diagnosis is clinical with the triad (found in 60% of cases): confusional syndrome, oculomotor disorders and ataxia. Magnetic resonance imaging is the imaging test that confirms the diagnosis by the presence of hyper signals most frequently in the periaqueductal, thalami, and mammary bodies.[2] We report here 2 observations of Gayet-Wernicke encephalopathy revealed in a context of vomiting in pregnancy. These 2 cases allow us to appreciate 2 different evolutions of this pathology. In a second part, we review the main publications in the literature. Vomiting in pregnancy is a frequent pathology and can be the cause of serious neurological complications. Early vitamin supplementation must be instituted in severe forms in order to guarantee the continuation of the pregnancy and the maternal well-being.

KEYWORDS: Wernicke's Encephalopathy, Pregnancy related vomiting, thiamine-deficiency, neuropsychiatric syndrome.

INTRODUCTION

Gayet-Wernicke encephalopathy (GWE) is a potentially fatal but preventable thiamine-deficiency neuropsychiatric syndrome characterized by the classic triad of encephalopathy, ophthalmoplegia and/or nystagmus and ataxia. EGW is most commonly seen in alcoholics, but can also occur in any state of malnutrition. In obstetrics, vomiting in pregnancy EGW can be complicated by low thiamine stores and increased thiamine requirements.

Clinical Case 1

This is a 28 year old patient, G2P1, with no notable pathological history, pregnant at 17 weeks of amenorrhea, presenting since the 6th week of pregnancy with vomiting resistant to treatment. The evolution was marked by general weakness, weight loss and progressive deterioration of consciousness.

On admission to the emergency room, the patient was drowsy with a GCS of 13/15. Neurological examination revealed loss of balance with gait incoordination, ataxia and multidirectional nystagmus. The biological workup showed renal damage, hepatic cytolysis and hydroelectrolytic disorders. MRI revealed in T2 and FLAIR sequences and in diffusion imaging: bilateral symmetrical hyperintensities in the medial and posterior thalamic region and in the periaqueductal region (Figure 3). Obstetrical ultrasound showed fetal death in utero, hence the decision to induce labor and the expulsion of a stillborn without any particular obstetrical complications.

1g per day of thiamine was administered and an infusion of normal saline and potassium supplementation. Despite neurological improvement, the patient could not be weaned from ventilatory support and a tracheostomy was performed. She was discharged on day 46 with mild ataxia and horizontal gaze nystagmus.

Clinical case 2

This is a 21-year-old parturient, G1P0, with no notable pathological history. She was admitted to the emergency room for incoercible vomiting in pregnancy at 12 weeks' gestation, accompanied by epigastralgia, weight loss and a subicterus. On admission, patient was obnoxious, GCS 14/15, tachycardic at 123 b/min, polypneic at 20 c/min. Neurological examination revealed a sensory-motor deficit in all four limbs, with abolition of osteo-tendinous reflexes.

The workup revealed hepatic cytolysis and hydroelectrolytic disorders. The patient underwent an

abdominal ultrasound, which was normal, and an obstetrical ultrasound, which revealed a progressive pregnancy at 12 weeks' gestation. A brain MRI showed signs in favor of a Gayet-Wernicke encephalopathy: T2 and FLAIR hyper signal (figure 1) involving the caudate nuclei with diffusion restriction at this level (figure 2).

The patient received from the admission in intensive care vitamin B1 at a rate of 1 g/d associated with rehydration and potassium charges repeatedly until normalization of the kalemia, as well as Ondansetron by injection.

In view of the persistence of consciousness disorders despite the cessation of sedation, the patient was tracheotomized, then successfully decanulated after 11 weeks of hospitalization. The evolution of the pregnancy was marked by spontaneous abortion of the product of conception during the stay in the intensive care unit. Thiamine was subsequently continued at a dose of 100 mg/d for five weeks.

The evolution after three months was marked by an improvement of the neurological state. The patient also kept a tetra paresis of the lower limbs, with the necessity of a walking aid. She was discharged after a 14-week stay in intensive care.

DISCUSSION

Gayet-Wernicke's encephalopathy in pregnant women is a difficult pathology to diagnose, due to the non-specific symptoms frequently found in other pathologies.[3]

The presentation is extremely varied with the presence of the typical clinical triad (confusion, ataxia, ophthalmoplegia). It may be incomplete or associated with other clinical signs.

MRI is diagnostic; hyper signals are found in the affected areas in T2, FLAIR, and diffusion sequences, with sometimes contrast in T1 sequence at the beginning of the evolution.

Therapeutic treatment consists of administering thiamine as soon as possible before the administration of glucose to avoid irreversible neurological sequelae.[4]

Any pregnant woman presenting with vomiting in pregnancy or malnutrition should receive adequate treatment and daily thiamine supplementation.

CONCLUSION

Gayet-Wernicke encephalopathy is a rare pathology during pregnancy. It must be suspected in front of any neurological disorder occurring in a context of precarious nutritional state, in particular, in the case of pregnant vomiting. Early treatment by vitamin supplementation (thiamine) allows a favorable evolution. In case of diagnostic or therapeutic delay, the neurological sequelae can be definitive, even leading to death.

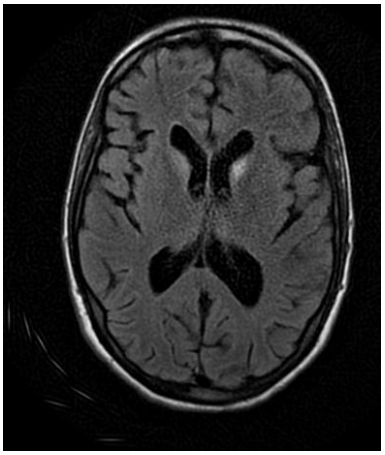

Figure 1.

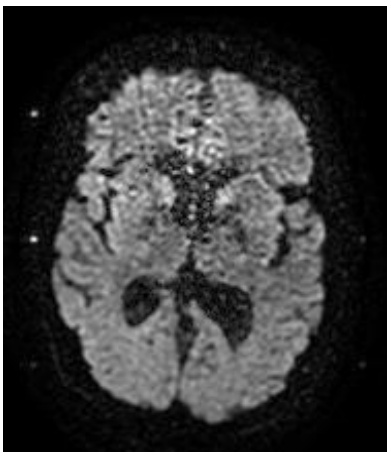

Figure 2.

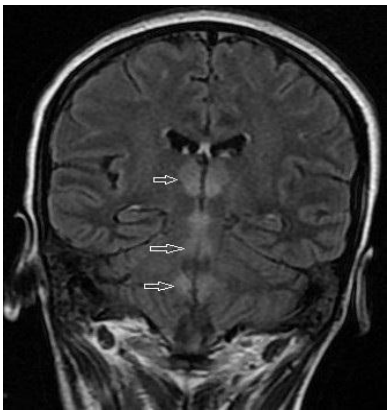

Figure 3.

REFERENCE

1. Haywood L. Brown, MD, F. Bayard Carter Professor of Obstetrics and Gynecology, Duke University Medical Center. physiologie de la grossesse, le manuel MSD
2. Karpel L, de Gmeline C. L'approche psychologique des vomissements incoercibles gravidiques. J Gynecol Obstet Biol Reprod (Paris), 2004; 33: 623-31.
3. Torgersen L, Von Holle A, Reichborn-Kjen- nerud T, Berg CK, Hamer R, Sullivan P, et al. Nausea and

vomiting of pregnancy in women with bulimia nervosa and eating disorders not otherwise specified. Int J Eat Disord, 2008; 41: 722–7.
4. Matthews A, Haas DM, O'Mathúna DPO, Dowswell T, Doyle M. Interventions for nausea and vomiting in early pregnancy. Cochrane Database Syst Rev, 2014; 3: CD007575.