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Severe Thiamine Deficiency Secondary to Hyperemesis Gravidarum Mimicking Guillain–Barré Syndrome: A Fatal Case Report

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ABSTRACT : Severe thiamine deficiency during pregnancy is rare but may lead to serious neurological complications mimicking Guillain–Barré syndrome, resulting in diagnostic delay. We report the case of a 27-year-old pregnant woman at 20 weeks of gestation with type 1 diabetes who presented with persistent vomiting followed by progressive neurological impairment. Brain magnetic resonance imaging was normal, while chest imaging revealed bilateral bronchopneumonia. Cerebrospinal fluid analysis showed albuminocytologic dissociation, initially suggesting Guillain–Barré syndrome. However, prolonged hyperemesis gravidarum raised suspicion of severe thiamine deficiency with neurological involvement. Intravenous thiamine therapy and intensive care support were initiated. The patient developed respiratory failure requiring mechanical ventilation and died due to severe pulmonary infection. This case highlights the importance of early recognition and empirical treatment of thiamine deficiency in pregnant women with prolonged vomiting, particularly in low-resource settings.

KEYWORDS : Thiamine deficiency; Hyperemesis gravidarum; Pregnancy; Wernicke encephalopathy; Case report

INTRODUCTION

Thiamine deficiency is an underrecognized condition, particularly in pregnancy complicated by prolonged vomiting. Hyperemesis gravidarum may lead to severe nutritional depletion and neurological complications. Clinical manifestations may mimic Guillain–Barré syndrome, leading to diagnostic confusion and delayed treatment. Early recognition is essential to prevent severe maternal morbidity and mortality.

CASE PRESENTATION

A 27-year-old pregnant woman at 20 weeks of gestation, with a history of type 1 diabetes, was admitted for persistent vomiting since early pregnancy, followed by progressive limb weakness and functional impairment.

On admission, hemodynamic and respiratory parameters were stable. Neurological examination revealed symmetrical motor weakness predominantly affecting the lower limbs.

Brain magnetic resonance imaging showed no abnormalities. Chest imaging demonstrated bilateral bronchopneumonia. Laboratory investigations revealed anemia, inflammatory syndrome, and mild hepatic cytolysis. Cerebrospinal fluid analysis showed albuminocytologic dissociation, initially suggesting Guillain–Barré syndrome.

Given the history of prolonged vomiting and malnutrition, severe thiamine deficiency was suspected. Intravenous thiamine supplementation was initiated along with intensive care management.

Despite treatment, the patient developed acute respiratory failure requiring mechanical ventilation. The clinical course was complicated by severe pulmonary infection, leading to death during intensive care hospitalization.

DISCUSSION

Thiamine deficiency during pregnancy is a rare but potentially life-threatening condition, particularly in cases of prolonged hyperemesis gravidarum [1,3]. Neurological manifestations may include Wernicke encephalopathy or peripheral neuropathy, which can mimic Guillain–Barré syndrome and delay diagnosis [2,7].

Several reports have described cases of acute motor neuropathy associated with thiamine deficiency, emphasizing the risk of misdiagnosis and delayed treatment [2]. Hyperemesis gravidarum significantly increases the risk of nutritional deficiencies, especially in settings where early supplementation may not be systematically implemented [1,3].

Severe cases may progress to respiratory failure requiring intensive care support [4]. Early administration of intravenous thiamine can lead to rapid clinical improvement; however, delayed treatment may result in irreversible neurological damage or death [5].

Current recommendations support empirical thiamine supplementation in patients presenting prolonged vomiting associated with neurological symptoms, even before confirmation of diagnosis [5].

This case highlights the importance of early nutritional assessment and prompt treatment in pregnant women with hyperemesis gravidarum, particularly in low-resource settings where delayed diagnosis may worsen outcomes [6,8].

CONCLUSION

Thiamine deficiency should be considered in pregnant patients presenting prolonged vomiting and neurological deficits. Early diagnosis and prompt treatment are essential to improve maternal outcomes and prevent fatal complications.

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