Asymptomatic Wernicke Encephalopathy: a case report

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Introduction:
Wernicke’s encephalopathy (WE) is an acute, neuropsychiatric syndrome which results from a deficiency in vitamin B1 (thiamine), which in its biologically active form, thiamine pyrophosphate, is an essential coenzyme in several biochemical pathways in the brain, often due to alcohol abuse (alcoholic WE). Non-alcoholic WE variant manifests in many different clinical settings, such as gastrointestinal tumours, hyperemesis gravidarum, chemotherapy, acquired immunodeficiency syndrome, prolonged therapeutic fasting, prolonged parenteral nutrition and bariatric surgery, anorexia nervosa and can even be secondary to socioeconomic factors.

Case report:
We report the case of a 57 years-old woman with typical radiological features for WE, despite her negative neurological examination and her unremarkable medical and physiological history. Her familial and physiological history were unremarkable. In particular, the patient denied alcohol abuse, (she used to drink half a glass of wine only with meals) She reported a varied diet, with a good appetite and normal digestion. She also denied weight loss, and typical symptoms of malabsorption or gastrointestinal symptoms such as diarrhea, nausea, vomit, abdominal pain. She never received diagnosis of cancer and never underwent gastrointestinal surgical procedures. Her medical history was also unremarkable except for high blood pressure (but in good control with amlodipine). She was admitted to our Medicine Department in October 2013 due to persistent dizziness with nausea and vomit, and she performed a brain CT which was normal. Symptoms improved after administration of levosulpiride iv.

Neurological examination: normal except for bilateral exhaustible horizontal nystagmus.

Brain MRI:
multiple hyperintense lesions localized in the periaqueductal gray matter (mainly on the left side) and the ventral portion of both the posterior and medial thalami. No restriction of diffusion or pathological enhancement after contrast gadolinium were reported. These neuroradiological features were suspicious for a radiological pattern of Wernicke Encephalopathy.

Other exams:
- blood exams (blood count, glucose, electrolytes included magnesium, liver, kidney, thyroid, function tests, tumor markers, amylase, insulin, bilirubin and vitamin B12, folate and b1, immunological test such as complement C3,C4, CH50, ANA, ENA, ANCA, LAC), HIV, HBV, HCV, Treponema Pallidum and Borrelia sierologies, serum Ig assay were all normal.
- Doppler carotid US, chest x-ray, ultrasound of the abdomen: all normal.

Conclusion:
we report the case of a “pure radiological diagnosis” of non alcoholic and actually idiopathic WE as we haven’t been able to identify predisposing factor for the manifestation of the syndrome. We decided to follow our patient with strict neurological and neuroradiological examinations. MRI follow up at three, six, nine months has shown stable neuroradiological pattern.

Bibliography:
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