Administrating Methylprednisolone to Treat Osmotic Demyelination Syndrome Resulting from Overcorrection of Hyponatraemia in Hyperemesis Gravidum

Vallikkannu VN, Farnaz Keshavarzi

University Malaya Medical Centre, Kuala Lumpur

ABSTRACT

Background: Hyperemesis gravidarum is characterized by severe, unrectifiable nausea and vomiting which causes weight loss of more than 5% of prepregnancy weight, associated with dehydration and electrolyte imbalance. One of the rare complications of hyperemesis gravidarum is cerebral pontine myelinolysis, a non-inflammatory osmotic demyelination syndrome (ODS) often caused by rapid correction of hyponatraemia. **Case Presentation:** We describe a 32-year-old woman who was unsure of date, but estimated to be of 12 weeks +4 days, presented with persistent vomiting over a week. During admission, patient appeared to be confused and delirious. As she was in hypotensive shock, rapid fluid resuscitation was performed. Biochemistry assessment on admission revealed hyponatraemia (serum sodium (109mmol/L) and hypokalaemia (serum potassium 1.7mmol/L). She was then managed with slow isotonic infusion with potassium supplementation. Her state of consciousness did not improve and she then developed dysphagia and slurred speech. She also elicited hallucinations with child-like behaviours. Furthermore, MRI was done which confirmed radiological features consistent with diagnosis of ODS. Steroids were administered for 5 days which improved the clinical status of the patient and the biochemical profile. Patient was discharged 14 days after steroid treatment. She was able to eat autonomously, ambulate and spoke coherently. **Conclusion:** This report highlights the unorthodox treatment for ODS using steroid administration. This uncommon case of ODS in hyperemesis gravidarum emphasizes the need for cautious correction of electrolyte imbalance. Physicians should acknowledge the possible fatal consequences of rapid correction of shock in hyperemesis cases.

Shear Wave Elastography of the Endometrium: A Simple Tool to Improve Diagnostic Accuracy of Endometrial Carcinoma from other Benign Endometrial Diseases

SY Mah[1], A Vijayananthan[1], K Rahmat[1], R Muridan[1], Y Abdul Aziz[1], Yeong CH[1], YL Woo[2], SL Khaing[2], NAM Adenan[2]

[1]Biomedical Imaging, University Malaya Research Imaging Centre, University Malaya, Kuala Lumpur, Malaysia, [2]Department of Obstetrics & Gynaecology, University Malaya, Kuala Lumpur, Malaysia

ABSTRACT

Introduction: The incidence of endometrial cancer (EC) is increasing globally and in Malaysia, it rose from 3300/100,000 in 2003 to 4100/100,000 in 2007. **Objectives:** We evaluated the diagnostic value of endovaginal shear wave elastography (SWE) of the endometrium in patients with abnormal uterine bleeding (AUB) in order to reduce the incidence of unnecessary invasive endometrial biopsy. **Methods:** 43 subjects were enrolled, where shear wave elastography ultrasound were performed. There were 24 healthy controls and 19 patients who presented with AUB, where histopathology results were available. SWE average values were elabourated as Emax and Emean where, "E" represents the longitudinal elasticity of a material. These values were described in kilopascal (kPa) unit. Analysis was performed for the SWE values and endometrial thickness (ET). **Results:** The mean age of patients was 58.9 years. Highly significant correlation between the SWE values and ET was present in AUB patients (r_s=0.771, $p<0.001$). Significant difference of ET and SWE values were demonstrated between the control and AUB patients ($p<0.05$). Amongst the AUB patients, there was also significant difference of SWE values between the malignant and non-malignant diseases, where p=0.01. The SWE cut-off value of ≤82.5kPa (Emean) and ≤103.7kPa (Emax) resulted in 100% sensitivity, 86.8% specificity and 88.4% accuracy. **Conclusions:** Endometrial SWE serves as a clinically applicable diagnostic tool in women with AUB. With cut-off values of Emean 82.5kPa and/or Emax 103.7kPa, EC were excluded from other non-malignant endometrial diseases. This will aid in triaging patients for invasive biopsy procedures.