

Association between epilepsy and gluten sensitivity based on human leukocyte antigen - DQ genotyping together with coeliac disease related antibody

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ABSTRACT

Introduction: Gluten sensitivity (GS) is associated with several neurological conditions including epilepsy. Studies have found an association between epilepsy and gluten intolerance where epilepsy is more prevalent in patients with CD or gluten intolerance and vice versa. However, no data is available in Malaysia to support these claims. The purpose of this study is to investigate the association between epilepsy and gluten sensitivity based on serology tests. The independent variables are three different tests; HLA-DQ genotyping, alpha-gliadin antibody (AGA) and tissue transglutaminase antibody (anti-tTG) while the dependent variable of the study is epilepsy. **Materials and Methods:** This is a case-control study. Patients who are diagnosed with epilepsy attending Neurology Clinic HUiTM are recruited to this study. Control group consists of non-epileptic adults matched for age, gender and race with the case patients are also recruited. Clinical research forms will be used to obtain demographic data, socioeconomic data and background illness. The type and treatment of epilepsy were also recorded for each patient. Ten (10 ml) of blood samples will be taken from 50 epilepsy patients and 50 matched controls who are recruited for this study in HUiTM. The samples will be send for genotyping for HLA-DQ alleles [(i) DQ2.2 (rs2395182; rs7775228 rs4713586); (ii) DQ2.5 rs2187668; (iii) DQ7 (rs4639334) and (iv) DQ 8 (rs7454108)]. The remaining blood sample will be used for detection of AGA and anti-tTG using commercially available ELISA kit. **Results:** In this study gluten sensitivity is diagnosed serologically and defined by the presence of AGA and/or anti-tTG and/or HLA-DQ risk genotypes. We will analyse the results using SPSS software version 21.0 and compare the occurrence of GS in epilepsy patients (case) and non-epilepsy patients (control). A two-tailed *p* value of < 0.05 is considered significant. **Conclusion:** This study indicates that risk of serologically detected gluten sensitivity is higher in epilepsy patients compared to non epileptic patient.

Early rehabilitation in patient with acute hemorrhagic stroke

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ABSTRACT

Summary: Intracerebral hemorrhage accounts for 10-23% of strokes with hypertension as the highest risk factor in the middle aged and elderly group. The risk is substantially greater among those who have defaulted their antihypertensive medication, those who are relatively young, or those actively smoking. Common sites of bleeding were basal ganglia, internal capsule and thalamus. We present a case of a 45 years old Malay male with underlying hypertension and chronic kidney disease, presented with right-sided body weakness. Upon presentation, his Glasgow Coma Scale was E4V1M6, blood pressure 220/120 mmHg, heart rate 80 beats per minute, respiratory rate 20 breaths per minute, oxygen saturation was 98% under room air. Neurologically, he has right sided hemiplegia. Electrocardiogram done was normal. Computed tomography of the brain was performed which showed left basal ganglia bleeding. He was treated conservatively by the Neurosurgical team. He was transferred to a rehabilitation ward for a post-stroke rehabilitation programme. He was trained and taught regarding transfer technique, constraint-induced movement therapy, physiotherapy and basic activities of daily living (ADL) retraining to achieve optimum capability. After a week of rehabilitation training, he was able to do wheelchair transfer with minimal assist and carry out basic activities at seated level. This case illustrates the prompt diagnosis of a left basal ganglia bleed secondary to hypertensive emergency, leading to early rehabilitation referral and interventions. This resulted in an optimal patient outcome as well as improved patient prognosis. It is also portrayed that a multidisciplinary approach is important in the management of acute hemorrhagic stroke.