ketogenic diet and vagal nerve stimulation. Treatment with anterior corpus callosotomy started to show improvements at 18-24 months after the procedure with less severe drop attacks. *Conclusions:* Corpus callosotomy usually works few months after surgery. This is a very atypical case in whom callosotomy had a delayed response. This is rarely reported and we do not have a clear explanation. Delayed re-organization of the pathways associated with the seizure initiation may be a potential explanation.

P.016

Understanding the natural history of adult temporal lobe epilepsy

L Hernandez-Ronquillo (Saskatoon) JF Tellez-Zenteno (Saskatoon) S Buckley (Saskatoon) L Ladino-Malagon (Saskatoon) W Adam (Saskatoon)*

doi: 10.1017/cjn.2015.127

Temporal lobe epilepsy (TLE) is the most common type of epilepsy in adults. The literature in this field supports the notion than many patients become candidates for surgery and little is known about the group of patients who do not require surgical treatment. This is a retrospective cohort study that included all patients with TLE assessed and followed by the Saskatchewan Epilepsy Program since 2007. Mild course was defined as patients not having seizures, using or not AEDs at last follow up. Severe course of TLE was considered in patients with continuous seizures and patients who had epilepsy surgery. Descriptive statistics were used. OR and CI were calculated. One hundred and fifty nine patients were included. Age of patients at last follow up was 46.04 + 14.4 (range 19-88) years. Mean follow up of patients was 43.46+ 22.6 (6 to 84) months. Fourth six patients (29%) were seizure-free with AEDS (mild course TLE) and 113 (61%) had severe course of TLE. Patients with mild course of TLE were older (p 0.002), with a late onset of epilepsy ($p< 0.001$) and their epilepsy evolution was shorter ($p<0.001$). Our study shows that not all the patients with TLE require surgery and that a fair percentage of patients can be controlled with medication.

P.017

EEG in asymptomatic relatives of idiopathic epilepsy; a prospective study

BM Duaa (Riyadh) C Boelman (Vancouver) L Brunga (Toronto) BA Minassian (Toronto) D Andrade (Toronto)*

doi: 10.1017/cjn.2015.128

Introduction: The mainstay of diagnosis in Idiopathic Epilepsies (IE) is the electroencephalogram (EEG). The characteristic EEG of each syndrome is an electrographic endophenotype of the larger clinical phenotype of each and more directly associated with potential gene defects than the full phenotype. Endophenotypes represents primary abnormalities elicited by the gene defect, which, in some patients, blossom into full seizures. Revealing the percentage of abnormal EEGs in asymptomatic relative of patients with IE may help to describe the mode of inheritance that would help the ongoing genetics studies to discover the pathologic gene defect. *Method:* This is a prospective cohort study to identify the percentage of abnormal EEG in asymptomatic first-degree relatives of patients with IE *Results:* 20 out of 141 EEGs (14%) of first-degree relatives were abnormal. The abnormalities included generalized polyspikes and waves , generalized 3-Hz spike and waves or centro-temporal spikes in 50% of the abnormal EEGs. 50% of the abnormalities were nonspecific. *Conclusion:* These results may indicate that the EEG endophenotypes in IEs do not follow a Mendelian pattern of inheritance. Nevertheless, the EEG endophenotype is relatively common and thus genetically simpler than the full epilepsy, which will aid in gene identification

P.018

The term "epilepsy in the elderly" is conceptually irrelevant and needs to be replaced by an etiology-driven classification system in the aging brain

B Pohlmann-Eden (Halifax) CE Crocker (Halifax) KT Legg (Halifax) MH Schmidt (Halifax)*

doi: 10.1017/cjn.2015.129

Objective: "Epilepsy in the elderly (EE)" is considered a homogeneous, benign syndrome in patients aged > 60 years, with cerebrovascular disease as the most frequent etiology. We challenge this concept by comparing EE and middle-aged adults with epilepsy (MAE). *Methods:* We compared: 1) seizure dynamics, 2) MRI lesions, 3) EEG findings and 4) treatment course in EE and MAE at the Halifax First Seizure Clinic. *Results:* 48 EE patients aged > 60.2 years (median 66.9 years). 31 MAE patients aged 50.2 – 59.6 years (median 55.1 years). Seizure dynamics in EE/MAE included first seizure in 50/54.8%, new onset epilepsy (new seizures within 12 months) in 43.8/35.5%, newly diagnosed epilepsy (seizures for >> 12 months) in 9.6/6.3%. First seizure evolved into new onset epilepsy in 12.5/3.2%. MRI in EE/MAE was normal in 22.5/27.6% or showed microangiopathy (25/38.5%), atrophy (10/15.4%), tumors (7.5/11.5%), vascular malformations (7.5/3.8%), hippocampal pathologies (0/3.8%), infarcts (12.5/0%). EEG in EE/MAE was normal in 64.4/65.5% or showed diffuse (6.6/3.5%) or focal slowing (8.8/7%), generalized (4.3/13.7%) or focal (15.4/10.4%) epileptiform activity. At 12 months, 87% of EE and 93.8% of MAE were seizure-free. *Conclusions:* EE and MAE show similar heterogeneity. We propose an etiology-driven classification of epilepsy syndromes in the aging brain.

P.019

Progressive contralateral hippocampal atrophy following Temporal Lobe Epilepsy Surgery (TLS)

CA Elliott (Edmonton) C Yasuda (Campinas) L Concha (Querétaro) M Liu (Edmonton) M Wheatley (Edmonton) C Beaulieu (Edmonton) T Sankar (Edmonton)*

doi: 10.1017/cjn.2015.130

Background: Temporal Lobe Epilepsy is associated with bilateral gray (GM) and white matter (WM) loss. After surgical treatment progressive bilateral temporal and extra-temporal WM change occur, however, less is known regarding post-operative GM change. We set out to measure contralateral hippocampal volume (CHV) following TLS. *Methods:* 1.5T-3D-1mm-isotropic-MPRAGE scans in 26 TLE patients and 3 controls in two groups: longitudinal (n=10)(imaged POD1,2,3,6,60,120 and >360d) and single post-operative scan (n=16). Manual volumetry protocols. *Results:* We find significant