

records, neuropathological changes ranged from mild to severe. **Conclusions:** All families expressing the IVS10+14 *MAPT* mutation display striking inter- and intrafamilial clinical and neuropathologic phenotypic variability. Our cohort adds sensory and sleep abnormalities as potential symptoms and illustrates a lack of clear clinicopathological correlates for these heterogenous symptoms.

Reference: Maxwell et al. 2021. Clinical and Neuropathological Variability in the Rare IVS10+14 Tau Mutation. *Neurobiology of Aging*. In Press. DOI: 10.1016/j.neurobiolaging.2021.01.004.

P.015

What Happens to the Worried Well? – Follow-up of Subjective Cognitive Impairment

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doi: 10.1017/cjn.2021.297

Background: Concern around perceived neurocognitive decline is increasing, leading to increased number of referrals and anxiety for patients. We aimed to explore the likelihood of the “worried well” experiencing neurocognitive decline. **Methods:** 166 “worried well” patients who attended the Rural and Remote Memory Clinic between 2004 and 2019 were included. Mini Mental Status Examination, Center for Epidemiologic Studies Depression Scale, and Functional Assessment Questionnaire scores were measured and compared at initial assessment and at 1-year follow-up. MMSE scores over time were assessed with a mean follow-up of 2.95 years (SD 2.87). **Results:** There was no statistically significant difference in MMSE, CESD, or FAQ scores between clinic day and one-year follow-up, and no consistent pattern of MMSE score over time. Of the 166 patients with SCI on initial assessment, nine were eventually given a neurological diagnosis. **Conclusions:** There is no pattern of neurologic decline observed in the “worried well”. Though the likelihood of a patient with SCI developing a neurological diagnosis is reassuringly low, (9/166), it is not irrelevant. This, along with the benefits of early diagnosis and treatment for dementia, leads us to believe that patients with SCI should still be seen in follow-up at least at the one-year mark.

P.016

Hypertensive disorders in pregnancy are associated with future development of vascular dementia: A systematic review and meta-analysis

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doi: 10.1017/cjn.2021.298

Background: We aimed to evaluate the association between hypertensive disorders in pregnancy (HDP) and future risk of cognitive impairment and dementia. **Methods:** Systematic searches were performed in MEDLINE and EMBASE up to April 27th, 2020. Exposure of interest included the different types of HDP. Outcomes of interest included dementia incidence,

dementia subtype, and cognitive testing. **Results:** On qualitative review, 4/9 studies showed impaired memory, visual motor processing speed, executive function, and verbal testing in previously preeclamptic women. 2/4 studies showed impaired visual motor processing and subjective cognitive complaints in previously eclamptic women. Six cohort studies involving >2.6 million women were included in the meta-analysis. Pooled hazard ratios (aHR) with 95% confidence intervals were generally adjusted for age at delivery ethnicity, and vascular risk factors. Women with a history of gestational hypertension were more likely to develop vascular dementia (aHR 2.02 [1.45-2.83], I²:0%), but not Alzheimer disease (1.24 [0.93-1.66], single-study). Women with a history of preeclampsia were also more likely to develop vascular dementia (2.17 [1.20-3.91], I²:61.1%), but not Alzheimer dementia (1.19 [0.83-1.69], I²:69.9%). **Conclusions:** Whereas studies of neuropsychological testing in previously preeclamptic and eclamptic women have been heterogeneous, a history of HDP is associated with developing vascular dementia in later life.

EPILEPSY AND EEG

P.017

Nutritional deficiency: A mysterious case of psychosis and seizures

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doi: 10.1017/cjn.2021.299

Background: As a neuroactive steroid, vitamin D is essential for optimal neuronal functioning¹. Its immunomodulatory and neuroprotective effects aid in reduction of proconvulsant cytokines, membrane excitability and seizure prevention²⁻³. Deficiency plays an important role in neurological and psychiatric illnesses, though clinical manifestation with seizures and psychosis have not been described. **Methods:** A 61-year-old female presented with 3-day history of confusion, insomnia and new onset seizure. She was noted to have poor dentition, deformed nail bed and multiple ecchymosis. Neurologically, there were brisk reflexes with some spread. She worsened with frequent seizures and psychosis. **Results:** Laboratory investigation showed serum Vitamin D level of 19nmol/L, hemoglobin of 70g/L. MRI head revealed T2 hyperintensities in bilateral anterolateral temporal lobes and EEG consistent with bitemporal lobe epilepsy. Auto-immune and infectious work up were negative. Treatment with antipsychotics, several antiepileptics, high dose Vitamin-D and iron supplements were initiated. Initially, she remained unresponsive to neuro/psych medications. Improvement in clinical symptoms was noticed in 4th week of admission, with complete resolution of MRI, EEG findings. **Conclusions:** Evidence surrounding hypovitaminosis D and risk on the central nervous system continues to grow. This case highlights the significance of vitamin-D on brain processes and its neurological manifestations in state of deficiency.

1. Kalueff.A.,2006. 2. Garcion. E, 2003. 3. Eyles, D., 2013.