Other Adult Neurology

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Case report: listeria rhombencephalitis in a healthy 64 year old woman

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Background: Listeria rhombencephalitis is a rare and serious complication of Listeria monocytogenes infection. We present a case of presumed Listeria rhombencephalitis with dramatic recovery from a highly morbid state. **Methods:** A previously healthy 64 year old woman with a remote and stable history of a major depressive episode and no history to suggest immune compromise presented with nausea and vomiting followed by the acute onset of diplopia and gait disturbance 28 days after exposure to an identified infectious source of spring rolls and 21 days after a severe diarrheal illness from that exposure. Our patient was evaluated by emergency physicians and general internists over a period of 1 week after the onset of diplopia and gait disturbance and given a diagnosis of serotonin syndrome before receiving a consultation from Neurology. Her presentation featured a deep encephalopathy and an unusual hyperkinetic movement disorder with startle myoclonus, palatal myoclonus and diffuse tremor. **Results:** Her MRI scan showed FLAIR hyperintensities in the bilateral cerebellum and pons with adjacent pial enhancement, characteristic of Listeria rhombencephalitis. Her CSF showed a lymphocytic pleocytosis with normal chemistry. **Conclusions:** She recovered dramatically to treatment with IV ampicillin. This case report illustrates the importance of considering Listeria rhombencephalitis in immunocompetent patients with brainstem symptoms following a diarrheal illness.

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Causes of albuminocytologic dissociation and the impact of an age-adjusted reference limit on review of 2,627 CSF samples

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Background: We set out to test the discriminative power of an age-adjusted upper reference limit (URL) for CSF total protein (CSF-TP) in identifying pathological causes of albuminocytologic dissociation (ACD). **Methods:** We reviewed the charts of 2,627 adult patients who underwent a lumbar puncture at a tertiary care center over a 20-year period. Samples with CSF-TP above 45 mg/dL (0.45 g/L) were included. Samples with white blood cell count > 5×10^9/L, red blood cell count > 50×10^9/L, and glucose < 2.5 mmol/L (45 mg/dL) were excluded. Patients with CSF-TP elevated above 45 mg/dL were considered to have 'pseudo' albuminocytologic dissociation (ACD) or 'true' ACD if their CSF-TP was in excess of age-adjusted norms. **Results:** Among all patients with ACD, a pathological source of CSF-TP elevation was identified in 57% (1490/2627) of cases, 51% of those with 'pseudo' ACD, and 75% with 'true' ACD ($p< 0.001$). Use of an age-adjusted upper reference limit favored the detection of polyneuropathy patients (13.5% proportionate increase) and excluded a larger number of patients with isolated headache (10.7% proportionate decrease; $p < 0.0001$). **Conclusions:** Elevated CSF-TP is a relatively common finding. Use of age-adjusted upper reference limits for CSF-TP values improve diagnostic specificity and help to avoid over-diagnosis of ACD.

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Effects of hypoglycemia on sensitive brain structures in a patient with an insulinoma

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Background: A previously healthy 26 year-old male presented with confusion and recurrent hypoglycemia (blood glucose lows of 2.5 mmol/L) while on vacation in Las Vegas. He denied substance or heavy alcohol use and the toxicology screen was negative. He was transferred home to Winnipeg for further care and was found to have only patchy memories of his trip and the days leading up to the trip, consistent with mixed anterograde and retrograde amnesia. MoCA score at presentation was 16/30 with points lost on orientation, delayed recall and visuospatial-executive tasks. MRI revealed T2 hyperintensities and diffusion abnormalities in bilateral hippocampi and globus pallidi. Electroencephalography showed triphasic waves. The patient was found to have a pancreatic insulinoma, which was surgically resected. In follow-up nine weeks later he was near his cognitive baseline, though he had ongoing difficulties with delayed recall. Repeat MRI showed improvement but not resolution of hippocampal and pallidal signal change, with mild hippocampal atrophy.

Neuropathological and animal studies have shown that structures most sensitive to hypoglycemic neural injury include the hippocampus, basal ganglia, and neocortex. The clinical and radiographic findings in this case illustrate an unusual presentation of insulinoma and the effects of hypoglycemia on the brain. **Methods:** N/A **Results:** N/A **Conclusions:** N/A

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Initial validation of symptom scores derived from the Orthostatic Discriminant and Severity Scale

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Background: To develop a scale to quantify and discriminate orthostatic from non-orthostatic symptoms. We present initial validation and reliability of orthostatic and non-orthostatic symptom scores taken from the Orthostatic Discriminate and Severity Scale (ODSS). **Methods:** Validity and reliability were assessed in participants with and without orthostatic intolerance. Convergent validity was assessed by correlating symptoms scores with previously validated tools (Autonomic Symptom Profile (ASP) and the Orthostatic Hypotension Questionnaire (OHQ)). Clinical validity was assessed by correlating scores against standardized autonomic testing. Test-retest reliability was calculated using an intra-class correlation coefficient. **Results:** Convergent Validity: Orthostatic (OS) and Non-Orthostatic (NS) Symptom Scores from 77 controls and 67 patients with orthostatic intolerance were highly correlated with both the Orthostatic Intolerance index of the ASP (OS:r=0.903;NS:r=0.651; $p<0.001$) and the OHQ: (OS:r=0.800;NS:r=0.574; $p<0.001$). Clinical Validity: Symptom