

Editor's Note: Journal of Neurological Disorders – Volume 4, Issue 8

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Description

Neurological disorder comprises all those mental complications that make human being physically and psychologically impaired than a normal one. Recent report of World Health Organization has included neurological disorder in the category of 'Global burden of disease'. However, in the global scenario, prevalence of neurological disorder is growing rapidly. In a recent study by Gourie-Devi, estimated 30 million incidents of neurological impairments only in India [1], which is a great concern. Moreover, neurological disorder not only deteriorating the quality of living, it also affects the socio-economic statement of a society. Therefore, an insight into the molecular mechanism of neurological disorder is an urgent need of research. The current release of volume 4, issue 8 of 'Journal of Neurological Disorders' deals with a wide spectrum of topics such as motor neuron disease, creation of a predictive model for improve timing for palliative measures in MND, validation of computerized cognitive testing in ischemic stroke patients, a putative connection between alexia with agraphia and usage of oral contraceptives, identification of a rare case of arterial thoracic outlet syndrome, identification of seminal mutations associated with ADHD, identification of a rare case where post-traumatic fronto-ethmoidal and orbital encephalocles occurred together, and successful repair of nerve damage by VEGF soaked gelatin.

Motor Neuron Disease (MND) is a spectrum of neurological conditions characterized by progressive degeneration of upper and lower motor neurons, resulting in muscle weakness and atrophy. MND is inexorably progressive, and ~70% of the patients die within 3 years of symptom onset. Multiple attempts have been made to establish predictive biomarkers for the disease, but without success. In this issue, Moura et al. [2], constructed a predictive model using simple possible markers in various combinations. The aim was to employ the model for routine evaluation of patients in order to improve timing for palliative measures. The authors identified five parameters for worse prognosis in MND, these are: pyramidal syndrome (HR=2.36 CI 95% 1.05–5.33), neck weakness (HR=2.28 CI 95% 1.03–5.05), age >65 years (HR=2.50 CI 95% 1.23–1.08), supine FVC<63% (HR=2.78 CI 95% 1.03–7.48), and involvement of second site in <6 months (HR=2.02 CI 95% 1.04–3.94). The authors state that the model can be used with 74% accuracy in clinical practice.

Cognitive impairment is frequently observed among patients with stroke and early recognition can increase the efficiency of patient care. In this issue, Gagnon and Laforce [3], explored the reliability of computerized cognitive testing (CogState Brief Battery) in adult acute ischemic stroke patients by comparing the results with paper-pencil assessments (Montreal Cognitive Assessment). They observed moderate to strong correlations between the two methods at study entry and follow-up sessions. These correlations were independent of gender, age, and education level. The prominent cognitive changes were executive dysfunctions. Strong test-retest correlations were observed. Thus, the CogState Brief Battery is a valid alternative for measuring cognitive skills following an acute ischemic stroke, though it is not without its limitations such as disinterest and testing related anxiety.

Alexia with agraphia is a rare linguistic disorder resulting from a stroke in the region of the middle cerebral artery. Individuals having

alexia with agraphia have difficulty in writing as well as comprehension, though spoken language remains unimpaired. In this issue, Farzi et al. [4], present a case report where alexia with agraphia is caused as a result of cerebral thrombosis. The patient, a 26 year old woman exhibited impaired reading, writing, naming, and calculation, but exhibited fluency while speaking. Her blood chemistry and physical tests were normal. MRA revealed thrombosis of the sigmoid and left transverse sinuses. The authors attributed the thrombosis to oral contraceptive usage by the patient. Post 6-day warfarin and heparin treatment, the patient exhibited some improvement in naming and calculating, but was unable to read and write. Complete recovery was achieved at 2 weeks FU. This is the first report where alexia with agraphia is associated with usage of oral contraceptives.

Thoracic outlet syndrome (TOS) is a condition characterized by compression of arteries, veins, and nerves in the passage-way from the neck to the armpit. TOS may be congenital or acquired and may exhibit vascular or neural symptoms or a combination of both. The arterial version of TOS is the rarest and causes severe complications like thromboembolic phenomenon. In this issue Rastogi et al. [5], present a case of a 35-year old male complaining of numbness and paresthesia in the right upper extremity for 2-3 months. No signs of ischemia were observed. Color Doppler Imaging (CDI) revealed luminal narrowing of the right subclavian artery. Based on these findings, the patient was diagnosed with arterial thoracic outlet syndrome (ATOS).

Attention Deficit Hyperactivity Disorder (ADHD) is rampant neurological disorder frequently observed in children. ADHD is characterized by excessive activity, problems in paying attention, or difficulty in controlling behavior. These symptoms begin manifesting by age 6 or 12. ADHD is a genetic disorder that is transmitted from mother to child. A positive correlation exists between consumption of strong antibiotics, sedatives and abortion drugs during pregnancy and the probability of the child being hyperactive. In this issue, Asadi et al. [6] studied the prominent genetic mutations associated with ADHD. They identified that 91% of the ADHD patients had mutations in *ADRA2A*, *BDNF*, *DSM-IV*, *DRD4*, *GRIN2A*, *HTR1B*, *SERT*, *SNAP25*, and *TPH2 genes* (580 patients and 620 controls).

Facial trauma involving the orbits and sinuses is frequently encountered. Post-traumatic, fronto-ethmoidal and orbital encephalocles are encountered infrequently and require early intervention in order to prevent complications. Cross-sectional diagnostic imaging techniques such as MRI and CT play a pivotal role in the early detection of such entities. In this issue, Rastogi et al. [7],

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has been reported a rare case where post-traumatic fronto-ethmoidal and orbital encephaloceles occurred simultaneously in an individual following severe injury to the face.

Facial nerve reconstruction is a challenging procedure which is required for treating conditions such as facial paralysis. In this issue, Jun et al. [8], employed silicone tubes for connecting nerve ends to guide nerve growth. The effect of vascular endothelial growth factor (VEGF) on facial nerve regeneration was evaluated. Towards this end, the left facial nerve was transected and the stump connected by silicone tubes loaded with gelatin sponge containing VEGF. It was observed that incubation with VEGF enhanced nerve regeneration which was reflected in significantly higher nerve conduction velocity in the VEGF group as compared to control.

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