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Research Article

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[Endovascular management of tandem occlusions in stroke: Treatment strategies in a real-world scenario](#)

The association between intracranial large vessel occlusion (LVO) and concurrent steno-occlusive lesion of an ipsilateral extracranial internal carotid artery (ICA) is considered a tandem occlusion (TO) [1]. In approximately half of TO, the first clinical manifestation are acute occlusions of the extracranial ICA associated with occlusion of the middle cerebral artery (MCA), with additional occlusion of the intracranial ICA in up to 25% of these cases.[2] This particular lesion subset is technically challenging for endovascular treatment (EVT) and is also characterized by lower success rates of intravenous thrombolysis [3], worse prognosis compared to intracranial occlusions alone, and higher rates of symptomatic intracranial hemorrhage [4]. The optimal approach regarding EVT of TO remains controversial, and reports in this regard are scarce. There are two proposed strategies according to the selection of the first lesion to be treated. The proximal approach comprises stenting of the proximal cervical ICA followed by mechanical thrombectomy (MT) of the intracranial vessel, whereas the distal approach involves MT followed by stenting of the cervical ICA [3–14].

Besides, there other clinically relevant unresolved aspects regarding the treatment of these patients, such as concomitant use of intravenous thrombolysis, the need for stenting compared to angioplasty alone, as well as the most adequate antiplatelet strategy after treatment. Accordingly, we aimed to report the procedural and clinical outcomes of a real-world experience in a comprehensive stroke center regarding EVT of anterior circulation acute ischemic stroke (AIS) associated with a TO.

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Review Article

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[Differential diagnosis of POLG related disorders: What to keep in mind when multiorgan system is involved?](#)

Mitochondrial and lysosomal dysfunction accounts for a large group of inherited metabolic disorders most of which are due to a dysfunctional mitochondrial respiratory chain (MRC) leading to deficient energy production and defects in phagocytosis in endosomal-lysosomal pathway respectively. MRC function depends on the coordinated expression of both nuclear (nDNA) and mitochondrial (mtDNA) genomes. Thus, mitochondrial diseases can be caused by genetic defects in either the mitochondrial or the nuclear genome, or in the cross-talk between the two. The mitochondrial DNA depletion syndromes (MDSs) are a clinically heterogeneous group of disorders with an autosomal recessive pattern of inheritance that have onset in infancy or early childhood and are characterized by a reduced number of copies of mtDNA in affected tissues and organs. In this review article, we summarized the spectrum of mtDNA depletion disorders along with minor learning of lysosomal storage diseases. This current article offers a perspective on the role of genetics in medical practice and how this role may evolve over the next several years.

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Review Article

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[Endocannabinoidome and its role in neurological disorders-A comprehensive update of existing literature](#)

Medical benefits of cannabis and related compounds is widely known. Discovery of psychotropic plant cannabinoid  $\Delta^9$ -tetrahydrocannabinol have urged researchers to study more about the cannabinoid system and related therapeutics in the field of neurology and medicine. Where activation of cannabinoid receptor type 1 (CB1R) yielded in unwanted and serious side effects, discovery of cannabinoid receptor type 2 (CB2R) and its ligands gave a new hope. Till now there is limited success in this field because of complex expanded endocannabinoid system comprising of receptors, ligands and enzymes. In this review we will update about the role of endocannabinoidome relevant to neurological disorders.

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[Factors associated with mortality after decompressive craniectomy in large basal ganglia bleeds](#)

**Aim:** To assess the efficacy of decompressive craniectomy in patients with large basal ganglia (BG) bleed. To establish predictive criteria of mortality after surgery in patients with BG bleed.

**Materials:** This prospective study includes all patients of large spontaneous BG bleed operated by decompressive craniectomy without hematoma evacuation from October 2012 to September 2015. Data was collected on patient age, gender, distribution of bleed, affected hemisphere dominance, preexisting medical conditions, admission Glasgow Coma Score (GCS), midline shift on CT or MRI Brain, hematoma volume and anisocoria, duration (hours) between the onset of stroke and operation, post-operative complications, and the duration of hospital stay. This data was correlated with one month mortality of the patients.

**Results:** Total number of patients were 27. Mean age was 51 years and mean GCS was 7.55(range 5-11). The mean volume of the bleed was 68.51 ml. Mortality was noted in 17 out of 27 patients (63%) in 30 days. Thirteen of the 16 patients with intraventricular extension of BG bleed had mortality. The factors that showed statistically significant correlation with one month mortality were age, GCS at admission, volume of the bleed and the intraventricular extension.

**Conclusion:** Large BG bleed was associated with high mortality and morbidity. Age of 50 years or more and GCS  $\leq$  8 at presentation were poor prognostic factors for decompressive craniectomy in patients with BG bleed. Patients with large BG bleed of volume  $>$  60 ml and intraventricular extension had poor prognosis.

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[Endovascular treatment experience in acute ischemic stroke](#)

**Background and Objective:** Thrombolytic and mechanical thrombectomy therapies are proven treatment methods in patients with acute stroke. Aim is to share our experience in acute stroke therapy with colleagues.

**Material and methods:** In this study we evaluated the patients who underwent MT or MT + IV-tPA between 2018-2019 retrospectively. Demographic features, comorbid diseases of patients, symptom onset-to-gate and symptom gate-to-puncture durations, mRS (Modified Rankin Score) and NIHSS (National Institutes of Health Stroke Scale) score, treatment method and degree of recanalization were listed.

**Results:** MT was applied to 29 patients, MT + bolus IV-tPA was applied to 12 patients and MT + full dose IV-tPA was applied to 7 patients. The mean age was  $66 \pm 15$  years, arrival mRS was  $2 \pm 2$ , arrival NIHSS score was  $14 \pm 5$ , onset-to-gate duration was 185 minutes and gate-to-puncture duration was 118 minutes.

**Conclusion:** The rate of recanalization, functional independence and mortality were similar to the HERMES study. It was observed a higher rate of intracranial hemorrhage in patients who received bolus or full dose IV-tPA compared to patients who underwent MT. These results have led us to question the necessity of giving bolus or full dose IV-tPA before MT. Onset-to-gate and gate-to-puncture durations were found longer than the recommended durations. Rapid and effective management of AIS patients will provide good clinical results.

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[Characterization of the immune response in neuroimmune disorders in children](#)

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**Background:** A misguided auto-reactive injury is responsible for several types of central nervous system (CNS) conditions in pediatrics. We propose that, in some of these conditions, the adaptive immune system has a common cellular immune pathogenesis, driven predominantly by T cells, despite variability on the phenotypical clinical presentation.

**Methods:** We have characterized the CD4+/CD8+ adaptive immune response (AIR) on pediatric patients presenting with clinical symptoms compatible with Neuroimmune Disorders (NID). Flow cytometry with deep immunophenotyping of T cells was performed on peripheral blood obtained during the acute clinical phase and compared to an age-matched cohort group (Co).

**Results:** We found that pediatric patients with confirmed NID, exhibit a pattern of dysregulation of CD4+ lineages associated with autoimmune processes.

**Discussion:** The autoimmune associated CD4+ dysregulation was associated with patients with NID, as compared to healthy controls and patients with non-autoimmune diagnoses. If we can improve our capacity for early accurate diagnosis and meaningful disease monitoring of pathogenic T cell subsets, we can both expedite disease detection and may serve as a guide to the administration of effective immunotherapeutic agents.

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**Review Article**                      **Published Date:-2021-03-23 00:00:00**

[Cortical spreading depolarizations in the context of subarachnoid hemorrhage and the role of ketamine](#)

Delayed cerebral ischemia (DCI) is one of the main complications of spontaneous subarachnoid haemorrhage and one of its causes is the cortical spreading depolarizations (CSDs). Cortical spreading depolarizations are waves of neuronal and glial depolarizations in which there is loss of neuronal ionic homeostasis with potassium efflux and sodium and calcium influx. In damaged brain areas and brain areas at risk, such as those adjacent to subarachnoid haemorrhage (SAH), CSDs induce microvascular vasoconstriction and, therefore, hypoperfusion and spread of ischemia. Several studies have been devoted to minimize secondary injuries that occur hours to days after an acute insult. Ketamine, a drug until recently contraindicated in the neurosurgical population for potentially causing intracranial hypertension, has re-emerged as a potential neuroprotective agent due to its pharmacodynamic effects at the cellular level. These effects include anti-inflammatory mechanisms, and those of microthrombosis and cell apoptosis controls, and of modulation of brain excitotoxicity and CSDs. A literature review was performed at PubMed covering the period from 2002 to 2019. Retrospective studies confirmed the effects of ketamine on the control of CSDs and, consequently, of DCI in patients with SAH, but did not show improvement in clinical outcome. The influence of ketamine on the occurrence/development of DCI needs to be further confirmed in prospective randomized studies

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**Case Report**                      **Published Date:-2021-03-19 00:00:00**

[Cerebral arterial air embolism with anterior spinal cord syndrome after CT-guided hook-wire localization of Lung mass and pulmonary nodule](#)

Systemic arterial air embolism (SAAE) is a rare but serious complication of CT-guided hook wire localization of pulmonary nodule usually with catastrophic and poor outcome. Hook wire needle localization is done pre-operatively by placing wire around or into the pulmonary nodule to provide the thoracic surgeon accurate location guidance of the target nodule for Video-Assisted Thoracoscopic Surgery (VATS) wedge resection with safety margins. Physicians should be aware of this possible complication during the procedure in order to rescue the patient promptly as it requires rapid diagnosis and management. We describe a 55-year-old male who underwent a CT-guided hook wire needle localization of left upper lobe lung cancer and left lower lobe pulmonary nodule prior to planned VATS wedge resection who developed altered mental status and bilateral lower extremities paralysis after wire placement was completed. His CT head demonstrated small air embolism in the left occipital area, confirming the diagnosis of cerebral air embolism and follow up CT and MRI of the head revealed multiple areas of brain infarction. In addition, he was diagnosed with anterior spinal cord syndrome (ACS), most likely due to anterior spinal artery ischemia from micro air embolism on the basis of clinical findings but with negative ischemic changes on MRI of the spinal cord. His mental status recovered but he remained paraplegic and transferred to inpatient rehabilitation service.

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**Hypothesis**                      **Published Date:-2021-01-25 00:00:00**

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“The mind of man is capable of anything...because everything in in it, all the past as well as all the future [Joseph Conrad]”. Why I am using above quote and what is the relation to what point I am coining you will understand its relevant your own as you moving line by line of this write-up. This topic though complex to some people to get understand, but those has strong or at least average background of Space, Physics, Quantum Mechanics, Neuroscience and theory of evolution definitely acquire it. Near distance and physical face to face communication started with the evolution of humankind and changes in each evolution in DNA structure caused to changes in communication patterns from different phonetics to gestures, gestures to voice and voice to voice with different languages.

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**Case Report**

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[Acute urinary retention and hyponatremia from central hypothyroidism](#)

A mass arising from the pituitary gland commonly damages cells of the anterior pituitary gland and affects the secretion of gonadotropins and growth hormone. However, central hypothyroidism and secondary adrenal insufficiency from such damage is a rare phenomenon. Acute urinary retention as the main symptom of central hypothyroidism is also an unusual initial presentation. We report a male patient who comes with frequent urinary retention and hyponatremia at our hospital.

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