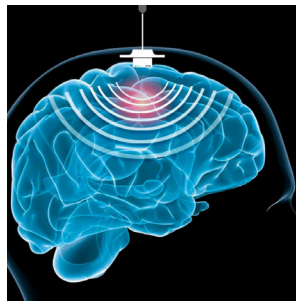
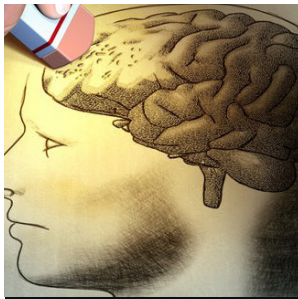


# Video Presentation

## *Stroke 2021*



10<sup>th</sup> International Conference on  
**Neurological Disorders and Stroke**

September 13, 2021 | Webinar

## **Diagnosing Stroke cases using unenhanced helical computed tomography in recently Brain Stroked patients in Duhok city**

**Maysaloon Shaman Saeed, Shevan Mahdi Saadallah**

University of Duhok, Iraq

**Background:** Cerebral Stroke has been recorded as a major health problem in the world, it accounts the second most common cause of personal disability in the worldwide. This study was undertaken for the use of unenhanced computed tomography (CT) imaging findings in the persons who were clinically diagnosed and referred to the radiological units as a cerebrally stroked patients, aiming to detect their overall number (incidence) in the city, taking into consideration the most common period of onset and duration of their relevant radiological unenhanced CT findings regarding both haemorrhagic, ischemic changes and their subtypes, looking for the most commonly affected vascular territories in different stroke types considering the site and side of the vessel affected, detecting also the most common brain lobes involved in different strokes in detailed disruption with their mass effects in addition to checking the incidence of normal (-ive) CT scan findings among those clinically diagnosed and referred to as stroked patients in addition to finding out the sensitivity of the unenhanced CT in detecting early stroked cases compared to the clinical diagnosis and to find out the most common related risk factor in each kind of stroke

**Results:** The overall number of these patients was 104 case study, the male patients constitute 60.6% of the total number and the female patients were 39.4%, the mean period of onset of their relevant radiological appearances on the unenhanced CT scan in overall acute cases regardless of the kind of stroke was 6.9 hours from the onset of the patients symptoms, the incidence of ischemic stroke was more than haemorrhagic stroke as it was 33.7% of the overall cases while the haemorrhagic stroke constituted 23.1%. Among all 104 patients, the middle cerebral artery (MCA) was the most affected vessel in both ischemic and haemorrhagic strokes constituting about half of the cases followed by the posterior cerebral artery (PCA) which accounts 17% in ischemic and about 21% of haemorrhagic cases, the right side of both of these vessels was commonly affected, the parietal lobe was most commonly affected in ischemic stroke cases followed by the basal ganglia,

while in haemorrhagic cases the opposite was seen, 43.3% of the cases showed negative CT scan findings. The sensitivity of unenhanced CT scan radiological findings in confirming the diagnosis was 56.7% compared to the clinical diagnosis as reference standard. Regarding the risk factor, the age was the most common factor followed by hypertension and Diabetes Mellitus, more mass effects seen in haemorrhagic than ischemic stroke, the mean time of appearance of radiological changes as seen in CT scan was 5.8 hrs in haemorrhagic type compared with 7.5 hrs. in ischemic stroke

**Conclusion:** In overall cases of stroke, Male were affected more than the female, 6.9 hours was the mean period of onset of appearance of their unenhanced CT findings, ischemic kind of stroke exceeds haemorrhagic one by about 10%, the right MCA was the most affected vessel in both types of stroke followed by the PCA, the parietal lobe was the most common lobe affected in ischemic stroke while the basal ganglia were most commonly affected in haemorrhagic stroke, negative unenhanced CT findings account for about one third of the clinically diagnosed cases, the unenhanced CT scan detection and disease confirmation sensitivity was more than half compared with the reference clinical diagnosis, age increment was the most common risk factor for overall stroke followed by diabetes mellitus. The use of unenhanced CT scan in the patients presented and clinically confirmed as having stroke, imply an early assessment, giving proper estimation, has a major role in differentiating ischemic from haemorrhagic types of stroke which is considered the major dilemma, in addition it can be performed rapidly, a feature that help recognize early signs of stroke as soon as 6 hours from starting symptoms.

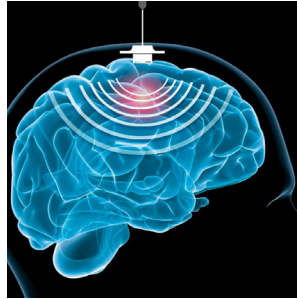
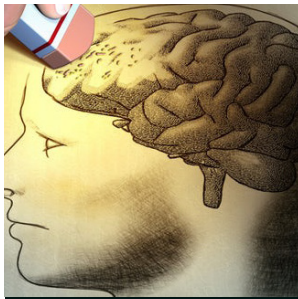
### **Biography**

Maysaloon Shaman Saeed is working as Assistant Professor in University of Duhok. She completed M.B.Ch.B, FIBMS in Diagnostic Radiology. She is also the Head of Radiology Department at College of Medicine in University of Duhok, Iraq.

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# Accepted Abstract

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## **Systemic glyceic variation predicts inflammation and in-hospital mortality of acute Ischemic Stroke after mechanical thrombectomy: A prospective study using continuous glucose monitoring**

**Jiangshan Deng**

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**Background:** The association between glyceic variation (GV) and inflammation and short-term outcomes of acute ischemic stroke (AIS) after reperfusion therapy remains to be elucidated.

**Methods:** Glucose levels were assessed through intermittent continuous glucose monitoring in 124 patients with AIS after reperfusion therapy, of whom 70 underwent mechanical thrombectomy (MT). The percentages of time above range, time below range, time in range (TIR), coefficient of variation (CV), standard deviation (SD), mean amplitude of glyceic excursion, largest amplitude of glyceic excursion, mean of daily difference, high blood glucose index and low blood glucose index of glucose were calculated. The association between GV, systemic inflammation and outcomes was analyzed.

**Results:** The average period of glucose monitoring was 3.5 days and serum glucose was recorded 728 times for

each person immediately following reperfusion therapy. Among all patients, the TIRs in different ranges, CV and SD were different in survival and mortality. In the MT subgroup, the National Institutes of Health Stroke Scale score at 24 h and CV were independently associated with in-hospital mortality. CV was correlated separately with tumor necrosis factor (TNF)- $\alpha$  and interleukin-8 (IL-8) levels. Significant differences in TNF- $\alpha$  and IL-8 levels were found between the groups divided by the mean CV. In the intravenous thrombolysis subgroup, no difference was found in glucose variation metrics between the groups regarding survival and in-hospital mortality.

**Conclusions:** Increased systemic GV was associated with in-hospital mortality of large vessel occlusion (LVO)-AIS after MT. Therapeutic approaches that reduce GV may affect systemic inflammation and short-term outcome of LVO-AIS after recanalization.

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**Positive electrization of the US oceanic coast and its effect on human nervous activity**

**Yuri Pivovarenko**

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As a result of the interaction of the Gulf Stream (Figure 1, red arrows to the right of North America) with the vertical component of the geomagnetic field, which is directed downward in the northern hemisphere of the Earth, positive charges are concentrated on the western side of this sea current (as a result of the Hall effect [1]). For this reason, the land, water and air of the US east coast are constantly saturated with hydrated protons. In addition, as a result of the interaction of the California Current (Figure 1, downward blue arrow to the left of North America) with the same vertical component of the geomagnetic field, positive charges are concentrated on its eastern side. For this reason, the land, water and air of the west coast of the United States are also saturated with hydrated protons. Since this is undoubtedly important for completeness of the description, it should be additionally

noted that an increased concentration of hydrated protons occurs on the northern coast of the Gulf of Mexico and on the eastern and western coasts of Florida (of course, this is also the result of the interaction of the incipient Gulf Stream with the vertical component of the geomagnetic field. Let us discuss how the increased concentration of hydrated protons on the east, west and south coasts of the United States determines the characteristics of the nervous activity of the people who live there. First of all, these features are associated with the fact that glucose is transported across the cytoplasmic membranes by means of symport the intensity of which is stimulated by an increased concentration of extracellular protons, which create a “proton drawing force”.

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## **Freediving of a patient with movement dysabilities**

**Golez Ana**

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Patients with movement disabilities like diving as they can move freely, which is a big problem for them out of water. Their movement, strength, endurance and quality of life are improved.

70-year old man with an inverse total endoprosthesis of right shoulder, native type of endoprosthesis of left shoulder, total endoprosthesis of both hips and knees, after a surgery due to a herniated disc at spine level L5-S1, repeated some dives with a professional diver. After them physical and emotional status improved significantly. He

could walk better, his balance improved, as well as range of motion of joints and strength. Pain became weaker. There were no complications and the patient is going to repeat diving in the future.

In the literature positive results of diving of patients with movement disabilities are reported. Our patient is one of them. Diving could be one possibility for disabled patients to improve their quality of life.

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## An exploration of the role of occupational therapists in addressing sexuality with service users post Stroke

Jessica Heron

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**Introduction:** Research suggests stroke negatively affects sexuality yet is rarely addressed by healthcare professionals. This study aims to explore occupational therapists' perceptions of addressing sexuality post stroke with service users and whether they perceive it to fit into their scope of practice.

**Method:** A qualitative study was undertaken following an inductive reasoning approach. Three occupational therapists working within stroke rehabilitation were purposively recruited. Data were gathered through semi-structured interviews and analysed using inductive thematic analysis to generate four significant themes.

**Findings:** Findings generated the following themes: (1) Acknowledging the impact stroke has on sexuality. (2) Consideration of the appropriate stage of the stroke

journey to address sexuality; identifying home/community environments to be more appropriate, utilising a multi-disciplinary approach to facilitate this. (3) Barriers to addressing sexuality, including staff's personal feelings, inexperience, limited resources and ageism. (4) Facilitators to addressing sexuality, including approaching the topic appropriately and utilising the role of occupational therapy and resources.

**Conclusion:** This study highlights the gap in the stroke journey where sexuality lies and the role occupational therapists can play in closing this gap. Utilising facilitators such as resources and a multi-disciplinary approach can overcome barriers to practice including embarrassment, prejudice and inexperience.

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## **A qualitative study of Stroke survivors' experience of sensory changes**

**Dua'a Alwawi**

The University of Jordan, Jordan

**Background:** Previous literature examined tactile and proprioceptive changes after stroke; however, the lived experience of changes in all sensory systems is still a gap in the literature.

**Purpose:** To gain understanding of stroke survivors' experience of sensory changes and how sensory changes impact participation in daily life activities. **Method.** This study utilized a qualitative description method. Researchers used semi-structured interviews with probing questions. Inductive content analysis approach was used to analyze the data. Researchers recruited thirteen stroke survivors ≤ 75 years old who participated in a community program.

**Findings:** Emerging themes included Daily Life Impact of Sensory Function Changes and Experience and Timing of Sensory Changes. Participants experienced changes in various sensory systems including touch and proprioception, visual, auditory and taste. Survivors also reported sensitivity to environmental stimuli. Sensory changes affect survivors' participation in daily life. **Implications.** Results from this study inform health care providers about stroke survivors' sensory needs to help them design interventions that match their needs.

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## **Subclinical seizures in Post-Stroke patients in sub-saharan africa: Literature review**

**Emmanuel Orji**

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Stroke is the second leading cause of death globally and is ranked the highest (67.3%) contributor to the global burden of neurological disorders (Forouzanfar et al; 2017). In the last 20 years as of 2010, stroke was reported to have greatly increased in low- to middle-income countries (LMIC); 80% of global stroke burden is those countries (O'Donnell et al; 2010).

Non-convulsive seizures and non-convulsive status epilepticus (NCSE) (both examples of subclinical seizures) have been shown by advanced countries to be a frequent occurrence in comatose patients and especial those whose condition is because of stroke. This occurrence have been shown to worsen patient condition (Scozzafa et al.; 2010) and in some cases cause death.

Existing studies have shown that seizures are common neurological occurrences in stroke patients; especially at the early stage. Inasmuch as some factors, such as stroke severity on admission, cortical involvement and stroke subtype have been associated with post-stroke seizures, the fact that medical and neurological complications of stroke, especially those occurring in the very acute phase of the incidence might have on such a risk has never been adequately explored.

In the current study the aim is to highlight that a big gap exist in sub-Saharan Africa as regards management of patients with post stroke seizures.

A study by Pezzini et al (2013) showed that a study carried out on 516 patients with first-ever acute stroke showed that out of 436 patients with ischemic stroke and 80 with intracerebral hemorrhage, 20 (3.9%) developed early seizure. Those patients with early seizure had a higher burden of complications compared with those without it. The case cited above is in patients with clinical seizures, how much more in patients whose seizure is subclinical.

The burden of the above condition is worse in sub-Saharan Africa because of lack of adequate facilities to run clinically based electroencephalography (EEG) in wards during patient admission. In the most populous country in Africa for instance, there is only none know health facility where EEGs are done in the wards for patients with seizure or those suspected to have subclinical events.

It is therefore imperative that more study is done in this field of neurology in the above stated area in order to maximize patient care and avert the possibility of increased mortality in stroke patients.

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## Reliability of clinical dwi mismatch approach to predict patient with the probability of large infarct growth: A comparison of the percentage of infarct growth and clinical dwi mismatch status of the patients with Acute Ischemic Stroke

**Christian N**

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**Purpose:** The purpose of this study is to highlight the reliability of clinical DWI mismatch (CDM) in the identification of patients with large infarct growth.

**Methods:** We prospectively reviewed 21 ischemic stroke patients who underwent DWI imaging within 72 hours from stroke symptoms onset. Description of images was made by experienced radiologists. Lesion volumes were assessed by manually outlining the DWI infarct lesions area. The percentage of infarct growth was calculated by dividing the difference between second and first infarct volume by the first infarct volume times 100. The NIHSS scores were assessed by an experienced neurologist. CDM was defined as NIHSS score  $\geq 8$  and initial infarct volume on DWI  $\leq 25$  mL.

**Statistical Tests:** We assessed the relationships of variables within different groups of CDM using nonparametric

tests— Kruskal-Wallis and chi-square test. Sensitivity and specificity of CDM to predict large infarct growth were tested by using crosstabs table.

**Results:** CDM was present in 36.8% of our patients and was associated with the percentage of infarct growth ( $P < .01$ ). The mean percentage growth was high in patients with CDM (211.8%) while it was low in the group of patients without CDM (5.7%; group B and 10.7%; group C). The sensitivity and specificity of CDM to predict infarct growth was 77.8% vs 100% with a likelihood ratio of 15.4 ( $P = .0004$ ).

**Conclusion:** The approach of comparing CDM and percentage of infarct growth proved that the concept of CDM can accurately indicate the existence of a large volume of tissue at risk of infarction—penumbra.

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## Prevalence of extracranial carotid artery stenosis and risk factors in first Ischemic Stroke patients: Our experience in northeast india and review of literature

**Prabuddha J Das**

Guwahati Neurological Research Centre, India

**Objective:** To assess the prevalence of carotid artery stenosis and risk factors in stroke patients of northeast India. This is a prospective hospital-based study on 157 first ischemic stroke patients of the region.

**Method:** A total of 157 patients presenting with first ever sudden onset focal neurological deficit lasting for more than 24 hours due to acute ischemic brain infarction were selected, after excluding other causes of focal neurological deficit by imaging. All extracranial carotid arteries were evaluated with carotid ultrasonography. Forty-four patients also had computed tomography (CT) angiography of intracranial and extracranial arteries. Risk factors of stroke were recorded for each patient. Results: Only 8.92% patients had significant extracranial carotid artery stenosis.

There was high prevalence of intracranial artery stenosis compared to extracranial artery stenosis in patients who had CT angiography. There was high prevalence of hypertension, dyslipidemia and diabetes. Increased age and male sex were important factors associated with first ischemic stroke.

**Conclusion:** The prevalence of significant extracranial carotid artery stenosis is low in northeast Indian patients with first ischemic stroke, indicating that it is not a major cause of ischemic stroke in this population. There may be high prevalence of intracranial artery stenosis compared to extracranial artery stenosis.

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