# Cerebral Venous Thrombosis Presenting as Simultaneous Intracerebral Hemorrhage

## Abstract

A 37-year-old pregnant woman presented to the emergency department with central facial palsy, ipsilateral right hemiparesis, and seizures. Brain Computed Tomogram (CT) showed intracerebral hemorrhage (ICH) and bilateral frontal edema. Magnetic resonance imaging (MRI) revealed multifocal hemorrhages consistent with a diagnosis of multiple simultaneous ICH (MSICH) (Figure 1). We suspected cerebral venous thrombosis (CVT) and performed a MR angiogram confirming this diagnosis (Figure 2). Upon admission, the patient was treated with low-molecular-weight heparin and transitioned to direct oral anticoagulation at discharge. Non traumatic MSICH is a rare imaging finding with high mortality, usually arterial in origin (1). However, since treatment options vary, cerebral venous thrombosis should always be considered in the differential diagnosis, especially in young female patients with known risk factors, such as pregnancy and puerperium (2-4). MRI modalities (Echo-GRE) are valuable tools in identifying ICH when CT is inconclusive (5).

**Pediatric Brain Stem Cavernoma: A Therapeutic Conundrum**

*No abstract available*

# The TeLeo Program: Tele-education in pediatric oncology as a tool to support training programs in Latin America

## Abstract

The TeLeo Program offers a free-access 2-year online learning program to support fellowship programs in pediatric oncology, enhance networking opportunities, and facilitate the exchange of context-specific, educational content within the pediatric oncology community in training in Latin America. In its first edition beginning in 2021, 185 fellows from 40 centers in 12 Latin American countries were enrolled. Additional courses for other healthcare professionals related to oncology in the region were produced to further support the program. A digital platform was created to allow users to easily access learning activities after registration, with 7075 professionals currently registered.

**Keywords:** Latin America; learning platform; pediatric oncology; virtual education.

# Serum 25-Hydroxyvitamin D Levels and Disease Activity in Patients with Systemic Lupus Erythematosus: An Exploratory Study in Western Mexico

**Background and objectives:** The correlation between diminished 25-hydroxyvitamin D (25-(OH)D) concentrations and heightened disease activity in systemic lupus erythematosus (SLE) patients remains contentious, as clinical studies have yielded conflicting outcomes-some propose a potential link, while others assert no relationship exists. Nonetheless, all studies report a significant prevalence of low 25-(OH)D levels among SLE patients. This study aimed to assess the frequency of low serum levels of 25-(OH)D in Mexican patients with SLE and to evaluate the correlation between 25-(OH)D deficiency or insufficiency and disease activity levels.

**Materials and methods:** This retrospective analysis comprised patients admitted to our hospital from November 2022 to October 2023, diagnosed with SLE, and had their serum 25-(OH)D levels tested upon admission. The frequency of low levels of 25-(OH)D was assessed, and clinical and demographic data were gathered to examine potential causes linked to 25-(OH)D deficiency or insufficiency.

**Results:** A total of 61 patients were included, and 87% (n = 53) had low serum 25-(OH)D levels. Patients with 25-(OH)D deficiency (n = 21) were significantly younger (mean 23 vs. 39 years, *p* = 0.04) and had higher protein levels in 24 h urine protein (1.8 vs. 1.1 g/24 h, *p* = 0.006) than patients who presented only 25-(OH)D insufficiency, without significant differences in other indicators of disease activity.

**Conclusions:** In this investigation, patients with SLE exhibited a high frequency of low serum levels of 25-(OH)D, consistent with existing literature; however, no significant correlations were identified between 25-(OH)D levels and indicators of disease activity. These findings require validation in subsequent research.

**Keywords:** 25-hydroxyvitamin D; disease activity; systemic lupus erythematosus; vitamin D.

# Association of Protein Energy Wasting and Oxidative Stress Markers in Peritoneal Dialysis

## Abstract

**Introduction:** Protein-energy wasting (PEW) is highly prevalent among patients undergoing peritoneal dialysis (PD), and it has been proposed that oxidative stress (OS) may contribute to its pathogenesis. This study was an attempt to determine the association between the presence of PEW and OS levels in PD patients.

**Methods:** This analytical cross-sectional study involved 62 clinically stable PD patients aged ≥ 18 years, between September 2017 and July 2018. PEW was assessed using PEW definition criteria, 7-point Subjective Global Assessment (SGA), and Malnutrition-Inflammation Score (MIS). Redox state was evaluated through oxidants (lipoperoxides, 8-Isoprostane, nitric oxide), antioxidants (superoxide dismutase, catalase, glutathione peroxidase-GPx, total antioxidant capacity), and oxidative DNA damage [8-hydroxy2'-deoxyguanosine-8-OHdG, 8-Oxoguanine-DNA-N-Glycosylase-1(8-OHdG)].

**Results:** Among study participants, 38 (61.2%) were males and 24 (38.8%) were females; 22 (35.4%) had diabetes mellitus [males 15 (68.1%) and females 7 (31.8%)]. The average PD duration was 11 (4-27) months, body mass index: 23.5 ± 4.1 kg/m2, energy intake: 1138.4 ± 394.2 kcal/day, and protein intake: 50.2 ± 18.5 g/day. Prevalence of PEW varied based on the assessment method used (50-88.7%). Plasma 8-OHdG levels were higher in patients with PEW evaluated by MIS (0.1 [0.1-56.4] vs. 1.8 [0.1-74.7] ng/mL, P = .028), while GPx activity was lower in the presence of PEW as measured by MIS (3.6 [3.1-7.6] vs. 2.8 [1.2-10] nmol/min/mL, P = .021). No significant differences were observed between PEW markers and remaining OS levels.

**Conclusions:** In PD patients with PEW, assessed by MIS, 8-OHdG was significantly increased, while GPx activity was significantly low.

# The Association of Anti-Sm with Osteopontin Related to Cognitive Impairment in a Pristane-Induced Lupus BALB/c Mice Model

## Abstract

The BALB/c model of pristane-induced lupus (PIL) exhibits cognitive impairment features resembling neuropsychiatric lupus (NPLSE). Osteopontin (OPN) is associated with disease activity in SLE; however, its involvement in NPLSE is not yet entirely determined. Our study aims to elucidate the contribution of full-length OPN (OPN-FL) plasma expression, OPN N-half, and *Spp1* to cognitive impairment in the PIL mice model. A total of 76 female BALB/c mice were divided into pristane (P), pristane plus lipopolysaccharide (P plus LPS) and control (C) groups. In behavioral tests, the P group showed cognitive and visuospatial memory impairment. Elevated plasma OPN FL levels were found in P compared to C groups (177.7 ± 90.1 vs. 105.9 ± 56.8 ng/mL, *p* = 0.009) and OPN N-half was different between P and C groups (673.5 ± 144.6 vs. 624.5 ± 377.7 ng/mL, *p* = 0.028) and P plus LPS and C groups (624.5 ± 377.7 vs. 381.4 ± 205.0 ng/mL, *p* = 0.001). Anti-Sm correlated with OPN-FL (r = 0.269, *p* = 0.0150). The relative expression of *Spp1* in the brain was 2.5 and 2.7-fold higher in P and P plus LPS groups, respectively. The evidence suggests that OPN is related to cognitive impairment in PIL mice and might play a relevant role in the detrimental neurological conditions of NPSLE.

**Keywords:** anti-Sm antibodies; neuropsychiatric lupus; osteopontin; pristane-induced lupus; spatial learning and memory; systemic lupus erythematosus.

# Elastic static power, its correlation with acute respiratory distress syndrome severity: A Bayesian post-hoc analysis of the Mechanical Power Day cross-sectional trial

## Abstract

**Objective:** The relationship between different power equations and the severity of acute respiratory distress syndrome (ARDS) remains unclear. This study aimed to evaluate various power equations: total mechanical power, total elastic power (comprising elastic static and elastic dynamic power), and resistive power, in a cohort of mechanically ventilated patients with and without ARDS. Bayesian analysis was employed to refine estimates and quantify uncertainty by incorporating a priori distributions.

**Design:** A Bayesian post-hoc analysis was conducted on data from the Mechanical Power Day study.

**Setting:** 113 intensive care units across 15 countries and 4 continents.

**Patients:** Adults who received invasive mechanical ventilation in volume-controlled mode, with (mild and moderate/severe ARDS) and without ARDS.

**Interventions:** None.

**Main variables of interest:** ARDS, Elastic static power.

**Results:** Elastic static power was 5.8 J/min (BF: 0.3) in patients with mild ARDS and 7.4 J/min (BF: 0.9) in moderate/severe ARDS patients. Bayesian regression and modeling analysis revealed that elastic static power was independently correlated with mild (a posteriori Mean: 1.3; 95% Credible Interval [Cred. Interval]: 0.2-2.2) and moderate/severe ARDS (a posteriori Mean: 2.8; 95% Cred. Interval: 1.7-3.8) more strongly than other power equations.

**Conclusions:** Elastic static power was found to have the strongest correlation with ARDS severity among the power equations studied. Prospective studies are needed to further validate these findings.

**Keywords:** ARDS; Elastic static power; Invasive mechanical ventilation; Mechanical power; PEEP; Poder elástico estático; Poder mecánico; SDRA; VALI; Ventilación mecánica invasiva.