AWARD FOR THE HIGHEST SCORE DURING THE ABSTRACT REVISION PROCESS FOR ORIGINAL RESEARCH, 2nd PLACE:

02. FACTORS ASSOCIATED WITH GREATER IN-HOSPITAL FUNCTIONAL RECOVERY AFTER ACUTE ISCHEMIC STROKE WITH A SOCIAL SERVICE PROGRAM IN PHYSICAL REHABILITATION.

Fernando Tienda-López[1], Ricardo López-Soto[2], Ana Gabriela Cruz-Ramírez[1], Diego Alemán-Torres[1], Andrea De Koster-Gámez[1], Diego Alejandro Ortega-Moreno[1], Pablo Emilio Reyes-Guzmán[1], Óscar Alejandro Cavazos-de Luna[1], Mónica Adriana Medellín-Gómez[1], Elizabeth Rojas-Márquez[1], Fernando Góngora-Rivera[3]

[1] Medical Student. Faculty of Medicine of the Universidad Autónoma de Nuevo León, Monterrey, México

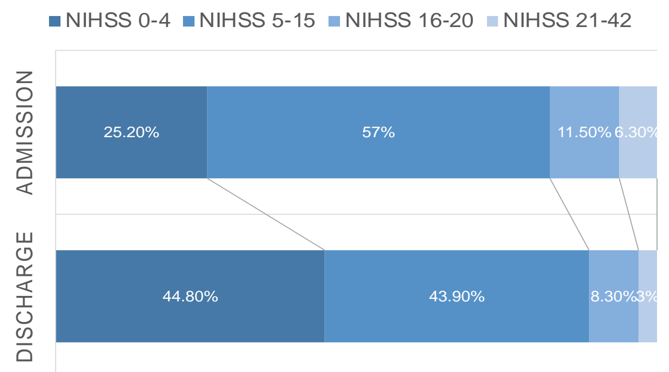
[2] Research intern. Neurology Service, "Dr. José Eleuterio González" University Hospital, Universidad Autónoma de Nuevo León, Monterrey, México

[3] Neurologist, professor and level 2 researcher of the national system of researchers in Mexico. "Dr. José Eleuterio González" University Hospital, Universidad Autónoma de Nuevo León, Monterrey, México

https://www.youtube.com/live/fSpXH-3Xy5w?t=20004s

BACKGROUND: Acute Ischemic Stroke (AIS) is one of the main causes of morbidity and mortality worldwide. In this pathology, early physical rehabilitation (<72 hours) is a challenge in public hospitals in Mexico. **AIM:** Evaluate the factors that influence the effectiveness of early rehabilitation after AIS. **METHODS:** Observational, prospective, and analytical study. The sample included all AIS patients admitted from 2022-2024 in the Neurology Service of the "Dr. José Eleuterio González" University Hospital of the UANL and registered in the stroke registry i-Registro-Neurovascular (iReNe). All the patients received early rehabilitation by students of the Medical Technical School in Physical Rehabilitation in the Neurovascular Care Unit of the Neurology Service. The change at admission and discharge in the Lovett, Ashworth, Barthel, and NIHSS scales was evaluated. Descriptive statistics were performed. A logistic regression model was conducted to evaluate the predictors of a reduction in NIHSS score≥4. We considered significance at $p<0.05$ with 95% CI, using SPSSv25 for statistical analysis. **RESULTS:** A total of 296 patients were included, 149 (50.3%) were female, mean age 61.4±12.9 years, mean 4.0±3.4 rehabilitation sessions. The average length of stay was 7.0±4.9 days. The most prevalent risk factors for AIS were hypertension (55.9%), type 2 diabetes mellitus (41.3%) and sedentary lifestyle (39.5%). There was a significant improvement in the median admission and discharge times in NIHSS (8 IQR 4-13 vs 5 IQR 2-11, $p<0.001$), Barthel (40 IQR 20-65 vs 45 IQR 20-75, $p<0.001$), Lovett (3 IQR 1-4 vs 3 IQR 2-4, $p<0.001$) and Ashworth (0 IQR 0-1 vs 0 IQR 0-1, $p=0.003$); the percentage of patients who showed some improvement was 55.9%, 25.8%, 32.2% and 11.8%, respectively. The 44.8% were discharged with NIHSS≤4; 25.1% of patients presented a significant reduction in NIHSS≥4, and it was associated with female gender (OR 2.033, IC95 1.092-3.785, $p=0.024$), tobacco withdrawal (OR 3.111, IC95 1.321-7.328, $p=0.009$) and previous use of antithrombotics (OR 3.015, IC95 1.455-6.248, $p=0.003$). **CONCLUSION**: Gender, smoking, and use of antithrombotics influence early recovery from AIS. Involvement of students in rehabilitation facilitates functional recovery during hospitalization and represents an efficient and low-cost strategy specially in developing countries like Mexico, being beneficial for students, hospitals and above all, for patients.

Figure: Change in NIHSS Scores from Admission to Discharge in Acute Ischemic Stroke Patients Undergoing Early Rehabilitation.



Key Words: Ischemic Stroke, Risk Factors, Stroke Rehabilitation, Rehabilitation Centers.