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# Cognitive impairment at 3, 6 and 12 month after the first-ever stroke among lebanese survivors: Rate and risk factors

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**Introduction**: The objectives of this study were to calculate the rate of <u>cognitive</u> impairment among Lebanese stroke survivors at 3, 6 and 12 month post stroke, and to identify the characteristics and associated risk factors.

**Methods**: A multicenter longitudinal prospective study was conducted in 10 hospitals from Beirut and Mount Lebanon for a 15-month period. Mini-Mental State Examination, modified Rankin Scale, Short Form Health Survey (SF12), and NIHSS were used to assess the <u>cognitive function</u>, the disability degree, the quality of life, and the stroke severity, respectively. Univariate and multivariable analyses were performed to characterize the predictors of post stroke cognitive impairment.

Results: High rate of cognitive impairment was found during the first 3 months' post stroke (74.8%) where a severe damage occurred in 53.7% of survivors. A significant improvement of 37% was highlighted at 1-year post stroke (p<0.001). Age was the main predictor of severe cognitive decline in the three time periods (AOR $\approx$ 3, p<0.05). Severe cognitive impairment was positively associated with sedentary behavior (AOR=3.062, p=0.033), depression (HADS $\geq$ 11) (AOR=2.536, p=0.049), and high NIHSS scores (AOR=3, p=0.009). Mild cognitive impairment was induced by anxiety (HADS $\geq$ 11) (AOR=2.7, p=0.023) and depression (AOR=3.5, p=0.017). Left hemisphere stroke was an independent risk factor of severe cognitive impairment at 1-year post stroke. Inversely, females (AOR=0.09, p=0.027), high educational level (AOR=0.2, p<0.02), employment post stroke (AOR=0.3, p=0.023), high PCS of QoL (AOR=0.8, p<0.001), use of anti-diabetic treatment post stroke (AOR=0.17, p=0.016) play a protective role for the cognitive function.

#### **Biography**

I am a BSN and MPH graduate from Lebanese University, and currently a Ph.D. student in Pathology and Clinical Research, Paris-Est Créteil University, Paris, France, working on neurologic, cognitive, <u>psychiatric</u>, and physical diseases. In addition, I am working as a Clinical Research Coordinator since 2018 at the Center for Infectious Diseases Research (CIDR), American University of Beirut Medical Center (AUBMC), Hamra, Beirut, Lebanon. Our field of research is Infectious and Immunology diseases.

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