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METABOLIC SYNDROME AND ALL-CAUSE MORTALITY IN PATIENTS WITH ACUTE ISCHEMIC STROKE

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Objectives: Metabolic syndrome is associated with increased risk of ischemic stroke. However, its relation with all-cause mortality among patients with ischemic stroke has not been well studied. We examined the relationship between metabolic syndrome and all-cause mortality among patients with acute ischemic stroke.

Methods: We analysed data from the China Antihypertensive Trial in Acute Ischemic Stroke, a randomized trial in 4,071 patients with acute ischemic stroke and elevated systolic BP (SBP). Among them, 3,473 patients with measures of metabolic syndrome components were included. Metabolic syndrome was defined as the presence of 3 of the following 5 factors: abdominal obesity (waist circumference ≥ 90 cm for men and ≥ 80 cm for women), elevated triglycerides (≥ 150 mg/dL), reduced HDL-cholesterol (< 40 mg/dL for men and < 50 mg/dL for women), elevated blood pressure (BP, systolic ≥ 130 and/or diastolic ≥ 85 mmHg), and elevated fasting glucose (fasting glucose ≥ 100 mg/dL). Patients were followed-up at 3 and 12 months.

Results: Mean age was 61.7 years and 63.5% of participants were male. Compared to patients without metabolic syndrome, those with metabolic syndrome had higher waist circumference (90.7 vs. 83.7 cm), body-mass index (25.7 vs. 23.9 kg/m²), triglycerides (193.2 vs. 100.7 mg/dL), fasting plasma glucose (133.4 vs. 94.8 mg/dL), and systolic BP (166.6 vs. 165.3 mmHg), but lower HDL-cholesterol (46.3 vs. 55.5 mg/dL). After adjusting for age and sex, odds ratios (95% CI) for recurrent stroke, cardiovascular disease, and all-cause mortality at 3 months were 0.91 (0.54, 1.54; $p=0.73$), 1.39 (0.88, 2.19; $p=0.15$), and 1.74 (1.09, 2.79; $p=0.02$), respectively. Likewise, hazard ratios (95% CI) for recurrent stroke, cardiovascular disease, and all-cause mortality at 12 months were 0.91 (0.66, 1.27; $p=0.59$), 1.09 (0.80, 1.47; $p=0.59$), and 1.47 (1.06, 2.03; $p=0.02$), respectively.

Conclusion: Our study indicated that metabolic syndrome was significantly associated with increased all-cause mortality among patients with ischemic stroke. Treatment of individual components of metabolic syndrome might reduce mortality among patients with acute ischemic stroke and metabolic syndrome.

Biography

Jing Chen is an Associate professor of Medicine and Adjunct Associate Professor of Epidemiology at Tulane University School of Medicine and Tulane University School of Public Health and Tropical Medicine respectively. He has published more than 80 papers in reputed international journals and presented his research throughout the globe.

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