

EXCESSIVE INCIDENCE OF STROKE IN IRAN: EVIDENCE FROM THE MASHHAD STROKE INCIDENCE STUDY (MSIS), A POPULATION-BASED STUDY OF STROKE IN THE MIDDLE EAST

Reza Kiani

Valiasr Hospital, Fasa University of Medical Sciences, Iran

Background & Purpose: The epidemiology of stroke and its subtypes in the Middle East is unclear. Most previous studies have been performed in Western countries, and incidence rates are unlikely to apply in the Middle East. We aimed to determine the incidence of stroke in Mashhad, North-eastern Iran.

Methods: During a 12-month period (2006–2007), we prospectively ascertained all strokes occurring in a population of 450 229. Multiple overlapping sources were used to identify people with stroke. A large number of volunteers assisted in finding stroke patients not admitted to hospital. Potential cases were reviewed by a group of stroke experts before inclusion.

Results: A total of 624 first-ever strokes occurred during the study period, 98.4% undergoing imaging. Despite a relatively low crude annual incidence rate of first-ever stroke FES (139; 95% CI, 128 to 149) per 100 000 residents, rates adjusted to the European population aged 45 to 84 years were higher than in most other countries: 616 (95% CI, 567 to 664) for ischemic stroke, 94 (95% CI, 75 to 113) for intracerebral hemorrhage, and 12 (95% CI, 5 to 19) for subarachnoid hemorrhage. Age-specific stroke incidence was higher in younger patients than is typically seen in Western countries. Comparison of age-specific incidence rates between regions revealed that stroke in Mashhad occurs approximately one decade earlier than in Western countries.

Conclusions: The results of this study provide evidence that the incidence of stroke in Iran is considerably greater than in most Western countries, with stroke occurring at younger ages. Ischemic stroke incidence was also considerably greater than reported in other regions.

dr.Rezakiani@yahoo.com