

POPULATION ATTRIBUTABLE FRACTION OF STROKE RISK FACTORS IN THAILAND

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Purpose : Background & Objective

Stroke is the second leading cause of death and disability in Thailand. Diminution of modifiable risk factors can reduce opportunity contributed to stroke. According to the uncertain impact of each factor on stroke, the aim of this study was to prioritise and measure the impacts of modifiable risk factors on stroke in Thailand. The results are demonstrated in Population attributable fraction(PAF).

Method

Meta-analysis / Population-based cohort studies on stroke risk factors were searched in databases (PubMed, EMBASE, Google Scholar, etc.) to obtain Odd ratios (OR) or Relative risk (RR) of stroke patients compared with general population. The exposure prevalence to the relevant risk factors in Thailand was obtained from secondary data in three non-communicable disease surveillance systems, The National health information system for morbidity and mortality surveillance (NHES), The behavioral risk factor surveillance system(BRFSS) and National Health Security Office survey (NHSO), to calculate population-attributable fraction.

Result

Twenty-nine epidemiological studies were reviewed. Most common exposure prevalence for stroke risk factor is male current smoker accounted for 42.3%. The reported odd ratios were ranged from 1.17 to 4.59. Stroke is significantly correlated with Atrial fibrillation (OR=4.59, 3.66-5.75), Systolic BP > 140 mmHg (OR=2.9, 2.49-3.37) ,Diabetes (OR=2.24, 1.94-2.59) and Obesity (OR=1.75, 1.40-2.20). Taking into account the OR and the exposure prevalence, the highest PAF was estimated for elevated Systolic BP >140mmHg, (27.03%, 22.51-31.61) followed by male current smoker, (22.08%, 17.17-27.13), Hypertriglyceridemia(16.98%, 3.87-31.16) and Diabetes(9.94%, 7.72-12.40) respectively.

Conclusion

This study demonstrates the magnitude of important modifiable stroke risk factors which could contribute to establish stroke prevention and control strategies in health care policy. In Thailand, hypertension and diabetes control program should be emphasized as well as smoking cessation.

Keywords:

stroke, Thailand, population attributable fraction, risk factor, behavioral impact

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