LETTER TO EDITOR

Prevalence of Risk Factors and its Gender Difference Among Stroke Patients

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Sir,

Stroke is one of the leading causes of morbidity in Malaysia. According to the Asia Pacific Consensus on Stroke Management[1], the burden of stroke will be increasing most in developing countries in the next 30 years. Cerebrovascular accidents contributed 10% of medically certified deaths and were the fourth leading cause of death in the Malaysian Government hospitals in 2000[2].

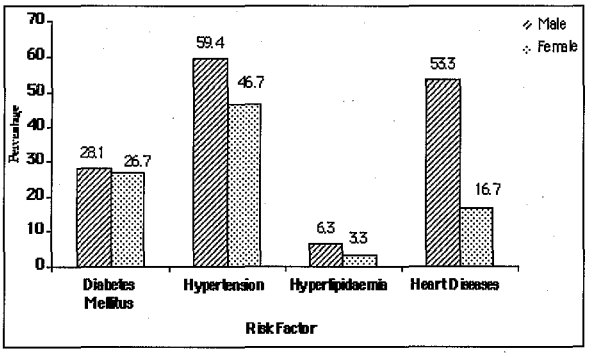
A retrospective cross-sectional study was conducted among newly registered stroke patients in Besut Hospital during year 2001. Stroke was defined as a sudden onset of clinical symptoms and signs of focal loss of cerebral function lasting more than 24 hours. We reviewed the medical records of all stroke patients to determine the incidence of stroke in Besut District, identify prevalence of concurrent diabetes, hypertension, hyperlipidaemia and heart diseases, and the gender difference of prevalence of these risk factors.

There were 62 stroke patients who fulfilled the criteria. The incidence was 46.0 per 100,000 population compared to the Malaysian, 68.4 in 1997[3]. The incidence was higher among males than females. Majority presented at the age of 50 years or older (92.0%). There were 52% males and they were affected at younger age compared to females (p=0.102). Among all, 53.2% had hypertension, 35.5% had heart diseases, 27.4% had diabetes mellitus and 4.8% had hyperlipidaemia. Males had higher a prevalence of all risk factors compared to females. There were significantly more males than females having heart diseases as risk factor (p<0.001), and multiple risk factors (p=0.020).

Age is the most important risk factor for stroke. For each successive 10 years after the age of 55 years, the stroke rate doubles[4]. The risk for stroke is 4 times higher for those with blood pressure of more than 160/95 mm Hg[5], twice for diabetes mellitus patients with blood glucose of more than 13.4 mmol/L and HbA_{1c} of more than 10.7%[6], 2-6 times higher in the first week for those who had anterior wall infarction[5], six times for those with atrial fibrillation[4] and twice for those with high density lipids less than 0.90 mmol/L and triglycerides more than 2.30 mmol/ L[6].

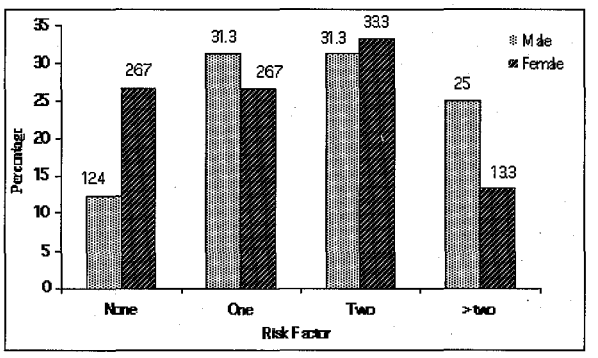
Males with heart diseases and multiple risk factors are at risk of stroke. Treating hypertension, diabetes, hyperlipidaemia and acute myocardial infarction and modification of life-style may control the occurrence of stroke. Public awareness regarding stroke should be incorporated into the current healthy life style campaign and focused on high-risk groups. The community should be educated about risk factors, prevention and the importance of having regular screening of stroke risk factors.

In conclusion, stroke is a condition with high incidence and morbidity, leaving a large proportion of survivors with significant residual physical, cognitive and psychological impairments. In view of the increasing older population and emergence of new effective therapies that lead to the increasing number of survivors of stroke, the best treatment for stroke is prevention.



*Only heart diseases were significantly different between gender (p< 0.001)

Fig. 1: Gender difference in the risk factors of stroke



*Males had significantly more multiple risk factors compared to females (p=0.020)

Fig. 2: Gender difference in the multiplicity of stroke risk factors

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