

## **ABSTRACT**

### **Background**

Stroke is one of the leading causes of death and majority of the stroke burden was observed in middle- and low-income countries. Understanding the stroke types, risk factors, complications and how they are associated with the outcomes can be useful in healthcare planning and resource allocation. However, there was no study about the stroke types, risk factors, clinical features and outcomes in Myanmar.

### **Objectives**

To describe the types, risk factors, clinical features and outcomes of stroke patients in 1,000 Bedded General Hospital, Nay Pyi Taw.

To analyse how the risk factors, types and clinical features of stroke associate with the outcomes of stroke patients in 1,000 bedded General Hospital, Nay Pyi Taw.

### **Method**

This study was a review of medical records of stroke admission during 2017 in 1,000 Bedded General Hospital, Nay Pyi Taw, a tertiary hospital. Data from CAMRS with ICD 10 codes of I60, I61, I62, I63, I64, I67, I68 were extracted. Paper-based medical records of those patients were searched and reviewed. Final diagnosis, risk factors, clinical features, complications and outcomes were collected from the paper-based medical records.

## Results

Stroke admissions were 4% of total admission in 2017. Among the stroke admissions, 60.8% were male, 65.3% were from rural area, with mean age of 60.4 years  $\pm$  14.4. Haemorrhagic stroke was the most common type of stroke which was 48.8% of stroke patients followed by 43.4% of ischaemic stroke, 0.2% of both ischaemic and haemorrhagic stroke, 7.6% of unspecified stroke. The median duration from onset of stroke to admission to hospital was 1 day (IQR 0-3) and from the time of admission to the time of treatment received was 10 minutes (IQR 5-20). Hypertension (79.7%) was the most common risk factor followed by tobacco usage (24.6%), alcohol drinking (20.6%), DM (17.7%), previous stroke/TIA (10.1%), cardiovascular diseases (6%). Among stroke admissions 68.5% discharged normally (improved) and 25.2% S/L, 5.4% expired, 0.9% absconded. Tobacco usage, history of cardiovascular diseases, history of previous stroke or TIA were more common in ischaemic stroke and hypertension was more common in haemorrhagic stroke ( $p < 0.01$ ). Admission blood pressure ( $p < 0.01$ ) and blood sugar level ( $p = 0.01$ ) were higher in haemorrhagic stroke patients. Conscious level (assessed by GCS) was better in ischaemic stroke patients ( $p < 0.01$ ). Fever during the hospital stay was more common in haemorrhagic stroke ( $p < 0.01$ ). Haemorrhagic type of stroke (AOR 1.6), reduce conscious level (decrease in GCS) (AOR 0.67) and fever during hospital stay (AOR 2.4) were associated with poor prognosis (S/L, Abs, expired).

## Conclusion

Haemorrhagic stroke type was the most common stroke type and ICH was the most common subtype and haemorrhagic stroke was associated with poor prognosis.

Hypertension was the most common risk factor and the proportion of hypertension among stroke patients was highest in the South, East and South-East Asia. Studies to explore how to improve stroke outcomes, how to prevent and control fever among stroke patients during hospital stay, how to reduce the stroke incidence by controlling the risk factors of stroke were warranted.