Stroke Registry - Relevance and Contributions

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Stroke is turning into a major public health problem in developing countries, particularly in the Asian region. This is attributed to urbanization, increase in life style diseases, adoption of modern life style and increasing life expectancy. Stroke is the third largest cause of mortality globally and the 4th in Malaysia [1]. Though the overall incidence and prevalence of stroke is not much different in the Asian region, differences in the clinical pattern and patho-physiological subtypes have been described (more strokes in the younger age group, stroke related to infection and greater number of lacunar strokes compared to large vessel disease) [2-5]. Major advances have taken place in the field of stroke management in the past decade, such as newer anti-platelet and antithrombotic agents, thrombolytic therapy, stroke units and improved interventional therapies. Based on this new evidence, updated Clinical Practice Guidelines have been published by various professional societies. The latest Malaysian Clinical Practice Guidelines for Stroke was released in 2011.

Realizing the need for more population based data on various aspects of stroke and to evaluate the extent and quality of stroke care in the community, National and regional Stroke Registries were established in most of the developed world, since the turn of the century. [6-7] organized services are vital to reduce the burden of stroke, and stroke registers are recognized as an invaluable tool in planning and monitoring the performance of stroke services.

In a morbidity and mortality report published by Center for Disease Control in USA [8] the authors highlight the improvement in quality of stroke care in the centers participating in the Paul Coverdell National stroke registry over a 5 year period; 2005-2009. Compliance rates for 9 out of the 10 measures of quality of care improved, the sole measure that did not improve was provision of antithrombotic therapy at discharge, which already had a compliance rate of 98% and hence little scope for further improvement. Overall the proportion of patients receiving all 10 qualities of care measures increased significantly -21% in TIA cases, 17% in inpatients with ischemic stroke, 17% in hemorrhagic strokes and 11% in outpatient ischemic strokes.

Basic epidemiological data are essential for proper health care planning and resource allocation. Studies on epidemiology of stroke are few and limited from Asia. Wide geographic spread, gross disparity in the availability of medical facilities, ethnic and cultural diversities and economic disparities pose major challenges to conducting proper epidemiological studies in this region. WHO recommended "Steps Stroke Surveillance System" in developing countries to build stroke data base according to local circumstances, namely; step1-events in the hospital, step2-related to fatal events in the community and step3-related to nonfatal events in the community 9. Inclusion of all the 3 steps represents a full stroke register which includes hospital admission rates, case fatality and mortality, prevalence and incidence rates. Similar studies have been reported from India [10].

An Asia-Pacific Stroke Workshop was held in Singapore in 2005 and priorities for stroke research in Asia were drawn up[4]. Malaysia has taken the lead and a step in the right direction by establishing a National Stroke Registry in the year 2009 and all those involved have to be commended for this achievement. Norsima *et.al*. report the preliminary observations of this registry in an accompanying article in this issue [11]. Their observations are similar to other reports. Ischemic stroke remains the major category and hypertension the most prevalent risk factor. Measures of quality of care delivery show impressive results, 85.7% received aspirin within 48 hours, 87% were prescribed a statin on discharge, 83% were screened for dysphagia and 75% received rehabilitation and stroke care education. Two indicators that fared poorly were deep vein thrombosis (DVT) prophylaxis and anticoagulation for atrial fibrillation: only 1/3rd patients received these treatments. Logistic issues in monitoring anticoagulation therapy in a rural setting could be one of the reasons for this.

Thrombolytic therapy which is the standard of care for ischemic stroke patients within 4.5 hours of stroke onset was not available in Ministry of Health hospitals during the study period. The concerned persons should take every step to make this form of treatment available in all major hospitals. There is also an urgent need for improving the rehabilitation services in the community, over and above the current model of providing it only at an institutional level. Introduction of community level nursing will reduce the burden of care for hospitals dealing with chronic and disabling diseases like stroke.

The major issue with this study is that the representative data base is limited to only two centers. Every effort must be taken to make it a national level registry, all the regional hospitals must be recruited into the registry and sufficient financial and logistical support must be provided by the government to successfully implement this programme.

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