World Health Organisation defines the clinical syndrome of “stroke” as ‘rapidly developing clinical signs of focal (or global) disturbance of cerebral function with symptoms lasting 24 hours or longer or leading to death, with no apparent cause other than vascular origin’. Worldwide, about 20 million people suffer from stroke each year; 5 million will die as a consequence and 15 million will survive; of those, who survive, 5 million will be disabled by their stroke. Therefore, the global burden of stroke needs to be defined for developed and developing nations. For example, it is estimated that approximately 4.5 million Americans are currently living with the effects of stroke, and that every year another 570,000 will survive a stroke that results in disability. Health and disability management for stroke-survivors in the United States alone costs an estimated 17.1 billion dollars annually.

The Global Burden of Disease (GBD) Study, in 1990, reported 9.4 million deaths in India of which 61,900 were from “Stroke” and the disability adjusted life years (DALYs) lost almost amounted to 28.5 million - nearly six times higher than that due to malaria. When these estimates were projected for the year 2020, Murray and Lopez reported that 61 million DALYs are likely to be lost due to stroke, of these 52 million (84%) will be in the developing countries. Reddy and Yusuf have reemphasized the “Health Care and Economic Consequences” of emerging epidemic of cardiovascular diseases in developing countries.

India will face an enormous socio-economic burden to meet the costs of rehabilitation of “stroke victims” because the population is now surviving through the peak years (age 55-65) of occurrence of stroke (CVD). However, for stroke-prevention planning, reliable epidemiological information on pattern of disease and exposure to major risk factors and morbidity or mortality trends for CVD in defined populations is not available. Recent community surveys for “hemiplegia” presumed to be CVD, identified 320 cases in 145,456 persons, indicating an overall Crude Prevalence Rate (CPR) of 220 per 100,000 persons. Another recent survey on 20,842 rural residents in East India report a crude prevalence rate for stroke in elderly (age 41-60 yrs) at 540/100,000. Furthermore in two prospective stroke studies, during the period 1963-1968 and 1978-1982 in Bombay, using identical methodologies, it was observed that there was a significant drop in case fatality rate (32% to 12%) thereby resulting in a higher survival (68% to 88%) but with residual disability. Thus, these changing trends have posed a major social challenge in occupational rehabilitation and in solving the needs for stroke survivors.

In addition, published reports suggest that CVD occurs at all ages in both sexes and with increasing frequency with advancing age. Prospective studies on acute stroke have shown that hypertension, diabetes mellitus, low normal haemoglobin and tobacco use (smoking / chewing) are important risk factors (RFs). To design effective preventive strategies, WHO has proposed a “Global Stroke Initiative” on STEPwise Approach to Stroke Surveillance with increasing details in data collection. The primary purpose of stroke surveillance system is to provide health workers / policy makers data on risk factors, disability status and health practices. For example, in a preliminary analysis of 100 acute stroke cases (CT confirmed), using WHO STEPwise Approach to Stroke Surveillance, Hastak, et al (2003) reported that at 28 days the overall case fatality rate was 9% and nearly 31% of survivors had severe neurologic disability/handicap whereas 13% had mild disability needing assistance. Only 47% of survivors were independent at the end of 28 days; here 17% were not aware of having “hypertension”. Though such information being selective does not represent stroke morbidity / mortality patterns but it does show the current trends in DALYs in stroke population in the respective communities.

Thus to design stroke prevention strategies, public awareness and health education on warning symptoms of
hypertension and transient ischaemic attacks (TIAs) by optimum use of existing mass media is vital. Lifestyle changes, dietary habits and intensive campaign against tobacco use will prove rewarding. Primary health care teams should receive training on nomenclature and in bedside clinical diagnosis, in the absence of CT facilities in rural and remote areas. Mass screening surveys to identify “hypertensives” and “stroke-prone” subjects, wherever feasible, should be undertaken to prescribe simple, practical, non-costly remedies. The patients’ compliance to clinic reference is usually unsatisfactory; hence, a cadre of medico-social or multipurpose workers to remain in constant contact with such “stroke-prone” individuals will have to be established to ensure regular intake of medicines and control of risk factors. National Councils to liaise between various agencies (health, industry, finance etc.) are essential to coordinate actions at all levels. The political will to legislate National Health Policy in support of above objectives is highly recommended.12

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REFERENCES


Announcement

"Academy of Cardiology at Mumbai - International and Indian Fellowship"

Academy of Cardiology at Mumbai invites applications for above fellowships (one each) beginning January 2005 from eligible candidates. Applications alongwith detailed Curriculum Vitae and two letters of support from seniors in the profession should be sent to Academy of Cardiology at Mumbai, 102 Kirti Manor, SV Road, Santacruz West, Mumbai 400 054 by October 15, 2004.

Eligibility : D.M. or D.N.B. (Cardiology) from recognized centers and age 35 years or below. The fellowship will provide funding for training in interventional/non-invasive cardiology in prestigious centers upto one year. The interviews for selection will be conducted by Academy.