Reduction in global burden of stroke in underserved areas

Sir,

Stroke is a medical emergency, and rapid assessment is required for reaching diagnosis and starting timely management to prevent long-term complications.[1] It is usually associated with a detrimental impact on survival and quality of life of the patient, and a high economic cost.[2] Stroke is a global epidemic and a major public health-care concern as mortality rates are known to vary greatly between countries and geographic regions.[3] Annually, 15 million people worldwide suffer an episode of stroke, of whom, five million die and another five million are left permanently disabled, placing a burden on the family and community.[4]

In a case control study done across 22 nations, five major risk factors were identified that contributed to 80% of the risk for stroke, namely hypertension, waist-to-hip ratio, smoking status, diet-risk score, and physical activity.[5] The primary reason for the high mortality and disability after stroke is because of the increase in risk factors for stroke and inadequate secondary preventive measures (underdetection and undertreatment) in many developing countries.[6,7] In a prospective follow-up of a health survey in England, alcohol abuse was associated with a higher incidence of fatal stroke and cardiovascular risk.[7] In addition, barriers to appropriate treatment included inaccessibility/inadequacy of health-care services, diagnostic modalities, appropriate medication, and treatment facilities for stroke.[8,9]

As discussed earlier, as stroke is a global health-care concern, the strategy for its management has to be multifaceted and every attempt should be taken to rope in multiple sectors toward a comprehensive approach for the best possible outcome. It is important to realize that developing countries often possess causative factors different from those in developed countries, such as accessibility of health care, availability of resources, and sociocultural beliefs, and thus developing countries require targeted interventions to address their particular needs, as opposed to a one-size-fits-all approach.[8]

While designing interventions for reducing the burden of stroke, the concept of epidemiological triad (agent-host-environment) in the causation of stroke has to be taken into account, namely, feasible public health-care interventions aimed primarily at changing the lifestyle associated with the risk for stroke in the form of promoting a healthy diet, physical activity, and cessation of tobacco. As discussed above, measures for preventing alcohol abuse by means of health-care promotion activities is a must in bringing down the incidence of stroke to a significant extent.

Secondary prevention (early diagnosis and prompt treatment) is indispensable in ascertaining long-term outcome of patient survival, disability, and quality of life. Considering the unavailability of inexpensive basic equipment/drugs and financial constraints for many people who need health-care services the most, cost-effective secondary preventive measures for developing nations should be easily accessible, comprehensive, and adequate.[10] The World Health Organization (WHO) has identified five components of an equitable approach for stroke services including assessment of primary care and management of cardiovascular risk and transient ischemic attack, measures of secondary prevention, education of the public and health-care providers about prevention and management of stroke, access to care and rehabilitation services related to stroke, and community and family support for patients with stroke and their caregivers.[9]

In conclusion, for improving the short-term and long-term prognosis of stroke, optimal control of risk factors and early diagnosis and prompt treatment of stroke can lead to a reduction in the burden of stroke worldwide.

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GBM is the most malignant form of astrocytoma and associated with a poor prognosis. Cysts are commonly found in low-grade astrocytoma especially pilocytic astrocytoma. Cyst also develops in high grade tumors, but the presence of large cysts in GBM is extremely rare.

Cystic GBM may be primary or secondary. Secondary cystic GBM are due to malignant transformation in primary undiagnosed cystic low-grade gliomas and usually occur in younger patients whereas primary cystic GBM occur de novo. Other hypothesis put forward regarding cyst formation are necrotic degeneration of the tumor tissue, central hemorrhage and subsequent liquefaction, entrapment of adjacent cerebrospinal fluid space and blood brain disruption.

A GBM is said to be multifocal when there are multiple lesions and there is an established route of spread or dissemination between these lesions and multicentric if there is no established route of spread between the two lesions.

Our patient belongs to the multicentric category. GBM have a relatively narrow pericystic rim of the glioma with limited infiltration of the surrounding neuropils indicating that cystic GBM may be less infiltrative than non-cystic ones. This fact may be responsible for longer survival and lower recurrence, which could not be corroborated in our patient as she was not subjected to definitive surgery. Maldaun et al. reported median survival time after surgery to be 18.7 months in patients with cystic GBM, whereas it was 14.3 months in patients with non-cystic GBM, but the difference in overall survival was not statistically significant.

Bilateral cystic glioblastoma multiforme

Sir,

Cystic glioblastoma multiforme (GBM) is a rare disease whose exact prevalence is unknown. Glioblastoma is usually seen as a unilateral solid tumor more commonly in the supratentorial compartment. The presence of cyst in the GBM is rare. Bilateral large cystic GBM is still rarer and we report such a case. An 83-year-old female was admitted with right hemiparesis and inability to speak for the last 4 days. There was no history of headache or seizures. On examination, there was increased tone on the right side with hemiparesis and aphasia. Magnetic resonance imaging revealed large enhancing cystic lesions measuring 4 × 2.8 × 3 cm and 4.5 × 4 × 3.5 cm in the right and left frontal regions respectively with surrounding edema [Figure 1]. Radiological possibilities suggested were glioma with differential diagnosis of abscess and metastasis. Burr-hole aspiration revealed hemorrhagic fluid and biopsy of the cyst wall confirmed the diagnosis of GBM. Attendants were explained the prognosis and did not give consent for definitive surgery. Patient died within 5 months of discharge from the hospital.

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