

## Editorial

### **International Epilepsy Day - A day notified for global public education & awareness**

Epilepsy is a common medical disorder that can have a psychological and emotional impact on people with this disorder and their caregivers. About 65 million people worldwide have epilepsy<sup>1</sup> and nearly 80 per cent of the people with epilepsy (PWE) live in developing countries, where annual new cases occur between 40 to 70 per 100,000 people in the general population. The estimated proportion of the general population with active epilepsy at a given time is between 4 to 10 per 1000 people. However, some of the studies from developing countries suggest that the proportion is between 6 to 10 per 1000<sup>2</sup>.

In the Global Burden of Disease Study 2010, of almost 14,000 people from a range of global settings, severe epilepsy was rated as having a disability adjusted life years (DALY) of 0.657 and total prevalent cases were 28,300,000<sup>3</sup>. Disease burden for epilepsy has been evaluated in economic terms by the European Brain Council for the European countries, with data from 2004<sup>4,5</sup> and 2010<sup>6</sup> and based on epidemiological and health economic data it amounts to 161 and 212 million €, respectively.

It is estimated that there are more than 10 million PWE in India. In an earlier study their prevalence was about one per cent in our population<sup>7</sup>. The prevalence was higher in the rural population (1.9%) as compared with urban population (0.6%)<sup>8,9</sup>. The overall prevalence of epilepsy in India has been estimated to be 5.59-10 per 1000<sup>7,9-11</sup>.

Almost 70 per cent of newly diagnosed children and adults with epilepsy can be successfully treated with anti-epileptic drugs (AEDs). Drugs can be withdrawn in about 70 per cent of children and 60 per cent of adults without relapses after two to five years

of successful treatment. Approximately three-fourth of PWE in developing countries may not receive the treatment they need due to treatment gap of up to 80 per cent. In many low- and middle-income countries it is difficult to access treatment due to low availability and unaffordability of AEDs<sup>2</sup>.

Epilepsy is a cost intensive disorder. In a multicentric study on the cost of epilepsy in India, the total annual cost per people amounted to ₹ 13,755 (USD 344). The total economic burden of epilepsy in India was found to be ₹ 68.75 billion (1.72 billion USD) which constituted 0.5 per cent GNP of India<sup>12</sup>. There are global disparities in the care of people with epilepsy between high- and low-income countries and between rural and urban settings. However, more than 70 per cent of patients who are treated achieve long-term remission or freedom from seizures, usually within five years of diagnosis<sup>13</sup>.

The treatment gap is over 75 per cent in most low-income countries and over 50 per cent in many lower middle and upper middle income countries when compared with high income countries where it is less than 10 per cent. Furthermore, treatment gaps are twice as high in rural areas compared to urban areas<sup>14</sup>. In a systematic review the treatment gap in developing countries has been reported as low as 56 per cent<sup>15</sup>. The magnitude of epilepsy treatment gap in India is high and is influenced by lack of access to or knowledge of anti-epileptic drugs, poverty, cultural beliefs, stigma, poor health delivery infrastructure, shortage of trained professionals, inequitable distributions of available resources in rural areas and high cost of treatment<sup>16-18</sup>. Efforts need to be made to reduce the treatment gap in epilepsy. A substantial proportion of the current large

treatment gap in epilepsy in the developing countries could be minimized by educating the primary care physicians about the diagnosis of epileptic seizures, cost-effective AED treatment, availability of specialist health professionals in low- and middle- income countries and need-based referral for specialized care<sup>19</sup>.

Epilepsy due to perinatal brain injury remains an important problem in developing countries and contributes significantly to the burden of epilepsy in the developing world. Predominant causes are perinatal asphyxia, neonatal hypoglycaemia, sepsis-meningitis, late haemorrhagic disease of the newborn and perinatal ischaemic arterial stroke, all of which are preventable<sup>20</sup>.

International Epilepsy Day is likely to improve public awareness and raise visibility of epilepsy globally which will ultimately lead to improved access to AEDs, provision of cost-effective treatment, improved funding for research activity in epilepsy and development of appropriate legislation to protect the rights of all people with epilepsy.

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