Is "Vital" More Appropriate than "Super" Specialty in Addressing Emergency Neurosurgery for Head Injury and Stroke in Rural India

Head injury and stroke form one of the commonest neurosurgical emergencies across all socioeconomic strata. The distribution of public health care neurological and neurosurgical facilities being uneven and more urban based, millions of lesser privileged citizens in rural and semiurban India are deprived of emergency neuro care that is crucial and lifesaving.

A case in point is Thane city, located in Maharashtra, India, in the Taluka of Thane District. It is governed by Municipal Corporation which comes under Mumbai Metropolitan Region. As per the 2011 census, with a population close to two million, Thane city is the 15th most populated city in India. Sadly, this region lacks a public hospital offering lifesaving service for neurosurgery of head injury and stroke patients.

Hospital planners have archaically believed in the concept of neurosurgical and neurological facilities being housed in tertiary level public hospitals in major cities. It is this perspective that deprives hundreds of millions of the lesser privileged rural, district and semiurban population in India of a "vital" need of emergency head injury and stroke care. The notion needs to be dissected and debated.

Facilities exist in the private sector in many second and third tier towns and cities to address this need. However public care facilities for those who cannot afford private care are yet elusive on this front. Unimaginable challenges arise in the life of an economically less fortunate Indian residing in these regions, when any emergency neurosurgical intervention is warranted and it commonly involves transportation of many a hapless patient across hundreds of kilometres of rough terrain. This delay in reaching a city public hospital's neurosurgical service is unforgiving more often than not, and results in great morbidity and even mortality that may be avoided. Patel *et al*. noted that the majority of trauma deaths, particularly in developing countries, occur in prehospital settings and is due to delays in presentation to emergency departments or tertiary care centres.[1]

If emergency head injury and stroke care, the need of which is ubiquitous, is classified under the title of "vital special" instead of strictly, "super-specialty," a new age will dawn in the life of these "victims of the health-care system." The need for life saving facilities for head injury and stroke with basic training of available surgical and medical personnel at the district level could then be considered and spruced up to make the "vital specialty" concept a reality.

We suggest the approach be three pronged.

1. Development of guidelines for paired partnerships between rural centres and academic city hospitals
2. Supplying necessary equipment and surplus technology to rural areas
3. Rapid and sustained training of qualified local surgical personnel and the creation of sustainable feed-forward programs for trainees and infrastructural solutions.[2]

The principle of damage control neurosurgery (DCNS), minimizing brain time under pressure, focuses on immediate reduction of intracranial pressure and prompt evacuation of intracranial hematomas. This may be used in remote, military, or level I trauma centres. DCNS highlights the three tenets, namely, time to treatment, condensed neurosurgical training, and teleconsultation as critical to the future of rural neurosurgery.[2] Furthermore, a "vital" service of this nature would be a boon in times of natural disasters such as landslides, earthquakes and large-scale rail or road accidents in the countryside.

A crucial change in perspective is the need of the hour!

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