Neurotrauma Care: Time to Think Beyond Neurosurgeons and Need for Neurosurgical Interventions

Amit Agrawal¹  Luis Rafael Moscote-Salazar²

¹Department of Neurosurgery, Narayana Medical College Hospital, Chinthareddypalem, Nellore, Andhra Pradesh, India
²Neurosurgery-Critical Care, RED LATINO, Organización Latinoamericana de Trauma y cuidado Neurointensivo, Bogota, Colombia

Address for correspondence Amit Agrawal, MCh, Department of Neurosurgery, Narayana Medical College Hospital, Chinthareddypalem, Nellore, Andhra Pradesh 524003, India (e-mail: dramitagrawal@gmail.com; dramitagrawal@hotmail.com).

DOI https://doi.org/10.1055/s-0039-3402824
ISSN 0973-0508.

Discrepancy between the availability of trained neurosurgeons and the potential demand for trained neurosurgeons is a well-recognized phenomenon.¹ This gap between demand and supply gets further widened in a country like India, where trauma, particularly traumatic brain injury related morbidity and mortality, is on a rise.²,³ To bridge this gap, the authors have proposed an alternative that “neurotrauma and neurocritical care” can be provided by non-neurosurgeons (e.g., trauma surgeons).³ To better understand how neurotrauma care is possible without a trained neurosurgeon, we need to know that out of all trauma patients, only 1% need neurosurgical intervention in the form of craniotomy for mass lesions due to head injury, and out of all head injuries, only 3.6% patients require craniotomy.⁴ It means that almost 99% patients with trauma and 96% patients with traumatic brain injury do not require direct operative neurosurgical intervention. In a study, which included more than 3,000 trauma patients who were managed for thoracic injuries by trauma surgeons, the survival rates were comparable with the results reported by cardiothoracic surgeons.⁵ To further support these facts and as authors have suggested, essential skills necessary for the management of neurotrauma (operative as well nonoperative) are included in general surgical residency programs¹ and can be further enhanced with a short-term structured training program dedicated to the trauma care.⁶,⁷ There are a few challenges which we need to overcome, such as available data are not enough to provide details about how many patients in our country need neurosurgical operative interventions for traumatic brain injury and how many of these patients do require intracranial pressure monitoring and thus decompressive craniotomy; should we have trauma physicians to look after the patients who will not require operative neurosurgical intervention; and the biggest challenge will be that how many of the residents will opt for a career in trauma surgery to provide neurotrauma and neurocritical care.

Conflict of Interest
None declared.

References
2 Ganapathy K. Distribution of neurologists and neurosurgeons in India and its relevance to the adoption of telemedicine. Neurol India 2015;63(2):142–154