Navigating Neurotrauma Management in Pakistan

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Madam, neurotrauma is defined as an injury to the brain and/or spinal cord. A WHO, sponsored study estimated that the annual global incidence of neurotrauma is approximately 500–800 per 100 000 and it accounts for about 11.8% of total global disability-adjusted life years.[1] In Pakistan, the annual incidence of head injured patients admitted to numerous neurosurgical centres was 50/100,000 population per year.[2]

The lifetime medical treatment per neurotrauma case is estimated to range from US$600 000 to US$1.8 million. Neurotrauma management incorporates prehospital care lasting minutes to hours which encompasses accurate on site diagnosis and systematic treatment or during the shifting, to an organized, well-equipped health care management, in-hospital care for hours to weeks which comprises surgical and non-surgical intervention including imaging, neuro-monitoring and critical care and finally post-acute care lasting weeks to years and denotes any form of rehabilitative interventions to enable and empower patients to have an increased quality of life.[1] Each component of management requires trained personnel, specific equipment, and protocols.[3]

However, Pakistan lags in various aspects. As of a last study in 2001, there were only 35 neurosurgical centres and about 1000 neurosurgical beds to accommodate a population of 130 million.[2] Of the 23 Karachi hospitals studied in 2020, only 57% were well-equipped and accredited [Trauma capacity score (TCS) 67%] to perform elementary resuscitation steps to secure early stability. A sizeable number,57%, (TCS<34%) lacked space to accommodate head, neck, and spinal injuries; 65% s were partly inadequate (TCS<67%) in diagnosis, intensive care and safety.[4] With low medical insurance across the country.[2] Inadequate availability of essential medicines was also reported in 43% of hospitals.[4]

An organized trauma care system must be introduced to mitigate trauma mortality for local needs. It should encompass enabling those at injury site to become first responders,[3] an ambulance service equipped with communication systems and with properly trained personnel that can commence life-saving measures such as IV fluid resuscitation.[3] Trauma centres should have a referral network and hospitals that provide optimal traumatic care should be identified beforehand to transfer injured patients to this specialized facilitys.[4] A protocol also needs to be established that assists local doctors in immediate referral to trauma centers.[3] Proper allocation of resources and mobilization of staff and doctors timely can improve neurotrauma outcomes significantly.

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