

LETTER TO THE EDITOR

An update on spinal cord injuries in October 2005 earthquake in Pakistan

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Two years have passed since the devastating earthquake of October 2005 in Pakistan, which left 73 000 dead and more than 126 000 injured. Amputations and spinal cord injury (SCI) were the two major long-term disabilities arising out of this tragedy.

We reported for the first time in medical literature, the epidemiology of SCI in a major disaster like earthquake,¹ which was unique and different from the pattern reported in literature before. Recently our team also presented the important highlights and shortcomings of SCI management and rehabilitation response in this earthquake.² They are summarized as follows:

- Highlights of evacuation efforts
 - Absence of spinal trauma evacuation protocols
 - Air evacuation of casualties
 - Unique epidemiology of SCI
- Shortcomings during initial treatment efforts
 - Absence of SCI registry
 - Lack of spinal units and rehabilitation specialists
 - Inadequate and inaccurate assessment
 - Psychological support
 - Religious and spiritual support
- Spinal rehabilitation issues
 - SCI rehabilitation brought to forefront
 - Establishment of spinal units
 - International SCI assistance
- Issue with follow-up
 - Inadequate patient education and counseling
 - Inadequate monetary support distribution
 - Lack of social and vocational rehabilitation services

A long-term follow-up study of this study group of 187 patients is in progress and important preliminary results are as follows. We are not presenting the absolute results but only estimates based upon the initial data analysis.

- Of the 187 patients recruited during the initial study, five died in the first 18 months after the earthquake leaving 182 for follow-up. Causes were decompensated heart failure and septicemia in one patient each and pressure ulcers in two patients, while cause of death was unknown in one.
- There is hardly a quadriplegic available for follow-up and we have a strong suspicion that they have not survived.

- Many of the patients who were discharged to homes (located in hilly terrain) were readmitted within weeks for large, grade IV pressure ulcers and recurrent urinary tract infections (UTIs).
- Patients who were initially under physiatrist care in spinal rehabilitation unit are having better outcomes in terms of reduced secondary complications, better quality of life and returned to their previous work (100% incidence of UTIs in a sample of 194 SCI patients of October 2005 earthquake was reported by Tauqir *et al*).³ To the best of our knowledge only a single paraplegic having complete SCI (T8) has returned to his previous job of a school teacher and he had been under physiatrist care.
- A total of 75% patients had spinal fixation. Those operated by neurosurgeons rather than experienced spinal surgeons are having a greater incidence of implant failures (29 vs 1) surgical wound infections (17 vs 3) and pain at the operation site.
- Two spinal units, which were established in the wake of earthquake, are still functioning at National Institute for Handicapped and Pakistan Institute of Medical Sciences Satellite Hospital at National Institute of health. The patient population of these centers is around 100, majority being young patients. This speaks volumes about the claims of reintegration of these individuals back into the society as useful earning members. Although patients in these spinal units are receiving rehabilitation services, but without the involvement of a physiatrist and emphasis being on physical therapy alone. Complications are one of the reasons that they are still in hospital but majority of the young individuals who are absolutely complication free are also staying; as there is inadequate infrastructure for vocational- and community-based rehabilitation. Nearly 80% of these patients are the ones who were not initially admitted to a spinal rehabilitation unit under physiatrist care.
- Community-based rehabilitation services have been launched by the government, World Health Organization and nongovernmental organizations, but there is a visible lack of coordination between them with every body perusing his own goals, rather than focusing on a team approach. Still this has resulted in the establishment of physiotherapy centers in the earthquake-affected areas and in some cases even custom-made homes for these paraplegics, which are of immense benefit.
- Due to the active role played by the rehabilitation medicine physicians (particularly by the Armed Forces

Institute of Rehabilitation Medicine²) in the management and rehabilitation of the SCI in October 2005 earthquake, the general level of awareness of the specialty of physical medicine and rehabilitation has improved in public in general and medical community in particular.

- There is an absolute lack of sexual rehabilitation and counseling despite the fact that majority of the patients are young males and females of childbearing age. Female patients have suffered the most as many of them previously engaged had their engagements broken: those who were married were either divorced or had to bear with the second wife whom their husbands brought with the belief that the disabled paraplegic woman is unable to conceive or produce a child.
- Since majority of the patients were illiterate or minimally educated (~55%), so explanation of SCI prognosis to them was very difficult. Nearly all of them were asking the same question: When will I be able to walk again? Many of them did not take 'No' as an answer. This resulted in consultations with faith healers, traditional healers, homeopathic specialists and chiropractors. Many of them are also fascinated by claims of the successful stem cells transplant in SCI in China,⁴ which have failed on rigorous scientific analysis by Dobkin *et al.*⁵
- Teams and members of medical community came from all over the world. In case of SCI patients the services of physical therapists and occupational therapists warrant special mention. Unfortunately, the rehabilitation societies and physicians from the West were conspicuously missing in the acute as well as the rehabilitation phase. Even 2 years after the earthquake, they have yet to play their role.²

Despite all these shortcomings we believe that management and rehabilitation of such a large number of SCI patients in a developing country like Pakistan was a very

successful and rewarding experience for all who were involved. We also hope that experiences like ours would help in planning better management and rehabilitation protocols for SCI during disasters like October 2005 earthquake.

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We thank all the patients who participated in the long-term follow-up study. Their help in the collection of valuable data would improve our abilities to formulate better management and rehabilitation plans for the SCI patients in disasters like October 2005 earthquake in Pakistan.

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