LETTER TO THE EDITOR

The decrepit state of trauma care in under-developed healthcare settings and the need to integrate trauma rehabilitation as a continuum of care

Farooq Azam Rathore,[1] Sohail Muzammil[2]

Madam, we have read "The decrepit state of trauma care in under-developed healthcare settings"[1] by Shah and Shah with interest.

They correctly point out the lack of adequate trauma care services in Pakistan and the urgent need to develop these services in order to reduce trauma related morbidity and mortality. We would like to expand on their concept and suggest that trauma rehabilitation should also be improved and integrated into the trauma management services.

Rehabilitation is defined as "a problem-solving educational process aimed at reducing disability and handicap experienced by someone as a result of disease or injury".[2] Trauma rehabilitation extends beyond acute injury or wound management to reintegration of the patient into the home and community.[3] Patients injured in major trauma have long term sequelae , e.g., posttraumatic stress symptoms,[4] pain/discomfort, reduced mobility, anxiety/depression and poor QOL.[5] Persons with severe multiple injuries find it difficult to socially re-integrate both physically and emotionally.[6] In addition workers who sustain severe multiple traumatic injuries have a poor rate of return to work.[7] Centers that do not recognize, evaluate, and manage these injury-related mental health outcomes are not fully assisting their patients to return to optimal function.[8] Despite the clear need for early rehabilitation interventions these are not routinely considered integral to trauma care processes.[3]

Coordinated multi-disciplinary rehabilitation has shown benefit in major neurological and orthopaedic traumatic disorders like spinal cord injuries (SCI), traumatic brain injury (TBI),[9] amputations[10] and fractures.[11] WHO guidelines for essential trauma care have proposed rehabilitation as an essential continuum of trauma services.[12]

[1]Department of Rehabilitation Medicine, CMH Lahore Medical College, Lahore Cantt, [2]Department of Orthopaedics, Combined Military Hospital and Quetta Institute of Medical Sciences, Quetta Cantt.

Correspondence: Farooq Azam Rathore. Email: farooqrathore@gmail.com

Rehabilitation is underdeveloped in most low resourced countries including Pakistan. It is often confused with physiotherapy and exercises alone rather than a physiatrist lead multidisciplinary team effort.[13] The lack of and the need to develop rehabilitation services in the country was highlighted in the deadly 2005 earthquake which resulted in thousands of major traumatic injuries like SCI[13,14] TBI,[15] and amputations.[14] Patients who were primarily under care of a physiatrist lead rehabilitation teams had reduced complications, shorter hospital stay and better outcomes.[13]

Pakistan has seen rapid urbanization, a better road network and a consequent increase in the number of motor vehicle accidents. Terrorist attacks and sectarian violence have also seen an exponential increase in the last one decade. The incidence of major trauma, particularly long bone fractures, SCI and amputations is therefore set only to increase with time. There have been some impressive improvements in the trauma management system in the form of emergency ambulance services in the private and public sector like the Edhi ambulance network, 1122 service in Punjab and ambulance service in Islamabad. Similar gains have not however been achieved for trauma rehabilitation. Patients with fractures are discharged to home with external fixators and casts in place without a rehabilitation plan. By the time fixators and casts are removed joint stiffness and marked muscle wasting has already occurred resulting in prolonged disability for the patient. Disabled patients with complete paraplegia following SCI are only provided instructions like "malish', warzish (exercises) and physiotherapy instead of a referral for SCI rehabilitation. Most of these patients develop preventable complications like urinary tract infections, pressure ulcers, and depression and are unable to reintegrate in the community.

It is clear that there is a need to improve the trauma management system in the country and integrate early rehabilitation in this process in order to reduce the rate of complications, length of hospital stay and improve the functional outcomes and QOL of the patients. This will ensure successful community reintegration and an early return to work of the injured patient.

References

1. Shah DA, Shah AA.The decrepit state of trauma care in under-developed healthcare settings. J Pak Med Assoc 2014; 64:1217.
2. Wade D. Measurement in Neurological Rehabilitation. Oxford University Press: Oxford, 1992.
3. Khan F, Amatya B, Hoffman K.Systematic review of multidisciplinary rehabilitation in patients with multiple trauma. Br J Surg 2012;99Suppl 1:88-96.
4. Soberg HL, Bautz-Holter E, Roise O, Finset A. Mental health and posttraumatic stress symptoms 2 years after severe multiple trauma: self-reported disability and psychosocial functioning. Arch Phys Med Rehabil. 2010;91:481-8.
5. Ulvik A, Kvåle R, Wentzel-Larsen T, Flaatten H. Quality of life 2-7 years after major trauma. ActaAnaesthesiol Scand. 2008;52:195-201.
6. Soberg HL, Bautz-Holter E, Roise O, Finset A. Long-term multidimensional consequences of severe multiple injuries two years after trauma: a prospective longitudinal cohort study. J Trauma. 2007;62:461-70.
7. Soberg HL, Finset A, Bautz-Holter E, Sandvik L, Roise O. Return to work after severe multiple injuries: a multidimensional approach on status 1 and 2 years postinjury. J Trauma. 2007;62:471-81.
8. Michaels AJ, Michaels CE, Smith JS, Moon CH, Peterson C, Long WB. Outcome from injury: general health, work status, and satisfaction 12 months after trauma. J Trauma. 2000 ;48:841-8; discussion 848-50.
9. Andelic N, Bautz-Holter E, Ronning P, Olafsen K, Sigurdardottir S, Schanke AK et al. Does an early onset and continuous chain of rehabilitation improve the long-term functional outcome of patients with severe traumatic brain injury? J Neurotrauma 2012; 29:66-74.
10. Pezzin LE, Dillingham TR, MacKenzie EJ. Rehabilitation and the long-term outcomes of persons with trauma-related amputations. Arch Phys Med Rehabil. 2000;81:292-300.
11. Zhang X, Hu X, Reinhardt JD, Zhu HJ, Gosney JE, Liu S et al. Functional outcomes and health-related quality of life in fracture victims 27 months after the Sichuan earthquake. J Rehabil Med 2012; 44; 206-9.
12. World Health Organization. Guidelines for essential trauma care.[online] [cited 2014 Oct 26];Availablefrom : URL: http://www.who.int/violence_injury_prevention/publications/services/en/guidelines_traumacare.pdf
13. Rathore MF, Rashid P, Butt AW, Malik AA, Gill ZA, Haig AJ. Epidemiology of spinal cord injuries in the 2005 Pakistan earthquake. Spinal Cord 2007 45:658-63.
14. Mallick M,Aurakzai JK,Bile KM, Ahmed N.Large-scale physical disabilities and their management in the aftermath of the 2005 earthquake in Pakistan. East Mediterr Health J 2010;16: S 98-105.
15. Bhatti SH, Ahmed I, Qureshi NA, Akram M, Khan J. Head trauma due to earthquake October, 2005 - experience of 300 cases at the Combined Military Hospital Rawalpindi. J Coll Physicians Surg Pak 2008; 18:22-6.