

Delivering spinal rehabilitation through 3-tier health service delivery in Nepal: A 'One Stop Rehabilitation Services/OSRS' Approach*



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Abstract

Introduction: Spinal cord injury is a devastating injury, which has serious short and long term effects, not only to the individual's life but also to family, friends, and society. The objective of the study is to evaluate ongoing health condition, complications and community reintegration of spinal cord injury patients treated in our hospital and to contribute to the development of a national/Nepal rehabilitation model of care in line with WHO Rehabilitation in Health Systems agenda.

Material and Methods: The study was conducted at Green Pastures Hospital and Rehabilitation Center (GPHRC). Mechanism of injury, American Spinal Injury Association (ASIA) score, Thoracolumbar injury classification and severity (TLICS) score, time from injury to admission, time from admission to surgery, duration of hospital stay, modified Barthel index, accessibility within the house and community, availability and use of mobility aids were recorded. All the patient underwent surgical treatment followed by rehabilitation at the same center. Besides, a rehabilitation capacity assessment was done under six health system blocks to evaluate the feasibility of OSRS approach in GPHRC and their links to Government and other partners.

Results: There were 34 patients with Spine injury admitted from 1 May 2016 to 30 September 2019, two patients with cervical spine trauma referred due to lack of treatment facility, so excluded. 32 patients included. Fall from height especially from a tree was the predominant cause. In the study, 62.5% (20) had incomplete neurological (ASIA B-D) involvement, 25% (8) had complete neurological involvement (ASIA A) and 12.5% (4) had normal neurology (ASIA E) at presentation. At final follow up, 70% (14) of the incomplete neurology improved to normal neurology (ASIA E). Three cases had surgical site infection, improved with intravenous antibiotics. 75% (24) patients had re-admission for the continuation of rehabilitation. Among the wheelchair user modified Barthel index improved from 37.86 (± 16.84) to 70.7 (± 20.02) from discharge to final follow up ($P < 0.011$). 30% of those who were using mobility aids could not access the community independently because of rough terrain. 62.5 % of wheelchair user required an assistant to enter their house and for toilet accessibility due to inadequate housing. All wheelchair user required an assistant for road access to home because of the physical terrain. Secondary health problems like bed sore, urinary tract infection, chest infection, contractures were not seen. Gaps in rehabilitation services have been identified and are being addressed progressively.

Conclusion: With minor modification in a home for appropriate use of a wheelchair, they can have an independent productive life. The improved outcomes may be attributed to better management using standard protocols and guidelines and effective community linkages of GPHRC. Taking this forward, WHO Nepal has developed OSRS, a proof of concept approach, and is being piloted here towards delivering comprehensive rehabilitation package for all those who need it as part of universal health coverage under one roof with functional linkages to primary and secondary care including social services.

Biography

Subin Byanjankar has studied MBBS in Xinxiang Medical University, he is a Orthopedic Medical Officer worked from 2009 -2011 and also worked as a Consultant Orthopedics at Green Pastures from 2017 – 2019. He is now working as a senior consultant orthopedics at Green Pastures 2019.



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