

A retrospective study on traumatic spinal cord injury in an inpatient rehabilitation unit in central Saudi Arabia

To the Editor

In an article regarding spinal cord injuries (SCI), Dr. Al-Jadid has highlighted the major attributes of traumatic spinal cord injury (TSCI) in the Kingdom of Saudi Arabia (KSA).¹ This has supplemented the previously published literature on the subject of SCI in the region, which is very limited. However, it is noteworthy that the number of large studies carried out on SCI in rehabilitation setups in KSA is exceeding the number of studies carried out in non-rehabilitation settings. This is encouraging, as rehabilitation aspects of SCI are often poorly understood in the region and deserve more attention. The need for SCI registry in KSA is emphasized in previous studies as well. Considering the fact that this retrospective study was carried out at one of the pioneer rehabilitation facilities in the kingdom and spans over a period of 3 decades, it may serve as a valuable data resource towards developing SCI registry in KSA.

Studies carried out for TSCI in rehabilitation setups mostly include those patients who are in their sub-acute phase of spinal injury, or have already completed their acute treatment. Considering this, the impact of TSCI in general, on health care, could be misleading if studied in a rehabilitation setup, as many patients with TSCI may never reach a rehabilitation facility. This masks the reporting of mortality due to TSCI, occurring soon after trauma, or during acute management. Likewise, the bulk of TSCI patients who are discharged after their acute treatment due to their preferences, limited resources, or eligibility issues may never show up in a rehabilitation setup. Additionally, many patients with SCI require or undergo rehabilitation as outpatient only. Hence, the demographic features of TSCI may be best reported in acute settings rather than rehabilitation settings for this purpose; although it is important to know the same characteristics in rehabilitation setting, as well. In KSA, the hospital length of stay (LoS) is also reported in many other studies. Considering the fact that the LoS is considered as a measure of hospital cost, it is interesting to note that the actual cost of patient care per say is rarely reported in local studies.

A review of Saudi literature reports 'motor vehicle accidents' as the leading cause of TSCI.^{2,3} However, compared to TSCI, non-traumatic spinal cord injury

(NTSCI) in KSA has not been well studied. In 2010, some aspects of NTSCI was studied in detail for the first time in KSA, and it was concluded that gender, type of injury, and ethnicity differences were influencing factors of LoS of NTSCI patients.⁴ The rationale behind the need of exploring NTSCI in KSA is that the etiology of NTSCI has not been reported in detail so far.

A recent review published in January 2013 about the global map of non-traumatic spinal cord injury epidemiology reports that the developed countries tend to have a higher proportion of cases with degenerative conditions and tumors.⁵ Developing countries, in comparison, tend to have a higher proportion of infections, particularly tuberculosis and HIV, although a number also reported tumors as a major cause. The infection rate of tuberculosis in KSA is reported to be 32-64 per 100,000 compared to 5.2 per 100,000 in USA.⁶ AlOthman reports that 28% of patients with tuberculous spondylitis in KSA had paraparesis.⁷ Radiological features of the spinal canal diameter has been studied in normal Saudi adults, but data regarding spinal stenosis as a cause of NTSCI is deficient.⁸ Similarly there are only few case reports and case series regarding spinal tumors in KSA. Rehabilitation facilities, which are attached with tertiary care hospitals, having well established neuroscience centers are likely to receive more patients with NTSCI. Similar to epidemiological studies carried out for TSCI in KSA, the pattern of NTSCI needs to be investigated in detail. This can help us to devise preventive, diagnostic, and rehabilitation strategies for NTSCI in Saudi population.

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Reply from the Author

I would like to thank Dr. Qureshi for his interest in our article.¹ I do agree with Dr. Qureshi that TSCI in rehabilitation setups mostly include those patients who are in their sub-acute phase of spinal injury or have already completed their acute treatment. Saying that we all agree that rehabilitation starts from the minutes health care workers (and may be the community) are involved in management of TSCI. Also, the number of large studies done on SCI in rehabilitation setups in Saudi Arabia are exceeding the number of studies carried out in non-rehabilitation settings.⁴ I appreciate Dr. Qureshi for emphasizing the need of SCI registry in Saudi Arabia.

Correspondence

I would like to mention that this study¹ was conducted in a major tertiary referral hospital at Riyadh, which was the leading and the most important rehabilitation center during the 1980's and 1990's of the last century in KSA. This study attempted to provide basic information regarding SCI in a rehabilitation unit, and bring out the importance and need for extensive research in this area.¹ As mentioned in the article, the study has few limitations, such as: 1) single hospital and its retrospective nature; 2) exclusion of patients with bed sores and no tracheostomy, and limited number of quadriplegic patients admitted in the unit, which affect the external validity of the study; and 3) the study included only patients who completed the rehabilitation program. In this context, it may not be possible to generalize the study results. I do emphasize the need for SCI studies in non-rehabilitation setting, and the need to investigate the pattern NTSCI, which will provide more clarity regarding the situation, and facilitate us to develop preventive, diagnostic, and rehabilitation strategies among Saudi population.

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