

Quality of life in females with spinal cord injury in Saudi Arabia

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The problems faced by spinal cord injury (SCI) patients are numerous and usually difficult to manage, especially those demanding them to cope with the changes in their mode of life. Vast information and special education awaits them to resume a better quality of life (QOL) with handicapped sensory neuropathy, bladder, and bowel dysfunction.¹ Other parameters are also associated with injury duration, such as partner relationships.² With respect to repair of SCI, outcomes have improved substantially due to augmented treatment, and the better methods in management of neurological complications. The objective of this work is to reflect on the status and post-hospitalization QOL, and career of females with SCI in the Kingdom of Saudi Arabia (KSA).

A 20-year-retrospective study (1989-2009) was based on SCI patients' manually filled questionnaires of 5 parts, embodying subdivided 20 main questions that define their status. Male (70) and females (70) patients who did not complete the questionnaire in addition to mortality rate criterion were excluded. All female patients who were rehabilitated, or seen several times at Riyadh Military Hospital (RKH Program), Riyadh, KSA were included. The ethical committee approval and patient consent were obtained. GraphPad InStat was used for descriptive and statistical analysis.

According to the selection criteria, 50 female participants aged 6-60 years, were divided into 6 decade groups (Table 1). Children (0-10 year) and adolescents (11-20 year) had the lowest frequencies, while young adults (21-30 year) and adults (31-40 year) had the highest (majority). The most frequent (82%) level of injury was at the thoracic vertebrae. Most of the patients (82%) were locally rehabilitated, initially in KSA (RMH). Those who were initially rehabilitated abroad, were mostly (18%) sent to Czech (the Czech Republic) then Germany, however, data for 74% of the patients were not specified. Health status of the urinary bladder neuropathy was mostly (64%) remediated by intermittent catheterization. Maximum (40%) bowel incontinence was adjusted by the use of suppositories (S), then by the other medical aids. Recurrent urinary tract infections (UTI) were the most (80%) frequent complications of the genitourinary system, and 82% of the checkups were carried out at the Ministry of Health. More than 76% of the patients developed pressure sores, and almost 34 (62%) were already contracting

chronic diseases such as, diabetes, hypertension, and/or others. Self-purchase of equipments and supplies (62% of patients), and wheelchairs (82% of patients) were preferred to national sources, serviced by RMH and King Fahad Medical Complex. Home support was offered to patients mostly by househelps, non-specified assistance, and relatives, consecutively. Most of the patients stayed at their same houses, and then those who lived in new ones, and a small number were still hospitalized (Table 1). After SCI, educated ladies counts were higher than before their injury, and with respect to jobs, some of them quitted, and the number of married ones were reduced after their injury. The most striking difficulties that faced SCI patients were access to domestic places, employment, social isolation, and travel, consecutively.

Data analysis has emphasized that SCI patients experience appreciable daily life problems. The group range with the highest frequency of injury was the middle-aged, which is the most energetic with a lot of movement potential, such as sports, driving activity, and hence, vulnerability to accidents. In this study, it was found out that there was a correlation between specified age decades (the most active generation by all dimensions and parameters), and severity of the injury level. Members at this age range are expected to be productive in the fields of education, training, and gainful work, but sadly they are enduring, and suffering the most; younger, or older age ones are less affected, which does not merit an employment advantage.

The SCI is a real dilemma in third world countries and could be a crippling medical problem, especially in practicing their daily normal, and physiological life rhythms. According to this study, those patients who could manually manage evacuation of their body excreta were lesser than those employing supportive aids. Furthermore, patients who were practicing normal bowel evacuation were very few. Genitourinary system complications were additional worries in health status evaluation. All patients were on regular checkups, and more than 80% had developed UTI, and complications were mostly the cause for readmissions.³ Pressure sores were an inconvenience of more than 75% of the patients and chronic diseases were contracted by nearly 62%. Urinary and skin complications are the second main reason of readmissions for chronic SCI.³ Unemployment and financial status were of limited impact, and not a big deal for women in KSA despite their high levels of education. Various circumstances related to employment, relationships, autonomy, and mobility were vital for a patients' QOL.⁴ The time factor ensuing after injury is an appreciable remedy for psychological status and a modulator of QOL.⁵ Other problems, such as social look and understanding of the surrounding environment were of vital importance for self-confidence and QOL level.

Table 1 - The level of injury, rehabilitation location, bowels and urinogenital complications, development of chronic diseases, providers of equipment supplies, caring support, and accommodation.

Patient medical status	Age range, years						NA	Total	(%)
	0-10	11-20	21-30	31-40	41-50	> 50			
Levels of injury									
<i>Vertebrae, n</i>	2	3	12	19	9	5	0	50	(100)
Cervical	0	0	1	3	1	1	0	6	(12)
Thoracic	2	3	11	15	6	4	0	41	(82)
Lumbar	0	0	0	1	2	0	-	3	(6)
Rehabilitation location (initially in KSA)									
<i>National, n</i>	2	3	12	19	9	5	-	50	(100)
RMH	2	1	8	18	7	5	-	41	(82)
KFMC	0	2	3	1	2	0	-	8	(16)
Abroad	0	0	1	0	0	0	-	1	(2)
Rehabilitation location (initially outside KSA), n									
Czech	0	1	3	3	2	0	-	9	(18)
Germany	1	1	1	0	1	0	-	4	(8)
NA	1	1	8	16	6	5	0	37	(74)
Management of urinary bladder and bowel neuropathy, n									
Urinary bladder intermittent catheterization	2	3	12	19	9	5	0	50	(100)
IUC	2	0	1	3	2	3	0	11	(22)
Diaper						2	0	2	(4)
Continence						2		2	(4)
SPC				3				3	(6)
Bowel, n									
Manual	2	3	12	19	9	5	0	50	(100)
Enema		1	5	6	2			14	(28)
Support				1				1	(2)
Lax-suppositories	1	1	5	7	5	1		20	(40)
Continence	1		2	6	1	4		14	(28)
					1			1	(2)
Urinogenital complications and checkup, n									
UTI	2	2	20	18	4	4	0	50	(100)
Yes	2	-	16	16	3	3	0	40	(80)
No	-	2	4	2	1	1	0	10	(20)
Checkup, n									
RKH	2	2	20	16	4	3	3	50	(100)
MOH	-	-	2	5	1	1	0	9	(18)
	2	2	18	11	3	2	3	41	(82)
Development of pressure sores and chronic diseases, n									
Pressure sores	3	4	16	12	7	3	5	50	(100)
Sores	2	3	3	2	2	0	0	12	(24)
Sacrum	-	-	2	4	3	2	3	14	(28)
Trochanter	1	1	1	1	2	-	-	6	(12)
Ischium	-	-	5	1	-	-	1	7	(14)
Leg (thigh/sacrum)	-	-	-	-	-	1	1	2	(4)
Thigh/sacrum/shoulder	-	-	3	-	-	-	-	3	(6)
NA	-	-	2	4	-	-	-	6	(12)
Chronic diseases, n									
Yes	0	1	11	20	10	7	1	50	(100)
No	-	-	6	14	5	6	-	31	(62)
NA	-	-	2	4	3	-	1	9	(18)
	-	1	3	2	2	1		10	(20)
Patient source of support and equipment supplies, n									
Equipment and supplies									
KFMC	2	3	12	19	9	5	0	50	(100)
RMH	-	-	-	-	1	0	-	1	(2)
Purchase	2	-	3	5	4	4	-	18	(36)
	-	3	9	14	4	1	-	31	(62)
Wheelchairs									
Purchase	2	3	12	19	9	5	0	50	(100)
RKH	-	3	11	18	8	1	-	41	(82)
	2	-	1	1	1	4	0	9	(18)
Caring support and accommodation									
Care, n									
Househelp	2	3	12	19	9	5	0	50	(100)
Relative	-	-	4	8	3	4	0	19	(38)
NA	2	-	3	5	2	1	0	13	(26)
	-	3	5	6	4	0	0	18	(36)
Housing, n									
Fixed house	2	3	12	19	9	5	0	50	(100)
New house	2	3	11	14	9	4	0	43	(86)
Still patient	-	-	-	4	-	-	-	4	(8)
	-	-	1	1	-	1	-	3	(6)

NA - Not available, RMH - Riyadh Military Hospital, SPC- Suprapubic-cystostomy, KFMC - King Fahad Medical Complex, RKH - Riyadh Kharj Hospital, MOH - Ministry of Health, UTI - urinary tract infections, IUC - indwelling urethral catheter

In conclusion, SCI is practically affecting the young and adults of KSA. The patient's QOL is significantly affected and/or hampered by factors like accessibility, financial status (though this is not the case for females in the Kingdom), and employment. Effective measures for the management and social awareness may improve the patient's style and QOL. Studies on a larger group of patients, especially females with SCI from KSA should explore deeper on encountered difficulties that demand plans for future preventive measures, acute care, and rehabilitation follow ups, which are necessary for improving their QOL.

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References

1. Edwards L, Krassioukov A, Fehlings MG. Importance of access to research information among individuals with spinal cord injury: results of an evidenced-based questionnaire. *Spinal Cord* 2002; 40: 529-535.
2. Elliott S, McGrath M. Prazosin Vibrostimulation Autonomic Dysreflexia and Spinal Cord Injury Study. [Updated 2008 September 23. Accessed 2010 MArch 26]. Available from URL: <http://clinicaltrialsfeeds.org/clinical-trials/show/NCT00175682>
3. Dobkin BH, Curt A, Guest J. Cellular transplants in China: observational study from the largest human experiment in chronic spinal cord injury. *Neurorehabil Neural Repair* 2006; 20: 5-13.
4. Singh R, Dhankar SS, Rohilla R. Quality of life of people with spinal cord injury in Northern India. *Int J Rehabil Res* 2008; 31: 247-251.
5. Ehlers MD. Deconstructing the axon: Wallerian degeneration and the ubiquitin-proteasome system. *Trends Neurosci* 2004; 27: 3-6.

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Al-Jadid M, Robert AA. An analysis of the length of stay in traumatic and non-traumatic spinal cord injured patients. A rehabilitation unit experience in Saudi Arabia. *Saudi Med J* 2010; 31: 555-559.

Gurcay E, Bal A, Gurcay AG, Cakci A. Evaluation of blood and serum markers in spinal cord injured patients with pressure sores. *Saudi Med J* 2009; 30: 413-417.

Haddad FH, Malkawi OM, Sharbaji AA, Jbara IF, Rihani HR. Primary hyperparathyroidism. A rare cause of spinal cord compression. *Saudi Med J* 2007; 28: 783-786.

Al-Jadid MS, Al-Asmari AK, Al-Moutaery KR. Quality of life in males with spinal cord injury in Saudi Arabia. *Saudi Med J* 2004; 25: 1979-1985.