

DEMOGRAPHIC DATA CONCERNING SPINAL CORD INJURY INCIDENCE THAT ARE UNDERTAKING TREATMENT AT THE MEDICAL REHABILITATION HOSPITAL BĂILE FELIX

ALINA CARMEN MATICA¹, FELICIA CIOARĂ², CARMEN NISTOR CSEPPENTO³, LIVIU LAZĂR⁴

¹Băile Felix Medical Rehabilitation Hospital, ^{2,3,4}University of Oradea

Keywords: spinal cord injury, incidence, demographic data

Abstract: The purpose of the paper is to present the demographic data obtained following a cohort type, descriptive, comparative, with prospective elements study, and to correlate it with the data from the specialty literature. Material and method. 80 patients from Băile Felix Medical Rehabilitation Hospital were included in the study, patients who were diagnosed with spinal cord injury (SCI), and evaluated before and after 6 months of recovery treatment. Results and conclusions. We notice that the origin environment is not so significant, but on the other hand, age is an important factor, the maximum incidence being between 21-40 years old (41.25), which correlates with the SCI causes, that is car accidents (58.75%), falls from heights (20.00%) and water jumps (10.0%).

INTRODUCTION

Spinal cord injury represents a major event in the life of an individual (1,2), and the recovery involves physical adaptations as well as social ones, with the purpose of gaining a maximum degree of functional independence, of reintegration in the social and family life and of having a quality of life as high as possible.(3)

The main three causes of the spinal cord injury, according to the specialty literature (4,5,6), are: motor vehicle accident (42.9%), falls (20.9%) and violence (17.8%). Other causes are represented by: leisure sports activities, motor accidents and medical complications.(3,7,8)

Along time, several scales of evaluating the severity of the spinal cord injury were proposed, in order to be able to have an estimation of the functional prognosis of the trauma victim patients. These scales may be divided in two large groups: scales that evaluate the neurological deficit secondary to the trauma and scales that evaluate the residual functioning capacity of self care, of accomplishing daily activities, etc.(1,4,9)

Spinal cord injury makes the individual subject to a high risk of psychological disorders.(10)

The psychological effects arising may be: personality change, emotional disorders (depression, a drop in motivation and self esteem, emotional instability), anxious disorders (anxiety, panic attacks, post trauma stress), somatoform disorders, and sometimes even atrophy of the cognitive system.

PURPOSE

The purpose of the paper is to present the demographic data obtained following a cohort type, descriptive, comparative, with prospective elements study, and correlate it with the data from the specialty literature.

METHODS

80 subjects who were diagnosed with spinal cord injury were included in the study, and they were evaluated before and after 6 months of recovery treatment.

RESULTS

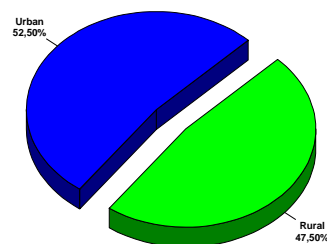
The demographic data obtained after evaluating the study group points out the following:

1. According to the origin environment, it turns out that incidence is slightly higher in the urban environment, the proportion urban/rural being of 1,1:1.

Table no. 1. The distribution of the cases according to the origin environment

Environment	No.	%
Rural	38	47.50
Urban	42	52.50

Figure no. 1. The distribution of the cases according to the origin environment



2. The age group concerned is represented in table no. 2.

Table no. 2. The distribution of the cases according to the age

Age	No.	%
<20 years old	7	8.75
21-30 years old	33	41.25
31-40 years old	22	27.50
41-50 years old	13	16.25
>50 years old	5	6.25
Average age	33.01±7.68	

¹Corresponding author: Alina Carmen Matica, Str. Col. Buzoianu, Nr. 29, Oradea, România, E-mail: matica.alina@yahoo.com, Phone: +40751 236263

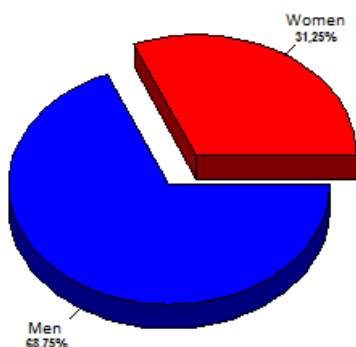
Article received on 14.11.2014 and accepted for publication on 15.12.2014
ACTA MEDICA TRANSILVANICA March 2015;20(1):55-57

CLINICAL ASPECTS

We notice that most of the cases were between 21-40 years old (41.25), the average age being 33.01 years.

3. In the studied group, the proportion men/women being of 2.2:1, the incidence of Vertebro-medullary trauma (VMT) is practically double among men (68.75%), just as figure no. 2 shows:

Figure no. 2. Spinal Cord Injury incidence according to gender



4. According to the motor deficit resulted as a consequence of SCI, the diagnosis of paraplegia is present in 66.25% of the cases, and 33.75% presented tetraplegia.

Table no. 3. The distribution of the cases according to the diagnosis

Diagnosis	No.	%
Paraplegia	53	66.25
Tetraplegia	27	33.75

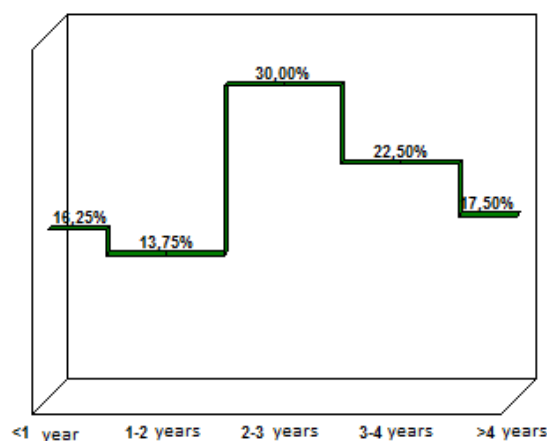
5. Out of the 80 patients of the study, 18 cases had the diagnosis of complete injury, and 62 cases had incomplete injury.

Table no. 4. The distribution of the cases according to the type of injury

Type of injury	Nr.	%
Complete	18	22.50
Incomplete	62	77.50

6. In the graphic bellow we have presented the duration of the injury for the patients included in the study. Over 50% of them had an injury that was 2-4 years old (52.50%), the average duration being of 2.75 years.

Figure no. 3. The distribution of the cases according to the duration of the injury



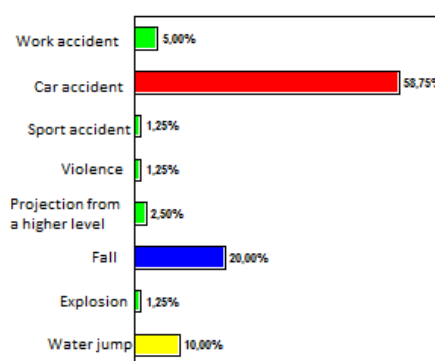
7. The causes of spinal cord injuries met in the present study are represented in table no. 5.

Table no. 5. The distribution of the cases according to the pattern of incidence of the injury

	No.	%
Work accident	4	5.00
Car accident	47	58.75
Sport accident	1	1.25
Violence	1	1.25
Projection from a higher level	2	2.50
Fall	16	20.00
Explosion	1	1.25
Water jump	8	10.00

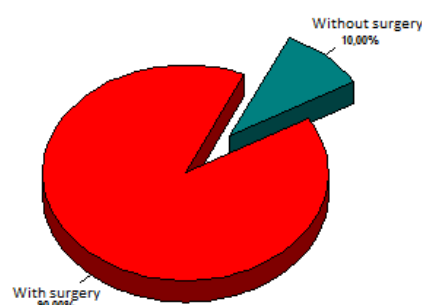
Almost 60% of the patients suffered a car accident (58.75%), falls represented 20.00%, and water jumps 10.0%.

Figure no. 4. The distribution of the cases according to the pattern of incidence of the injury



8. Concerning the need of surgical intervention, 90% of the patients needed one, the rest of 8 cases underwent a conservatory treatment.

Figure no. 5. Type of treatment needed



CONCLUSIONS

We notice that the origin environment is not so significant, but on the other hand, age is an important factor, the maximum incidence being between 21-40 years old (41.25), which correlates with the VMT causes, that is car accidents (58.75%), falls from heights (20.00%) and water jumps (10.0%).

The data obtained in the present study confirm the increased incidence of car accidents, just like in the specialty literature (42.9%) and of the falls from heights.

The deeds of violence met in this study are met to a much lesser degree, 3.75% compared to 17.8% described in literature.

Other causes met in the study were: leisure sports activities, explosion, work accidents.

The study shows a proportion men/women of 2,2:1, meaning an incidence of VMT, practically double among men (68.75%).

REFERENCES

1. Luca-Husti IF, Ciurea AV. Scale de evaluare a severității traumatismelor vertebro-medulare Viața Medicală 4 aprilie; 2013.
2. Lazăr L. Balneofizioterapie și Kinetologie clinică – curs – Editura Treira, Oradea; 2002.
3. Vlad SV. Teză de doctorat, rezumat - Studiu privind tratamentul fracturilor de coloană vertebrală, prin fixare ventrală, endoscopică, Facultatea de Medicina si Farmacie Oradea; 2011.
4. Chin LS, Facs RB, King MG. Spinal Cord Injuries Clinical Presentation Updated: Jul 7, 2014, <http://emedicine.medscape.com/article/793582-clinical>.
5. Lee BB, Cripps RA, Fitzharris M, Wing PC. The global map for traumatic spinal cord injury epidemiology: update 2011, global incidence rate Spinal Cord. 2014;52:110-116; doi:10.1038/sc.2012.158; published online 26 February 2013.
6. Wyndaele M, Wyndaele JJ. Incidence, prevalence and epidemiology of spinal cord injury: what learns a worldwide literature survey? Spinal Cord. 2006;44:523-529.
7. Jackson AB, Dijkers M, DeVivo MJ, Pocztatek RBA. Demographic profile of new traumatic spinal cord injuries: change and stability over 30 years. Arch Phys Med Rehabil. 2004;85:1740-1748.
8. Lee B, Cripps RA, Woodman RJ, Biering-Sørensen F, Wing P, Campbell R, et al. Development of an international spinal injury prevention module: application of the international classification of external cause of injury to spinal cord injury. Spinal Cord. 2010;48:498-503.
9. Lee B, Cripps RA, Woodman RJ, Biering-Sørensen F, Wing P, Campbell R, et al. Development of an international spinal injury prevention module: application of the international classification of external cause of injury to spinal cord injury. Spinal Cord. 2010;48:498-503.
10. Singh R, Rohilla RK, Siwach R, Dhankar SS, & Kaur K. Understanding Psycho-Social Issues in Persons with Spinal Cord Injury and Impact of Remedial Measures International Journal of Psychosocial Rehabilitation. 2012;16(1):95-100.