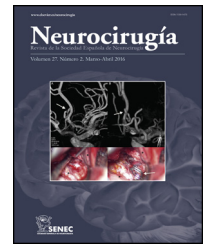




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Clinical Research

Epidemiology of traumatic spinal cord injury in Gran Canaria[☆]



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ABSTRACT

Objective: To evaluate the epidemiological and clinical trends in acute traumatic spinal cord injuries.

Material and methods: A retrospective study was conducted of traumatic spinal cord injury patients in Gran Canaria (Canary Islands, Spain) from 2000 to 2014. Demographic and spinal injury severity trends were analysed by year of injury grouped into 3 periods: 2000–2005, 2006–2010, and 2011–2014.

Results: The sample included 141 patients. The mean incidence for the entire period was 12 cases/million/year. There was a decrease in cases in the second and third period. While the male/female ratio was 3.8/1 and was maintained in all periods, the mean patient age increased from 38.8 in 2000–2005 to 54.5 years in 2011–2014 ($p < .05$). Falls have been the leading cause of spinal cord injury (48.2%), followed by traffic accidents (37.6%). Falls have increased, especially in the older population. Incomplete tetraplegia has been the most prevalent group (30.5%). A vertebral fracture was suffered by 70.3% of all patients, with 93.2% of them requiring surgery.

Conclusions: There has been a decrease in the incidence of traumatic spinal cord injury in recent years. The target population has changed, and the older population is currently the most affected. This reality suggests the need to change the local prevention campaigns for spinal cord injury in the elderly.

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Epidemiología de la lesión medular de origen traumático en Gran Canaria

R E S U M E N

Palabras clave:

Lesión medular traumática
Epidemiología
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Etiología

Objetivo: Determinar la tendencia de la incidencia del paciente con una lesión medular de origen traumático y describir las características epidemiológicas y clínicas de esta población.
Material y métodos: Se ha realizado un estudio descriptivo retrospectivo de los pacientes que han sufrido una lesión medular de origen traumático en la isla de Gran Canaria (islas Canarias, España) desde el año 2000 al 2014. Para estudiar la tendencia se han dividido los pacientes en 3 periodos según el año de la lesión: 2000-2005, 2006-2010 y 2011-2014.

Resultados: El número de casos ha sido de 141 pacientes. La incidencia media para todo el periodo ha sido de 12 casos/millón/año con una disminución de los casos en el segundo y tercer periodo. Mientras la relación hombre/mujer de 3,8/1 se ha mantenido, la edad media del paciente ha aumentado de 38,8 años entre el año 2000-5 a 54,5 años en el 2011-14 ($p < 0,05$). La caída, que ha sido la principal causa de lesión medular (48,2%) seguida de los accidentes de tráfico (37,6%), ha aumentado especialmente en la población de mayor edad. La lesión incompleta ha predominado sobre la completa, siendo la tetraplejía incompleta el grupo más prevalente (30,5%). El 70,3% de los lesionados medulares tenían una fractura vertebral y de ellos han sido intervenidos quirúrgicamente el 93,2%.

Conclusiones: En los últimos años ha habido una disminución de la incidencia de la lesión medular de origen traumático con un cambio en la población diana, afectando principalmente a la población de mayor edad. Estos hallazgos muestran la necesidad de replantear las campañas de prevención local de la lesión medular en el anciano.

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Introduction

Spinal cord injuries are one of the most significant traumatic events a person can suffer. This type of injury causes a series of physical, mental, family, social and economic dysfunctions that affect not only the patient, but also their environment. The physical consequences of these injuries are often permanent, and as there is currently no cure, prevention is of great importance. Knowing the incidence and aetiology is essential for planning prevention campaigns.¹

There are several reviews in the literature on the incidence of traumatic spinal cord injuries. The reported incidence varies widely, ranging between 4.5 and 83 cases per million people/year (c/m/y) in the review by Wyndaele et al.,² or between 15 and 39 c/m/y in the review by Cripps et al.³ These differences in the incidence are primarily due to: (a) differences in the databases, which are sometimes national and other times regional, hospital or simply a series without a clear methodological delimitation; (b) differences in the patient definition, criteria and identification processes: whether or not paediatric patients are included, whether the patients are included from the site of the accident or from admission, whether or not fatalities in the early hours are included, or inclusion due to coding processes, among other; and lastly, (c) differences between countries: sociocultural or economic variations, variations in public health, healthcare systems, or prevention policies.¹

Traditionally, the typical patients admitted into the specialised units for handling these patients were young males who had suffered a road traffic accident.⁴ In recent years, a change in the patient profile has been observed, with an

upward trend in the mean age, with falls being the main cause. As the impact intensity decreases, the number of fractures related to spinal cord injury decreases.

We present in this study the changes that we have observed in the incidence and the epidemiological and clinical characteristics of patients who have suffered a traumatic spinal cord injury.

Material and methods

Study population

A retrospective, descriptive study was conducted of all patients who had suffered a traumatic spinal cord injury on the island of Gran Canaria and who were admitted to a specialised unit. The Spinal Cord Injury Unit at the Hospital Universitario Insular de Gran Canaria has been a regional referral centre for the entire Canary Islands Community since it opened in November 2000. The Canary Islands are composed of 7 islands, and Gran Canaria and Tenerife are the most populous. According to the Canary Islands Statistics Institute, the population of the island of Gran Canaria was 741,161 people in 2000 (study start) and 851,157 people in 2014 (study end).⁵

Inclusion and exclusion criteria

All patients who were admitted to the Spinal Cord Injury Unit for an acute traumatic spinal cord injury on the island of Gran Canaria from 1 November 2000 to 31 December 2014 were included. Patients who died before admission to our Unit, traumatic spinal cord injuries occurring outside of Gran Canaria,

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