Incidence of Spinal Cord Injury in Traumatic Patients Admitted to a Trauma Referral Center in Guilan

Shahrokh Yousefzadeh-Chabok, Hamid Behzadnia, Leila Kouchakinejad-Eramsadati, Marieh Hosseinpour, Babak Alijani, Omid Taghinejadi

Abstract

**Background & Aim:** Patients with spinal cord injury (SCI) impose a heavy burden on health care system. Awareness on prevalence and incidence of SCI is important because this would show the necessity of prevention. This study aimed to investigate the epidemiology and types of traumatic spinal cord injuries in a trauma referral center in Guilan.

**Methods & Materials/Patients:** This is a descriptive study which was conducted on patients with spinal cord trauma using a questionnaire during one year. The questionnaire included demographic information, injured spinal cord area, mechanism of injury, and type of neural damage based on ASIA scale. The data were analyzed using SPSS18 and descriptive statistics.

**Results:** Out of 76 study patients, 68 (88.2%) were men with mean age of 35.2 ± 1.45 years. The most common cause of SCI was motor vehicle accidents (MVA) (48.7%). 34 patients (44.7%) had cervical spine injury and in 23 patients (30.3%), thoraco-lumbar injuries caused SCI. 29.7% of patients suffered from paraplegia and 10.8% quadriplegia. 25 patients (38.5%) had complete SCI. 7 patients with SCI (9.2%) died during hospitalization. In this study, increased age was identified
as a risk factor for death. In 4 of these patients (57.1%) cervical SCI was the underlying cause of death.

**Conclusion:** Young men were the group at highest risk and the most mechanism leading to SCI was motor vehicle accidents. Many of these accidents are preventable; thus, more attention should be devoted to safety policies based on needs of the vulnerable groups. Besides, comprehensive education program with clear and practical goals should be developed.

**Keywords:** Epidemiology; Spinal injuries; Trauma