

## Incidence and aetiology of traumatic spinal cord injury in Cape Town, South Africa: a prospective, population-based study

Joseph, C., Delcarme, A., Vlok, I., Wahman, K., Phillips, J. and Nilsson Wikmar, L.

### Abstract

**Study design:** Prospective, regional population-based study.

**Objectives:** To provide the incidence, aetiology and injury characteristics of traumatic spinal cord injury (TSCI) in the City of Cape Town, South Africa.

**Setting:** All government-funded hospitals within the City of Cape Town, South Africa.

**Methods:** All survivors of acute TSCI, given that they met the inclusion criteria, were prospectively included for a 1-year period. The International Spinal Cord Injury Core Data Set was used and systematically completed by specialist doctors. Further, international standards for neurological classification were adhered to.

**Results:** In total, 147 cases of acute TSCI were identified and 145 were included in the study. The male to female ratio was 5.9:1 and the mean age was 33.5 years, ranging from 18 to 93. The crude incidence rate was 75.6 per million (95% CI: 64.3–88.8) with assault as the main cause of injury, accounting for 59.3% of the cases, followed by motor vehicle accidents (26.3%) and falls (11.7%). Most injuries occurred in the cervical spine (53.1%), and American Spinal Injury Association Impairment Scale A severity was most common (39.3%) in the cohort.

**Conclusion:** The incidence rate of TSCI in a region of South Africa was high when compared to previously postulated figures for the country. There is a need for primary preventative strategies to target younger men that are exposed to violent activities. A national study is required to learn whether these findings are only locally applicable or generalisable.

### Introduction

Injury to the spinal cord, due to trauma, could affect persons irrespective of age, gender, socioeconomic background, ethnicity and demographic location.<sup>1,2</sup> As such, many countries have invested in establishing knowledge concerning the epidemiological profile of traumatic spinal cord injuries (TSCI).<sup>3-5</sup> Knowledge pertaining to the epidemiology of health conditions is essential for developing policies and preventative programs. Different causative factors could result in TSCI; therefore, knowledge and understanding of causes are imperative for geographically delineated prevention programs.

The global profile of TSCI had been studied recently. Studies found that incidence rates and injury characteristics across continents differ greatly.<sup>1,2,6</sup> However, methodological inconsistency is one of the reasons for this perceived disparity. A





















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