Editorial Commentary

Epidemiology of spinal trauma—regional differences

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Recently, Ouden et al. reported the epidemiology of spinal fractures in a level one Trauma Center in the Netherlands (1). A total of 3,029 spinal fractures in 1,479 patients were reported from 2007 to 2016 with a prospective register. Over time, they also reported a large increase in amount of fracture in patients older than 65 years (compared to younger people), as well as almost 41% of female in their sample (1). Most fractures occurred in the thoracic spine and the most common cause was secondary to fall from height. Additionally, another interesting finding was only 8.5% of spinal cord injury.

We congratulate the authors for this study. We believe that epidemiological studies are important to understand the development of precautionary actions and also to understand the differences in the disease presentation throughout the years and in different places around the world.

By managing patients with spinal trauma throughout the years, we have also realized that in Brazil there is a tendency of cases in which older patients have spinal fractures. However, our profile of patients with spinal trauma in level I trauma center is different from Netherlands (2,3). Spinal trauma in our country generally occurs in young men after high energy traffic accidents or violence (such as gun shot and direct stab wounds) (2-4). Additionally, spinal trauma in this context leads to higher rates of neurological injury and occurs more frequently in the subaxial cervical spine and thoracolumbar junction, instead of in the thoracic spine itself (2-4).

We believe that, today, we face two different and distinct clinical scenarios of spinal trauma: one composed of older patients, with low energy traumas, generally caused by fall from the own height, associated with poor bone quality, clinical comorbidities, degenerative spinal conditions/spinal ankylosis and neurologically intact patients; the other scenario, more common in Brazil and also probably in other developing countries, composed of spinal trauma in younger adults, caused by high energy trauma and generally associated with neurological deficits and systemic injuries. Probably, in Europe and more developed countries, such as the United States and Canada, with a clear ageing population, the epidemiologic profile of spinal trauma and preventative measures should focus in avoiding falls of older adults. On the other hand, although we also have many cases of fractures in older adults, in developing countries, focus should be in traffic measures to avoid accidents, as well as measures to decrease interpersonal violence. Additionally, management patients with fractures associated with bone fragility and clinical comorbidities is different, requiring a different surgical arsenal than for fractures in younger adults.

We congratulate the authors for this incredible manuscript. Epidemiology should be considered of major importance to understand what's happened in health care systems and to understand diseases behavior throughout the years. This allows specific measures for prevention, education and also to improve treatments. Understanding regional nuances is of paramount importance to prevent and improve resources allocation, as well as for medical education.

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Footnote

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