

According to the experts at the 17th National Refresher Conference for Rehabilitation Doctors, sponsored by ESTEVE and endorsed by SERMEF

Falls are the primary cause of traumatic spinal cord injury, outnumbering road traffic accidents

- Falls currently cause 65% of these injuries. Traffic accidents are in second place, with 23%¹
- During the first year after suffering a spinal cord injury, patients may lose more than 50% of the bone mass of certain bones and one in three will suffer a fracture due to the fragility of their bones²
- Pain management to improve patients' functionality is a challenge in specialist clinics

Barcelona, 17 February 2020.- The causes and the profile of patients with spinal cord injuries have changed over the last few years. Currently, the most frequent reason for these injuries is falls - in 65% of all cases - a percentage that reaches 80% in people over 75 years. Traffic accidents are in second place, with 23%. In addition, the average age of patients has risen from 46 to 56 in the last in the last decade¹.

These are some of the data provided within the framework of the 17th National Refresher Conference for Rehabilitation Doctors, organized by ESTEVE and endorsed by the Spanish Society of Rehabilitation and Physical Medicine (SERMEF). The aim of the Conference is to update attendees on cutting-edge aspects of rehabilitation. Held this weekend in Madrid and attended by some 200 doctors specialising in rehabilitation and physical medicine, the event included both practical workshops and lectures given by some twenty specialists of the highest national level, with a space specifically dedicated to the exchange of clinical experiences between the professionals present.

According to the experts, there are two main profiles in patients with spinal cord injury: those under 45, where the most frequent cause is traffic accidents; and those over 45, where the most frequent cause is falls. *"The percentage of spinal cord injuries due to traffic and work accidents has fallen in the last decade from 44% to 23%, while falls have increased to such an extent that they now account for 65% of the causes of spinal cord injuries"*, according to **Dr. Xoán Miguéns**, head of the Rehabilitation Service of the EOXI (Integrated Management Organizational Structure) of Orense, Verín and O Barco de Valdeorras, and Scientific Coordinator of the Conference. These data are consistent with other international research². In line with these data, it should be noted that, other than in the case of those over 74 years of age, a significant annual decrease in the incidence of spinal cord injuries has been observed over the years.

Chronic pain appears from minute zero of the injury

In rehabilitation clinics, it is common for 85% of patients to arrive with pain. When managing pain, specialists always keep in mind the perspective of functionality, i.e. pain control to improve patients' functionality and independence. In the case of spinal cord injuries, **Dr. Miguéns** points out that *"our priority is analgesic treatment, because when they arrive at the hospital, these patients suffer pain with every breath they take. Then, when the injury is stabilized, other neuropathic-type pains appear, which are terrible and tremendously challenging"*.

In addition to the processes associated with the injury itself, as in other circumstances where pain is suffered chronically, the system that transmits pain to the brain is also modified in such a way that it is transmitted with much greater intensity, even when there is no permanent stimulus that causes it (this is known as central sensitization). This constitutes a daily challenge in rehabilitation clinics.

Up to 50% of bone mass is lost in the first year

Osteoporosis is another common complication in spinal cord injuries. Specifically, neurogenic osteoporosis, which appears as a result of injuries to the central nervous system (CNS). According to **Dr. Xoán Miguéns**, *"what happens is that calcium control in these patients is altered due to several factors, such as the loss of mobility and the malfunctioning of the CNS in the control of calcium, which accelerates the loss of this mineral. IN addition, the metabolism of vitamin D is also altered"*.

Osteoporosis sets in immediately after a spinal cord injury. During the Conference, it was explained that the loss of bone mass is 1% per week during the first months and although it stabilizes after 1 or 2 years, it still continues for a few more years after that. This results in a loss of bone mass of up to 50% during the first year, especially at the neck of the femur and the tibia: this figure is greater than 75% in patients with complete spinal cord injury³. Moreover, this marked loss of bone mass leads to an increase in fractures due to bone fragility, which is suffered by 1 in 3 patients³.

All the topics addressed at the round tables of the current edition of the National Refresher Days for Rehabilitation Doctors were chosen by the specialists themselves, on the basis of a survey. Thus, as well as the rehabilitation of patients suffering a spinal cord injury, another round table took place on the medical-legal aspects in rehabilitation, *"given that legislation is changing and we need to bear some of these changes in mind when preparing reports for medical courts or other institutions"*.

Ultrasound-guided infiltration: greater precision and safety for the patient

The second day of the meeting was devoted to a practical workshop on ultrasound-guided infiltration, *"which responds to a real demand in clinics and makes it possible to introduce and treat patients with less common and more innovative techniques"*, according to **Dr. Miguéns**. The main advantage of the ultrasound-guided infiltration is that it offers greater precision and safety when you are visualizing the area of the organism to be treated and also when it comes to selecting the shortest and safest route to that area. In clinics it's as common a tool as a stethoscope and it *"allows us both to diagnose the problem and to treat it safely and evaluate the response to the treatment we have just administered"*.

It also lets us carry out techniques *“that we would not be able to do otherwise. For example, infiltrations in areas very close to the lungs or to an major artery, or in a nerve that is so small it needs to be visualized on ultrasound. Or analgesic techniques, such as caudal blocking or BRILMA blocking in women who have undergone breast surgery and have persistent, poorly tolerated pain. In other words, we can block a nerve that is generating sustained pain”*.

References

1. Montoto Marqués A. [Lesión medular traumática en Galicia \(1995-2014\): estudio de la evolución epidemiológica y resultados clínico-epidemiológicos](#) (Traumatic spinal cord injury in Galicia (1995-2014): a study of the epidemiological evolution and clinical-epidemiological results). (Doctoral thesis). University of Corunna, 2018
2. McCaughey EJ, Purcell M, McLean AN, Fraser MH, Bewick A, Borotkanics RJ, et al. [Changing demographics of spinal cord injury over a 20-year period: a longitudinal population-based study in Scotland](#). Spinal Cord. 2016;54(4):270-6.
3. Zehnder Y, Luthi M, Michel D, Knecht H, Perrelet R, Neto I, et al. [Long-term changes in bone metabolism, bone mineral density, quantitative ultrasound parameters, and fracture incidence after spinal cord injury: a cross-sectional observational study in 100 paraplegic men](#). Osteoporosis Int. 2004;15:180–9.

About ESTEVE

ESTEVE (www.esteve.com) is a global pharmaceutical company with headquarters in Barcelona. The company's mission is to advance in innovation in order to improve people's lives, and ever since its foundation in 1929, it has focused on providing solutions for unmet medical needs. It has an important presence in Europe, in the USA, Mexico and China.

For more information, please contact:

Olga Cajal, Communication ESTEVE, Tel. 93 446 62 60, ocajal@esteve.com
M^a José Egea, Atrevia, Tel. 93 419 06 30, mjegea@atrevia.com