Elderly spinal cord injuries increase five-fold in 30 years

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The number of spinal cord injuries among senior citizens (age 70 and above) has increased five times in the past 30 years, as compared with younger spinal cord injury patients, researchers at Thomas Jefferson University Hospital and Jefferson's Regional Spinal Cord Injury Center of the Delaware Valley recently reported.

As the population within the United States ages, it is estimated that 20 percent of its population will be older than age 65 by the year 2040, and will likely impact spine surgeons and spinal cord rehabilitation centers as these patients become a larger proportion of the spinal cord injury (SCI) population. The findings were just presented by Jefferson neurological surgeons at a meeting in Phoenix, Ariz. of the Joint Section on Disorders of the Spine and Peripheral Nerves of the American Association of Neurological Surgeons.

"Spinal cord injuries in older patients are becoming more prevalent," said James Harrop, M.D, Assistant Professor of Neurological and Orthopedic Surgery, Jefferson Medical College of Thomas Jefferson University, one of the study's primary investigators. "The mortality of these patients is much greater than younger patients and should be factored in when considering aggressive interventions and counseling families regarding prognosis." However, they also found that these patients have had an increase in survival over this period.

Admissions by geriatric SCI patients have increased five-fold and the percentage of geriatric patients within the SCI population has increased from 4.2 percent to 15.4 percent since 1980. In comparison to younger patients, geriatric patients are less likely to have severe neurological deficits but have higher rates of mortality. Researchers reviewed a database of 3,481 consecutive acute penetrating and blunt spinal cord and spine-injured patients treated at Jefferson Regional Spinal Cord Injury Center over a 28-year period (1978-2006).

Overall annual admissions for SCI at Jefferson's Spinal Cord Injury Center have increased 60 percent since the early 1980's, but geriatric SCI admissions have increased more than 580 percent during that same time period, the researchers found.

"This increase is likely a result of an aging population and propensity for these patients to have SCI with minor trauma," Dr. Harrop noted. "Falls continue to be the predominant mechanism for geriatric spinal cord injuries with 74 percent of geriatric injuries resulting from a fall in this series."

Geriatric patients also appear prone to traumatic spinal cord injuries due to:

(1) changes in bone quality with aging
(2) increasing prevalence of cervical spinal stenosis with older age
(3) an increased rate of motor vehicle accidents per mile driven

It is also believed that these older patients have an increased risk of mortality due to their concurrent medical illnesses, as well as their limited ability to overcome traumatic injuries, they said.

Mortality, both during hospitalization and the first year after injury, was much higher in the geriatric population-- approximately eight times higher, the study showed.

Mortality during hospitalization was 3.2 percent for adult patients less than age 70 and 27.7 percent for geriatric patients. Mortality one year after getting out of the hospital was 5.4 percent for the adult patients and 44.4 percent for the geriatric patients. In both cases of mortality (hospital and one-year), high-quadriplegic injuries were found to have the highest mortality and paraplegic injuries had the lowest mortality.

Source: Thomas Jefferson University