

## **HYPONATREMIA AND THE RISK OF LARGE BONE FRACTURE IN ELDERLY PATIENTS**

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Hyponatremia has been shown to be associated with gait disturbances, decreased mentation, and falls. The goal of this study was to determine the incidence of hyponatremia, in a geriatric patient population, admitted to an urban hospital emergency department (ED) with a substantial fracture (hip/pelvis/femur) and compare it to the incidence of hyponatremia in noncritically ill ED patients without fracture. During an 18 month period from March 2007 to August 2008 serum sodium levels were evaluated in 364 cases of bone fracture in patients aged 65 or older and in 364 age matched nonfracture patients.

The incidence of hyponatremia in patients with fractures was more than double that of nonfracture patients, 9.1% and 4.1% respectively ( $P=0.007$ ). The incidence of moderate hyponatremia ( $\leq 129$  mEq/L) and mild hyponatremia (130-134 mEq/L) was also twice as common in the fracture group. Mean serum sodium of the entire fracture group was  $131 \pm 1.9$ . Age distribution was similar in both groups. In the fracture group the patients were 75.3% female, while females comprised 66.2% of the nonfracture group ( $P=0.02$ ). Of fracture patients with hyponatremia 18.2% were taking SSRIs while none were taking this medication in the nonfracture group. Pulmonary problems and diuretic usage were more commonly associated with hyponatremia in the nonfracture patients.

In summary, hyponatremia was twice as common in patients admitted for fractures. The degree of hyponatremia was noted to be mild to moderate. The use of SSRIs was more common in the fracture patients.