

Community acquired hypernatremia in elderly and very elderly patients admitted to emergency department: clinical characteristics and outcome

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Introduction: Thirst is the ultimate defense against development of hypernatremia. Elderly people typically have decreased thirst, thus resulting in reduced water intake. The ability to concentrate urine also diminishes with advancing age. Numerous factors including female gender, infections, hypertonic infusions, tube feedings, osmotic diuretics, laxatives, and mechanical ventilation increase the susceptibility of elderly persons to hospital-acquired hypernatremia

Aim: Our aim is to investigate the application reasons, etiologies, clinical courses, outcomes, complications and cost assessments of the elderly patients showing CAH.

Patients and Methods: We conducted a retrospective study in our tertiary hospital. Elderly and very elderly patients evaluated in the emergency department (ED) from January 1, 2010 to December 31, 2010 (n=4960) were recruited. Totally 102 patients older than 65 years of age diagnosed as CAH were evaluated. The patients were divided into two main groups according to their age as elderly (65-74 years old) (group 1) (n=38) and very elderly (>74 years) (group 2) (n=64).

Findings: Our overall observed prevalence of CAH was 2.0% (n=102, 102/4960). In particular the prevalence of CAH in group 1 and group 2 were 1.0% (38/3651) and 4.8% (64/1309), respectively (p<0.001). 46.1% of the subjects had Alzheimer's disease. The mean Katz scores at the time of admission were found to be 2.4±1.9 and 1.1±1.0 in group 1 and 2, respectively (p<0.001). The mean cost was higher in group 1 than those in group 2 (2141.12±1387.14 USD and 2407.13±734.54 USD, respectively) (p<0.01). The intensive care need was significantly much in group 2 as compared to group 1.

Conclusion: The main features of elderly and very elderly patients with CAH are that they have Alzheimer disease the most as the accompanying disease. Moreover they have impaired and inadequate oral intake, are very often treated with RAS blockers, and are mostly hypotensive at the time of their admission. Another important feature is that the very elderly subjects with CAH have more intensive care and mechanical ventilation need. Clinically, an important question is how these results could aid in preventing and treating hypernatremia in the elderly and very elderly people. In our opinion, to prevent hypernatremia, close monitoring daily hydration with convenient salines, and careful prescription of some medications such as diuretics and RAS blockers should be kept in mind.

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