

Hyponatremia as a Prognosis Factor for COPD

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Hyponatremia is a common electrolyte disorder that develops frequently in 15-40% of hospitalized patients [1-3], although actual incidence data is not known. Hyponatremia usually appears as a complication of an acute illness, as a decompensation of a chronic disease, or as a consequence of therapy interventions carried out during patient treatment. Most common causes of hyponatremia include SIADH (syndrome of inappropriate antidiuretic hormone secretion), diuretic use, polydipsia (specially in psychiatric patients), hypovolemia, adrenal insufficiency following withdrawal of corticosteroids, heart failure, and liver cirrhosis [4]. Additionally, age is an independent risk factor for hyponatremia [2,5-8]. There is a clear association between chronic pulmonary pathologies, such as chronic obstructive pulmonary disease (COPD), asthma or cystic fibrosis, and SIADH, frequently concomitant with infective processes. The mechanisms involved, although not entirely clarified, suggest an effect on baroreceptors or higher release of ADH secondary to hypercapnia [9].

Hyponatremia is important, for it worsens the clinical course and is a predictor of poor prognosis in various diseases, such as heart failure, coronary syndrome, liver cirrhosis, chronic renal failure, stroke and COPD [3,10-15], both in stable phase and exacerbation. Patients with COPD often have associated comorbidities, especially cardiovascular diseases, and hyponatremia has been associated with a higher morbidity and mortality rate in patients admitted for COPD. However, whether mortality is due to hyponatremia or to the underlying disease remains unclear [16,17]. Additionally, a higher ICU admission rate and a higher need for mechanical ventilation, as well as an increase in average stay and in healthcare costs have been reported in patients with hyponatremia [18-20].

The diagnosis of hyponatremia is a challenge for the clinician because of its frequency, different etiologies and implications for prognosis. Suspicion should be raised by directed anamnesis and complete physical examination in those patients with suggestive symptoms or at risk (alcoholics with malnutrition, patients on diuretic treatment...), and then subsequently confirmed by determination of natremia.

Detection and correction of water-electrolyte imbalance in follow-up care could contribute to a lower morbidity and mortality rate of patients with COPD.

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