

Lecture Code: FE01-S1

Session Name: Fluid & Electrolyte

Session Topic: Fluid and Electrolyte Challenges in Nephrology: from Bench to Bedside

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Urea for Hyponatremia: A Fresh Look at an Old Cure

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Hyponatremia is the most common electrolyte disorder seen in clinical practice. While acute or severe hyponatremia often presents with significant symptoms, milder and more chronic cases tend to be clinically subtle. However, recent studies have shown that even mild forms of hyponatremia are linked to increased morbidity and mortality. Despite this, current treatments for chronic hyponatremia lack sufficient evidence on their efficacy and have notable limitations, including patient nonadherence, adverse side effects, and high costs. As a result, there is a pressing need to explore alternative treatment options for this widespread condition. Small case series from Europe, dating back to the early 1980s, suggest that urea—an oral osmotic diuretic that promotes urinary water excretion—is both safe and effective for managing chronic hyponatremia. In 2016, a novel formulation of urea became available in the United States. Two years later, the group at the University of Pittsburgh Medical Center published the first and only study evaluating the efficacy and safety of this American formulation of oral urea in hospitalized hyponatremia patients. Since then, several retrospective studies and two meta-analyses have demonstrated that oral urea is an effective, safe, and well-tolerated treatment for chronic hyponatremia. This lecture reviews the pros and cons of traditional therapies for chronic hyponatremia, with a particular focus on the use of urea in the treatment of SIAD.

Keywords: Hyponatremia, SIAD, Fluid restriction, Vasopressin antagonists, SIAD