Ure-NA versus tolvaptan for the treatment of hyponatremia

Nusrat Alex Hossain, PharmD[1], Alana Whittaker, PharmD, BCPS, BCGP[1,2], Evan Williams, PharmD, MBA, BCPS, BCACP[1,2]

[1]Valley Hospital Medical Center, Las Vegas, NV; [2]Roseman University of Health Sciences, Henderson, NV

BACKGROUND

- Hyponatremia is a common electrolyte abnormality observed in hospitalized individuals and is closely linked with increased mortality[1]
- Current studies for the treatment of hyponatremia comparing ure-NA and tolvaptan are limited to patients with syndrome of inappropriate antidiuretic hormone secretion (SIADH)
- Tolvaptan is an expensive option for the treatment of hyponatremia; however ure-NA could be used as a more cost-effective alternative
- The purpose of this study is to assess the effectiveness and safety of ure-NA compared to tolvaptan for the treatment of inpatient hyponatremia

STUDY OBJECTIVES

- **Primary Outcome:** Change in serum sodium level at 24hrs after initiation of study treatment
- **Secondary Outcomes:**
  - Change in serum sodium level at 48hrs and 72hrs after initiation of study treatment
  - Proportion of patients who achieved serum sodium concentration of ≥ 135 mEq/L prior to discharge
  - Length of stay in days
- **Safety:**
  - Change in serum sodium level >10mEq/L within 24hrs

METHODS

- Single-center, retrospective cohort, observational analysis
- Data will be extracted from the electronic medical record of patients admitted to a Valley Hospital Medical Center between August 2019 and September 2022

Inclusion Criteria

- Age ≥18 years old
- Serum sodium levels <135mEq/L
- Use of:
  - Ure-NA
  - Tolvaptan
  - Ure-NA and tolvaptan

Exclusion Criteria

- Serum sodium levels >135mEq/L
- Patients who received hypertonic saline at the same time as any of the study drugs

The following data will be collected:

- Demographic variables: Age, gender, ethnicity, and body weight
- Date of hospital admission, discharge, and length of stay
- Comorbidities: Heart failure, cirrhosis, and kidney disease
- Clinical characteristics: Presenting symptoms and indication
- Baseline laboratory values: Serum sodium, BUN, serum creatinine, serum osmolality, TSH, AM cortisol, serum glucose, urine sodium, and urine osmolality
- Treatment: Dose of ure-NA and tolvaptan received per day, number of doses received, duration of therapy, and concurrent use of other therapies such as fluids, salt tabs, diuretics, demeclocycline, and glucocorticoids

DATA ANALYSIS

- Statistical analysis will include Chi-square and Fisher's exact tests for nominal data and Kruskal-Wallis for continuous data
- The research results will provide data and patient outcomes comparing the use of ure-NA, tolvaptan, or both for the treatment of hyponatremia in an inpatient setting

REFERENCES

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DISCLOSURE

The authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.