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REAL-WORLD USE OF TOLVAPTAN IN HYPONATREMIA: A SINGLE-CENTRE EXPERIENCE

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INTRODUCTION

Hyponatremia is the most common electrolyte imbalance in hospitalized patients, associated with increased morbidity and mortality. Tolvaptan effectively raises serum sodium in SIADH. However, concerns regarding rapid overcorrection and safety persist. This study evaluates the efficacy, safety, and real-world usage patterns of tolvaptan in a tertiary care setting.

METHODOLOGY

A retrospective single-centre observational study was conducted at Hospital Putrajaya using the electronic records of patients treated with tolvaptan from January 2020 to December 2025. Overcorrection was defined as >10 mmol/L increase within 24 hours, and non-response as <4 mmol/L increment at 24 hours.

RESULTS

Twenty-one patients were included, with a mean age of 66.7 years; 57% were male. Most (90.5%) received 7.5 mg initially. Mean baseline sodium was 118.1 ± 4.1 mmol/L. Tolvaptan produced rapid correction, with mean sodium increasing to 127.0 mmol/L at 24 hours (mean increment 8.9 mmol/L). Only one patient (4.8%) was a non-responder at 24 hours. Median time to sodium >130 mmol/L was 1 day, with 60% achieving this within 24 hours. At discharge, mean sodium was 130.4 mmol/L. Median length of stay following initiation was 5.5 days. Overcorrection occurred in 23.8% (n = 5), all in the 7.5 mg group, particularly among those with baseline sodium 115–120 mmol/L. No cases of osmotic demyelination syndrome (ODS) were observed. The mean internal for initiation is approximately 6 days from diagnosis. Tolvaptan usage increased and peaked in the first 3 years, but subsequently dropped and plateaued over the last 2 years.

CONCLUSION

Tolvaptan is safe and effective for sodium correction; although overcorrection remains a risk, no long-term sequelae of ODS were observed, underscoring the need for vigilant monitoring. Its use in Hospital Putrajaya remains limited, with delayed initiation possibly due to tolvaptan being considered a secondary treatment after failure of other options.