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Therapeutic Efficacy and Safety Profile of Tolvaptan Administered in Hyponatremia Patients

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Abstract : Hyponatremia is an electrolyte disturbance in which the sodium ion concentration in the serum is lower than normal. Sodium is the dominant extracellular cation (positive ion) and cannot freely cross from the interstitial space through the cell membrane, into the cell. Its homeostasis (stability of concentration) inside the cell is vital to the normal function of any cell. Normal serum sodium levels are between 135 and 145 mEq/L. Hyponatremia is defined as a serum level of less than 135 mEq/L and is considered severe when the serum level is below 125 mEq/L. In the vast majority of cases, Hyponatremia occurs as a result of excess body water diluting the serum sodium (salt level in the blood). Hyponatremia is often a complication of other medical illnesses in which excess water accumulates in the body at a higher rate than can be excreted (for example in congestive heart failure, syndrome of inappropriate antidiuretic hormone, SIADH, or polydipsia). Sometimes it may be a result of over-hydration (drinking too much water).Lack of sodium (salt) is very rarely the cause of Hyponatremia, although it can promote Hyponatremia indirectly. In particular, sodium loss can lead to a state of volume depletion (loss of blood volume in the body), with volume depletion serving as a signal for the release of ADH (anti-diuretic hormone). As a result of ADH-stimulated water retention (too much water in the body), blood sodium becomes diluted and Hyponatremia results.

Keywords : Tolvaptan, hyponatremia, syndrome of insufficient anti diuretic hormone (SIADH), euvolemic hyponatremia
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