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A STUDY OF INCIDENCE OF HYPONATREMIA AND SIADH (SYNDROME OF INAPPROPRIATE ANTI- DIURETIC HORMONE SECRETION) IN ACUTELY ILL INFANTS AND CHILDREN RECEIVING INTRAVENOUS FLUIDS IN HOSPITAL

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Background

In both adults and children, hyponatremia is an important complication in acute illness. The causes of hyponatremia differ with the status of extracellular fluid in a given patient. Use of hypotonic intravenous maintenance fluids in sick children is one of the causes. In hyponatremic patients with euvolemia, SIADH is the most common causative factor.

Objective

To study the incidence of hyponatremia and SIADH in acutely ill infants and children receiving intravenous fluids in hospital

Method

This descriptive study was conducted on 124 acutely ill infants and children of age group up to 12 yrs admitted in the Paedriatics ward over 18 months period. Serum sodium was estimated using ion selective electrophoresis. Serum and urine osmolality was also estimated. Corresponding imbalance was managed with standard treatment guidelines with definitive treatment for the underlying condition.

Results

The study showed that early infancy was associated with higher prevalence of acute diseases like acute respiratory infections, seizures and sepsis. The most common indication for maintenance fluids was respiratory distress (29.8%) which precluded oral feeding. 61.3% of children had hyponatremia (serum Na < 135 mEq/L) with most cases being mild. Though euvolemic hyponatremia was more commonly seen, SIADH was detected in only 12.5% of these cases. No case of symptomatic hyponatremia was noted with the use of hypotonic intravenous fluids.

Recommendations

Monitoring of serum sodium levels is necessary to detect hyponatremia in early stage in acutely ill children. In euvolemic hyponatremia, SIADH should be suspected and diagnosed, so that its definitive management can be started. Hence every hospital with an intensive care unit should be equipped with facility for monitoring serum and urine osmolality and electrolytes.