Introduction:
One of the most common complications observed in oncology patients is electrolyte imbalance. Hyponatraemia (Na+ < 136 mmol/l) is a common abnormality in hospitalized patients and is associated with increased morbidity and mortality. In patients of haematopoietic stem cell transplant (HSCT), Syndrome of Inappropriate Anti-Diuretic Hormone Secretion (SIADH) has been reported in the literature between 7-13% . We undertook this study to evaluate the incidence of hyponatremia and SIADH in our patients, post-HSCT.

Methods:
We analysed 219 (158 male and 61 female; 48 paediatric and 171 adult; 112 allogenic and 157 autologous transplant) cases of peripheral blood-HSCT conducted between a period of June 2012 to May 2015 retrospectively. Serum electrolyte levels including serum calcium and magnesium were measured daily during the stay in the HSCT unit and subsequently twice to thrice a week during their follow-up outpatient department (OPD) visits. Hyponatremia was defined as serum sodium level <136 mmol/l. In hyponatremics further serum and urine osmolality were also carried out. SIADH was diagnosed by the following criteria: (1) Hyponatremia with hypotonicity of plasma; (2) Urine osmolality in excess of plasma osmolality; (3) Increased renal sodium excretion; (4) Absence of edema or volume depletion; and (5) Normal renal function.

Results:
The incidence of hyponatremia was found to be 9.6% (21/219). Total number of patients with SIADH was 7/219 (3.2%). Incidence of hyponatremia was 9.5% in men, 9.8% in women (p= 0.9385); 12.5% in allogenic, 4.5% in autologous transplant (p= 0.0283); 10.5% in adult and 6.3% in paediatric age groups (p=0.5789) respectively. Serum sodium levels were <130 mmol/l in all hyponatremics. Incidence of SIADH in allogenic and autologous HSCT patients was 5.40% and 0.64% (p=0.022) respectively. Out of all 171 adult and 48 pediatric cases, SIADH was observed in 3.5% and 2% respectively (p=1.0). Incidence of SIADH was 3.8% in men and 1.6% in women (p=0.676). More than 70% of SIADH and 62% of hyponatremia cases occurred within 100 days post-transplant. Hypocalcemia and Hypomagnesemia was observed in 4 out of 7 patients with SIADH.

Conclusion:
Incidence of hyponatremia and SIADH in post-HSCT was observed to be lower in our patients as compared to other published studies. Both Hyponatremia and SIADH were more commonly seen in allogeneic rather than autologous transplant setting.

References:
INCIDENCE OF HYPONATREMIA AND SYNDROME OF INAPPROPRIATE ANTI-DIURETIC HORMONE SECRETION (SIADH) IN HAEMATOPOIETIC STEM CELL TRANSPLANTS: A RETROSPECTIVE ANALYSIS

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CONCLUSION:
Incidence of hyponatremia and SIADH post-HSCT was observed to be lower in our patients as compared to other published studies. Both Hyponatremia and SIADH were more commonly seen in allogeneic rather than autologous transplant setting.

REFERENCES: