Syndrome of inappropriate antidiuretic hormone secretion diagnosis

Essential features

● decreased effective serum osmolality (<275 mOsm/kg of water)

● simultaneous urine osmolality>100 mOsm/kg of water

● clinical euvolemia

a) no clinical signs of extracellular (EC) volume orthostatic hypotension (orthostasis, tachycardia, decreased skin turgor, dry mucous membranes…)

b) no clinical signs of excess EC volume (edema, ascites…)

● urinary [Na]>40 mEq/L with normal dietary Na intake

● normal thyroid and adrenal function

● no recent diuretic use

Supplemental features

● plasma [uric acid]<4mg/dl

● [BUN]<10mg/dl

● fractional Na excretion >1%; fractional urea excretion >55%

● NS infusion test:failure to correct hyponatremia with IV infusion of 2L 0.9% saline over 24–48hrs

● correction of hyponatremia with fluid restriction

● abnormal result on water load tests:

a) <80%excretion of 20 ml of water/kg body weight over 5 hours, or

b) inadequate urinary dilution (<100 mOsm/kg of water) ● elevated plasma [ADH] with hyponatremia and euvolemia

a effective osmolality (AKA tonicity)=(measured osmolality) – [BUN]/2.8 with [BUN] measured in mg/dl

b this test is used in uncertain cases (corrects volume depletion) and is usually safe when baseline urine osmolality is<500 mOsm/L

c water load test & [ADH] levels are rarely recommended.