

	<b>SIADH</b> (first described 1957)	<b>CSW</b> (first described 1950)
<b>Pathology</b>	Disruption of hypothalamic – neurohypophyseal system, resulting in abnormal excretion of ADH	Disruption of neural input to kidney, or central elaboration of circulating natriuretic factor
<b>Urine specific gravity</b>	Elevated	Elevated
<b>Urine osmolality</b>	Increased (urine osm > serum osm)	Increased
<b>Urine sodium</b>	Elevated (18mEq/L)	Elevated
<b>Serum osmolality</b>	Decreased (<280 mOsm/L)	Decreased
<b>Plasma volume (CVP/PAOP)</b>	Increased (but peripheral edema is NOT seen)	Decreased
<b>Serum sodium</b>	Decreased (<135mEq/L)	Decreased
<b>Serum potassium</b>	Normal or low	Normal or elevated
<b>Clinical manifestations</b>	Eu- or hypervolemic, low urine output, low BUN	Hypovolemic, high urine output, increased BUN
<b>Serum uric acid</b>	Low *	Low or normal* (note: since this is a volume contracted state, you would expect it to be HIGH)
<b>ADH excretion</b>	Increased	Increased
<b>Fractional excretion of urate</b>	High *	High *
<b>Physiology</b>	Inappropriate release of arginine vasopressin (expanded blood volume)	Appropriate release of arginine vasopressin in response to volume depletion
<b>Treatment</b>	Fluid restriction	Fluid/sodium replacement
<b>Caveats to treatment</b>	Saline administration can cause <i>further lowering</i> of serum sodium	Fluid restriction can <i>worsen</i> underlying condition

- In the setting of hyponatremia, the normal response of the kidney is to elaborate a maximally dilute urine.
- In hyponatremic patients with inappropriately concentrated urine, one needs to assess the effective blood volume.
- Serum and urine electrolytes and osmolalities may be the same in patients with SIADH and CSW.
- SIADH and CSW *may* occur in the same patient, particularly after SAH!

\*While correction of serum sodium concentration in SIADH leads to a normalization of uric acid handling by the kidney, hypouricemia and increased renal uric acid excretion remains a persistent finding following the correction of serum sodium in CSW.