

# HYPOPITUITARISM

## Causes

1. Infarction : Sheehan's syndrome
2. Iatrogenic : Radiation, surgery
3. Invasive : Large pituitary tumors

## CRANIOPHARYNGIOMA

4. Infiltration : Sarcoidosis, hemochromatosis
5. Injury : head trauma
6. Infections : TB
7. Idiopathic

# CLINICAL PICTURE OF HYPOPITUITARISM

## DEPENDS ON HORMONES LOST

### 1. Lack of FSH LH :



1. Hypogonadism: amenorrhea
2. Lack of TSH: → hypothyroidism
3. Lack of ACTH: → adrenocortical insufficiency
4. Prolactin deficiency: FAILURE OF POSTPARTUM LACTATION
5. If all of the above: PANHYPOPITUITARISM
6. In children: GH: short stature

# TESTING ANT.PIT.FUNCTION

1. Clinical: Hx and Px

2. Biochemical studies:

a) Baseline studies: TSH, ACTH, FSH, LH, prolactin GH

b) Stimulation: 1) TRH

2) LH-RH

3) Insulin → hypoglycemia

3. Radiological : - Lat skull x=ray

- CT

- MRI

# TREATMENT OF HYPOPITUITARISM

1. Remove cause
2. REPLACEMENT THERAPY; depends on hormone lost
3. THYROXINE in 2° hypothyroidism
4. Hydrocortisone for 2° hypoadrenalism

20 mg at AM

10 mg at PM

5. Growth hormone : for children
6. Testosterone: monthly injections
7. Estrogen + progesterone
8. For induction of ovulation FSH + LH

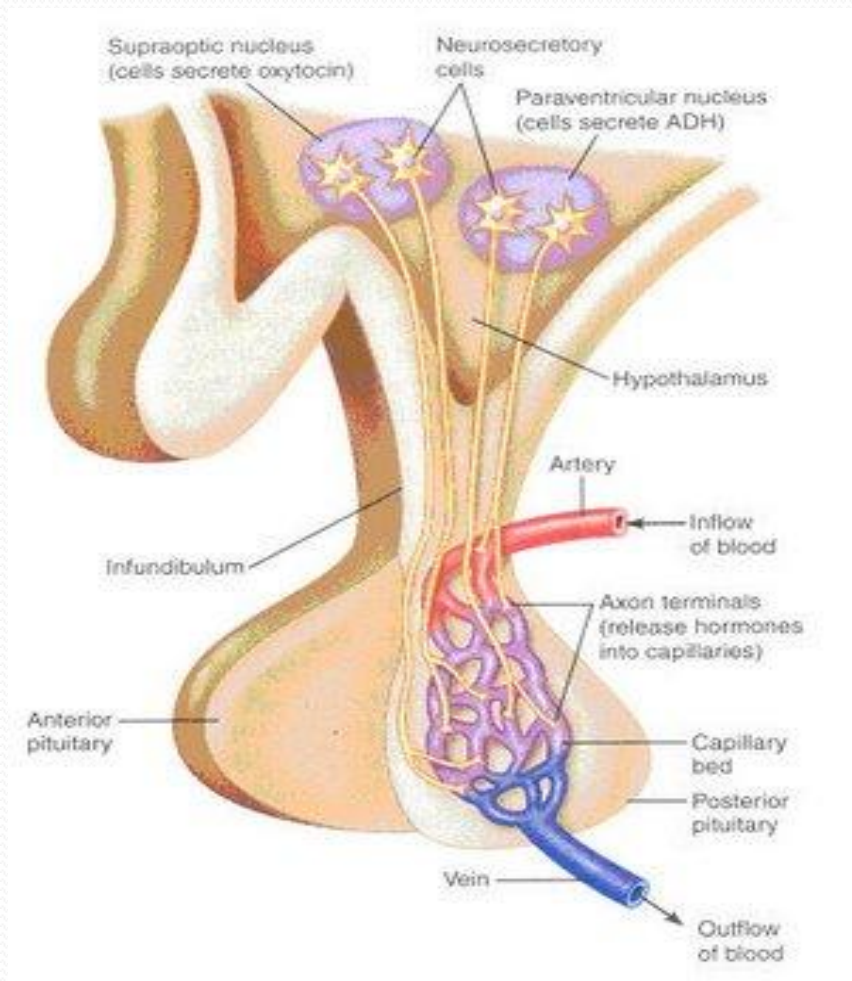
# HYPOTHALMIC POST. PIT DISORDERS

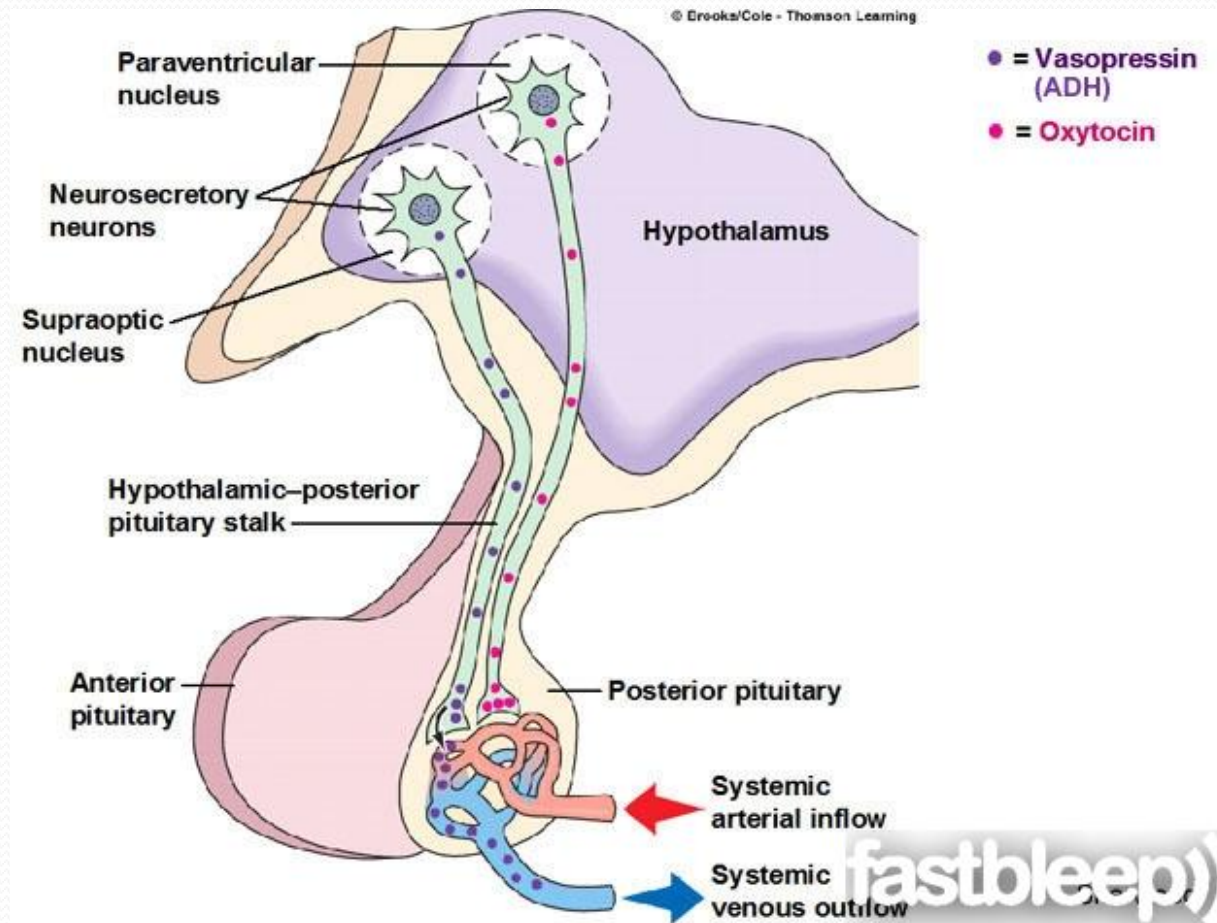
1. Syndrome of polydypsia . Polyurea
2. Syndrome of inappropriate ADH

Causes of ↑ ADH secretion:

1. Increased plasma osmolality
2. Hypovolemia
3. Neural stimuli : stress, nausea, vomiting, pain
4. Drugs: morphine  
vincristine  
cyclophosphamide  
Chlorpropamide

# ADH





# DIABETES INSIPIDUS

1. Central : ↓ ADH

2. Nephrogenic

I. Central

- neoplasm or infiltration
- surgery
- head trauma
- vascular
- idiopathic

Clinically : polydipsia polyurea

↑ urine volume ( 3 – 20 L/day )

↓ urine osmolality

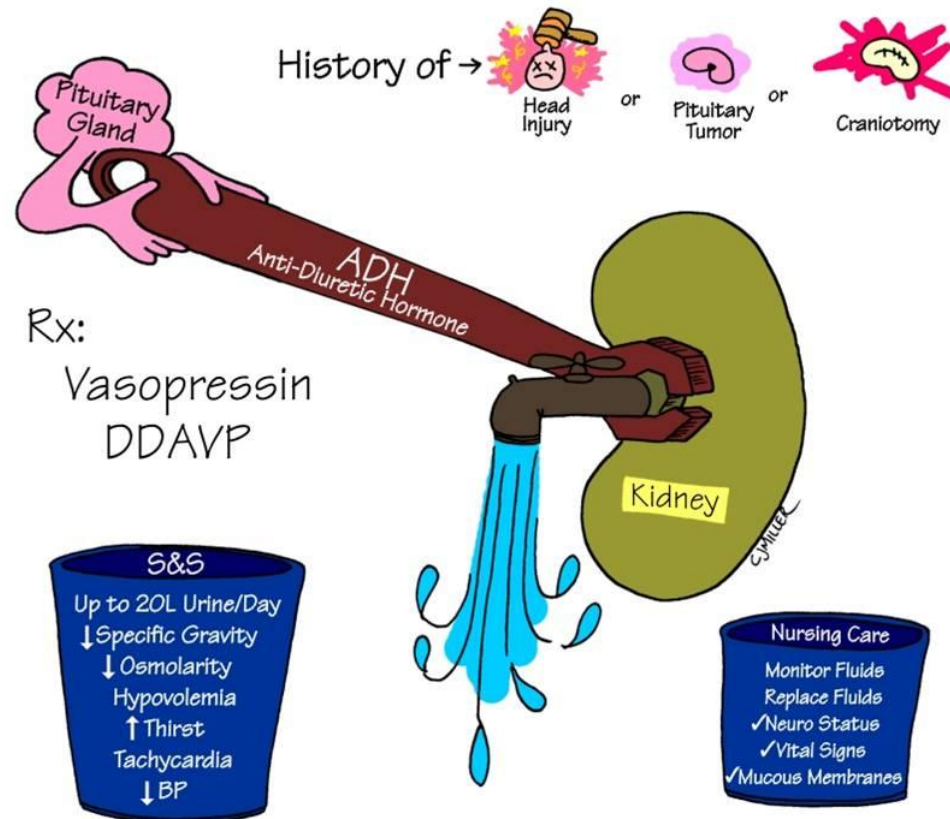
↓ specific gravity

Serum Na<sup>+</sup>: usually high



# Central DI

## DIABETES INSIPIDUS







# DIFFERENTIAL DIAGNOSIS

. Nephrogenic DI: inability of kidney to respond to ADH

- Common Causes:

- \* hypercalcemia
- \* hypercalcemia
- \* renal disease

Drugs: lithium

Demeclocycline

- Diuretics
- Diabetes Mellitus
- \* Primary polydipsia

## **Diagnostic Tests:**

1. R/O other causes
2. Water deprivation test

# TREATMENT OF DIABETES INSIPIDUS

1. For control DI:

Rx Desmopressin (DDAP)

If partial: Chlorpropamide

2. Nephrogenic: - correct underlying cause  
- hydrochlorthiazide

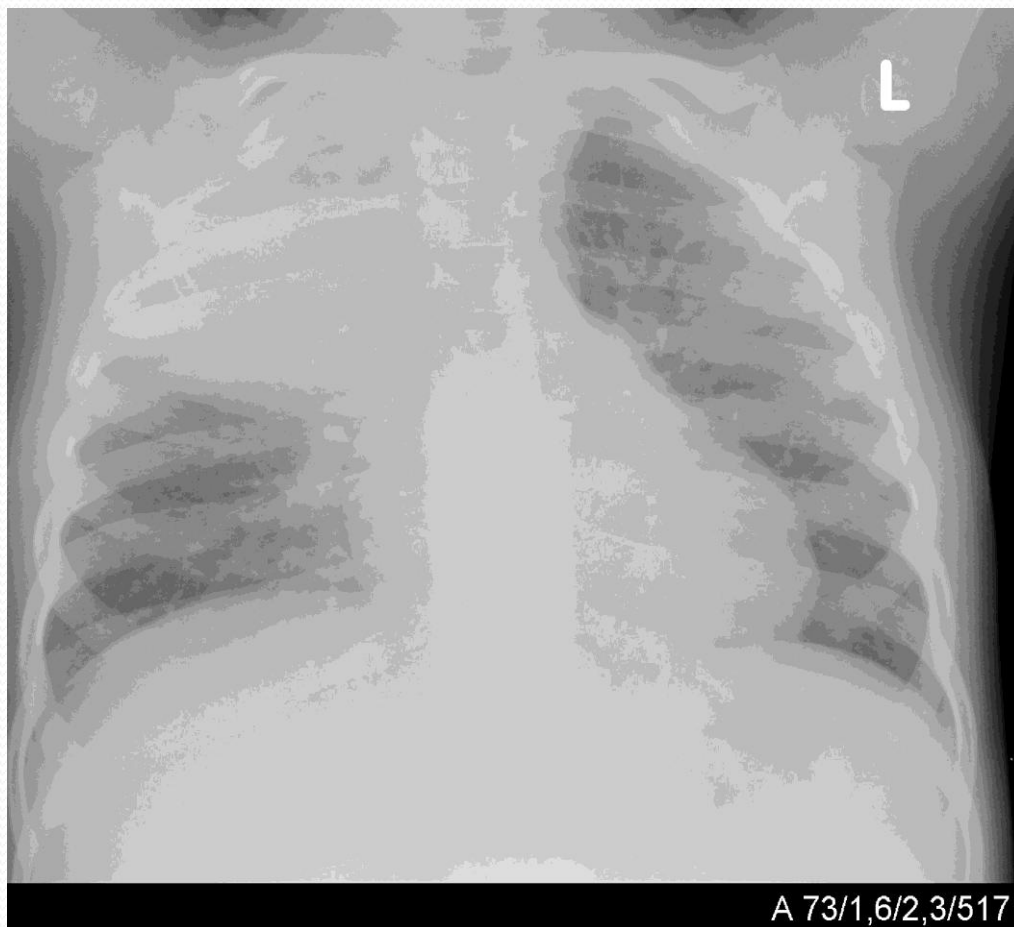
3. Primary Polydipsia: psychiatric management

# SYNDROME OF INAPPROPRIATE ADH EXCESS (SIADH)

- Hyponatremia
- Low serum osmolality
- ↑ urinary sodium
- ↑ inappropriate urine osmolality

## Causes:

- CNS: meningitis  
head trauma  
tumors
- Pulmonary: pneumonia  
TB  
small cell Ca
- Drugs: Chlorpropamide  
Carbamazepine  
Cyclophosphamide  
Vincristine



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**TABLE 2: Criteria for the diagnosis of SIADH**

Criterion	Definition
Hyponatremia	Serum sodium level $< 135$ mEq/L
Hypo-osmotic plasma	Plasma osmolality $< 280$ mOsm/kg
Hyper-osmotic urine	Urinary osmolality $> 500$ mOsm/kg
Hypernatremic urine	Urinary sodium level $> 20$ mEq/L (without diuretic therapy)



## CLINICAL PRESENTATION

- Confusion
- Nausea
- Irritability
- Fits
- Coma

## TREATMENT

- Removal of underlying cause
- Restriction of fluid intake (0.5 – 1 L/day )
- Demeclocycline
- If severe : I.V. hypertonic saline or normal infusion + Furosemide