

# Diabetes Insipidus

## Q. Define DI:

Diabetes Insipidus is the disorders of the posterior pituitary gland due to a deficiency of antidiuretic hormone (ADH).

## Q. Give the characteristics of DI.

1. Failure of the body to conserve water due to a deficiency of ADH.
2. Decrease renal sensitivity to ADH.
3. Suppression of ADH secondary to excessive ingestion of fluid, i.e. primary polydipsia.

## Q. Classify diabetes insipidus.

### 1. Central or neurogenic DI

It may due to-

a/ congenial and acquired causes leading to low level of ADH.

..... Hereditary and CNS defects

b/ Acquired causes are due to-

.... CNS tumors

.... CNS infections

.... Head injury

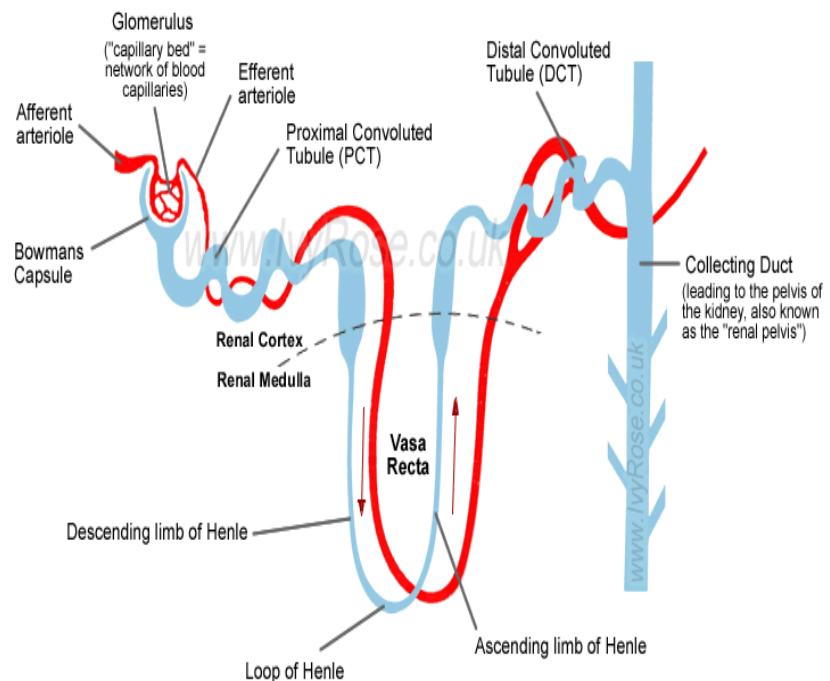
.... Vascular injury

.... In some cases it may be idiopathic

### 2. Nephrogenic DI:

a/ It occurs due to renal unresponsiveness to the ADH

b/ Caused by chronic renal disease



## **Q. State the clinical features of DI.**

### **Infant with DI present with**

1. Excessive crying
2. Quieted with water more than milk feeding
3. They also have rapid weight loss due to water performance over feeding
4. Sunken fontanel with dehydration
5. Constipation
6. Growth failure

### **The child with DI manifests suddenly with the disease. The child present with**

1. Excessive thirst and polyuria
2. Nocturnal enuresis
3. There is pale dry skin with reduced sweating and weakness
4. Dehydration
5. Hyperthermia
6. Poor appetite
7. Polyuria produces disturbance in rest, sleep, play and schooling

## **Q. State the management of DI.**

### **Specific treatment:**

1. Daily replacement of ADH using desmopressin (DDAVP), a synthetic analogue is necessary in I/M or S/C route. It can be given as nasal spray or in oral or sublingual route.
2. Thiazide diuretics in nephrogenic DI can be administered.

### **Supportive care:**

1. Sufficient water intake
2. Maintenance of intake and output
3. Prevention of fluid and electrolyte imbalance
4. Low sodium intake and recording of body weight

5. Care of dry skin
6. Safety measures in weakness
7. Adequate nutritional intake in poor appetite
8. Prevention of constipation and hyperthermia
9. Special mouth care with soft tooth brush
10. Promoting good sleep

**Advice:**

1. Parents should be explained about the care after discharge
2. Psychogenic compulsive water drinking may requires psychotherapy

**Prognosis:**

The prognosis of the disease depends upon adequate treatment. The disease is a chronic condition and usually not-threatening.

**Q. Enumerate the complications of DI.**

1. Hypovolemic hypotension
2. Hypernatremia
3. Precocious puberty
4. Visual disturbance
5. Emotional disorders

**Nursing management of Diabetes Insipidus**

**Nursing assessment of DI:**

1. Assess children with complaints polyuria and polydipsia for dehydration.
2. Obtain a through history of symptoms and behavior-
  - Specific attention to change in sleep pattern
  - Choice of fluids including source of water (e.g. does child drink from toilet bowls or dog dishes?)
3. Evaluate height—assess for weight loss related to possible decrease in calories due to excessive drinking, which cuts appetite.

4. For the child on treatment, assess for hydration status. Obtain history of fluid intake and output from the parents to assess appropriate dosage, frequency and administration of medication.

### **Nursing diagnosis:**

1. Deficient fluid volume related to disease process
2. Imbalance nutrition: less than body requirement due to fluid preference over food
3. Disturbed sleep pattern related to nocturia and enuresis.

### **Nursing intervention:**

1. Regaining fluid balance:
  - i. Assess for and teach parents assessment of dehydration
  - ii. Administer I/V fluid as prescribed if acutely dehydrated
  - iii. Monitor intake and output chart
  - iv. Keep record of daily weight
  - v. Administer and teach proper administration of DDAVP
2. Maintaining adequate nutrition:
  - i. Provide liquid nutritional supplement
  - ii. Consult with dietitian about need for vitamin or other supplements.
  - iii. Monitor length and weight and development milestone at regular interval
3. Normalizing sleep pattern:
  - i. Ensure evening administration of DDAVP to prevent night time water craving and enuresis
  - ii. Suggest the use of diapers at night on bed