**NAME: BELEMA SUCCESS**

**MATRIC NO: 18/MHS02/054**

**ASSIGNMENT: RENAL PHYSIOLOGY**

**QUESTION: DISCUSS THE DISEASES OF RENAL SYSTEM**

**DISEASES OF RENAL SYSTEM**

* Oliguria (decreased urinary output):  is defined as a urine output that is less than 1 mL/kg/h in infants, less than 0.5 mL/kg/h in children, and less than 400 mL or 500 mL per 24h in adults - this equals 17 or 21 mL/hour. For example, in an adult weighing 70 kg it equals 0.24 or 0.3 mL/hour/kg.
* Anuria (cessation of urine formation) in severe cases: Anuria or anuresis occurs when the kidneys aren’t producing urine. A person may first experience [oliguria](https://www.healthline.com/symptom/decreased-urine-output), or low output of urine, and then progress to anuria.
* Proteinuria (appearance of proteins in urine): People with proteinuria have unusually high amounts of protein in their urine. The condition is often a sign of kidney disease. Your kidneys are filters that don't usually let a lot of protein pass through. When kidney disease damages them, proteins such as albumin may leak from your blood into your pee.
* Hematuria (presence of blood in urine): Hematuria is the presence of blood in a person's urine. The two types of hematuria are:

1. Gross hematuria: when a person can see the blood in his or her urine.
2. Microscopic hematuria: when a person cannot see the blood in his or her urine, yet it is seen under a microscope.

* Edema due to increased volume of extracellular fluid (ECF) caused by retention of sodium and water.Edema is the medical term for swelling. Body parts swell from injury or inflammation. It can affect a small area or the entire body. Medications, pregnancy, infections, and many other medical problems can cause edema. Edema happens when your small blood vessels leak fluid into nearby tissues. Failure of kidney to excrete sodium and electrolytes causes increase in extracellular fluid volume resulting in development of edema.
* Hypertension within few days because of increased ECF volume: Hypertension is another name for high blood pressure. It can lead to severe health complications and increase the risk of heart disease, stroke, and sometimes death. Blood pressure is the force that a person's blood exerts against the walls of their blood vessels.
* Acidosis due to the retention of metabolic end products: Acidosis is a process causing increased acidity in the blood and other body tissues (i.e., an increased hydrogen ion concentration). If not further qualified, it usually refers to acidity of the blood plasma.
* Coma due to severe acidosis (if the patient is not treated in time) resulting in death within 10 to 14 days.
* Uremia is the condition characterized by excess accumulation of end products of protein metabolism such as urea, nitrogen and creatinine in blood. There is also accumulation of some toxic substances like organic acids and phenols. Uremia occurs because of the failure of kidney to excrete the metabolic end products and toxic substances. Common features of uremia

1. Anorexia (loss of appetite)
2. Lethargy
3. Drowsiness

iv. Nausea and vomiting

v. Pigmentation of skin

vi. Muscular twitching, tetany and convulsion

vii. Confusion and mental deterioration

viii. Coma.

* Blood Loss Gastrointestinal bleeding accompanied by platelet dysfunction leads to heavy loss of blood.
* Anemia Since, erythropoietin is not secreted in the kidney during renal failure, the production of RBC decreases resulting in normocytic normochromic anemia.
* Hyperparathyroidism Secondary hyperparathyroidism is developed due to the deficiency of calcitriol (1,25­dihydroxycholecalciferol). It increases the removal of calcium from bones resulting in osteomalacia.