Name: Ezika Mmesoma Jasmine.

Matric no: 18/mhs02/080.

Department: Nursing.

Course code: PHS212.

Assignment.

Discuss the diseases of the renal system

RENAL FAILURE

Renal failure refers to failure of excretory functions of kidney. It is usually, characterized by decrease in glomerular filtration rate (GFR). So GFR is considered as the best index of renal failure. However, decrease in GFR is not affected much during the initial stages of renal failure. If 50% of the nephrons are affected, GFR decreases only by 20% to 30%. It is because of the compensatory mechanism by the unaffected nphrons. The renal failure may be either acute or chronic.

ACUTE RENAL FAILURE

Acute renal failure is the abrupt or sudden stoppage of renal functions. It is often reversible within few days to few weeks. Acute renal failure may result in sudden life- threatening reactions in the body with the need for emergency treatment.

CAUSES

- Acute nephritis (inflammation of kidneys), which usually develops by immune reaction
- Damage of renal tissues by poisons like lead, mercury and carbon tetrachloride
- Renal ischemia, which develops during circulatory shock
- Acute tubular necrosis (necrosis of tubular cells in kidney) caused by burns, hemorrhage, snake bite, toxins (like insecticides, heavy metals and carbon tetrachloride) and drugs (like diuretics, aminoglycosides and platinum derivatives)
- Severe transfusion reactions
- Sudden fall in blood pressure during hemorrhage, diarrhea, severe burns and cholera.
- Blockage of ureter due to the formation of calculi (renal stone) or tumor: Tumors in general are covered in the article cancer. In this section, those tumors peculiar to the excretory system, and their local effects, are discussed briefly. In the case of benign tumors, these effects include pressure on local structures and obstruction to hollow organs; with malignant tumors, one must add the possibilities of local invasion and of spread by the bloodstream or lymphatics to other organs (metastasis).
- Urinary tract infections (UTIs) are bacterial infections of any part of the urinary system.

Infections in the bladder and urethra are the most common. They are easily treatable and rarely lead to more health problems. However, if left untreated, these infections can spread to the kidneys and cause kidney failure.

CHRONIC RENAL FAILURE

Chronic renal failure is the progressive, long standing and irreversible impairment of renal functions.When some of the nephrons loose the function, the unaffected nephrons can compensate it. However, when more and more nephrons start losing the function over the months or years, the compensatory mechanism fails and chronic renal failure develops.

CAUSES

• Chronic nephritis: also known as Glomerulonephritis is an inflammation of the glomeruli. Glomeruli are extremely small structures inside the kidneys that filter the blood. Glomerulonephritis can be caused by infections, drugs, or congenital abnormalities (disorders that occur during or shortly after birth). It often gets better on its own.

• Polycystic kidney disease: Polycystic kidney disease is a genetic disorder that causes numerous cysts (small sacs of fluid) to grow in the kidneys. These cysts can interfere with kidney function and cause kidney failure. (It's important to note that individual kidney cysts are fairly common and almost always harmless. Polycystic kidney disease is a separate, more serious condition).

• Renal calculi (kidney stones): Kidney stones are another common kidney problem. They occur when minerals and other substances in the blood crystallize in the kidneys, forming solid masses (stones). Kidney stones usually come out of the body during urination. Passing kidney stones can be extremely painful, but they rarely cause significant problems.

• Urethral constriction

• Hypertension

• Atherosclerosis

• Tuberculosis

• Slow poisoning by drugs or metals