



SNS COLLEGE OF NURSING

Saravanampatti (po), Coimbatore.

DEPARTMENT OF NURSING

COURSE NAME : BSC (NURSING) II YEAR

SUBJECT : MEDICAL SURGICAL NURSING

UNIT:VII: DISORDERS OF GENITO URINARY SYSTEM

TOPIC :NEPHROTIC SYNDROME



INTRODUCTION



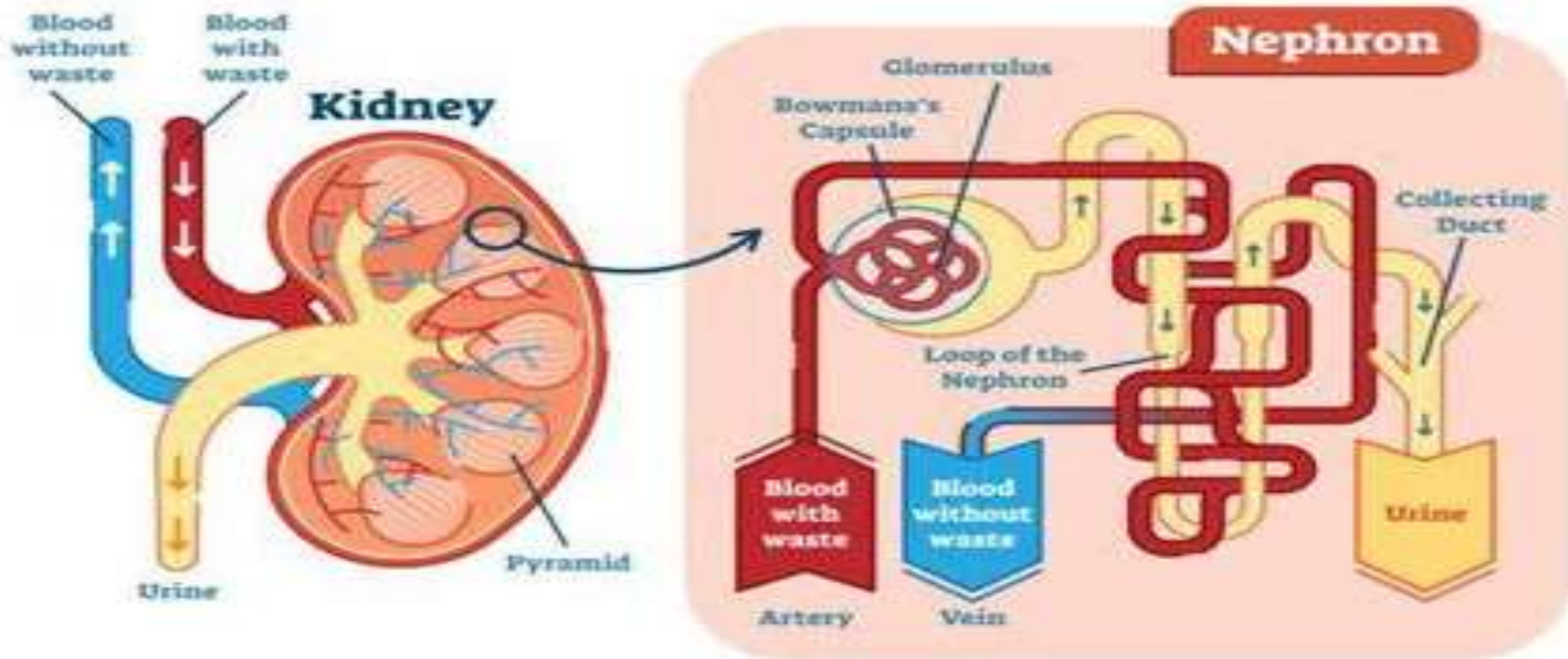
- ❖ Nephrotic syndrome happens when damage to your kidneys causes these organs to release too much protein into your urine.
- ❖ Nephrotic syndrome isn't itself a disease. Diseases that damage blood vessels in your kidneys cause this syndrome.

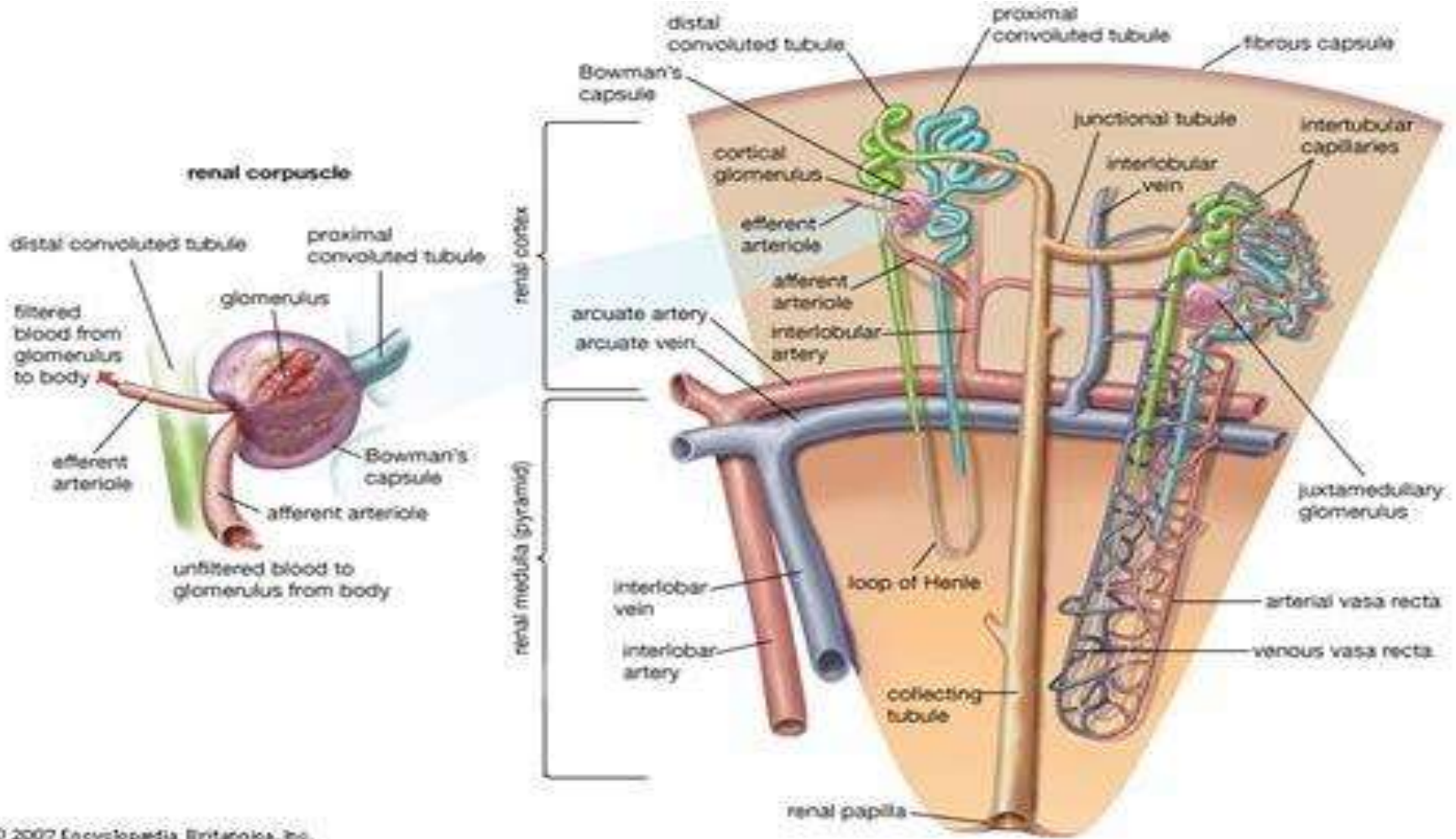


Nephrons: the functional part of the kidneys that filters the blood (renal corpuscle), reabsorbs minerals/water and secretes waste (renal tubule), and produces the substance called urine which will drain down into the ureters, be stored in the bladder, and voided out via the urethra.

- Each kidney has about 1 million nephrons. Each has its own internal set of structures

Nephron Anatomy





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DEFINITION

Nephrotic syndrome is a clinical complex characterized by a number of renal and extra renal features, most prominent of which are

- Proteinuria (in practice > 3.0 to $3.5\text{gm}/24\text{hrs}$),
- Hypoalbuminemia.
- Hyperlipidemia.
- Edema.
- Hypertension.
- Lipiduria and Hypercoagulability.

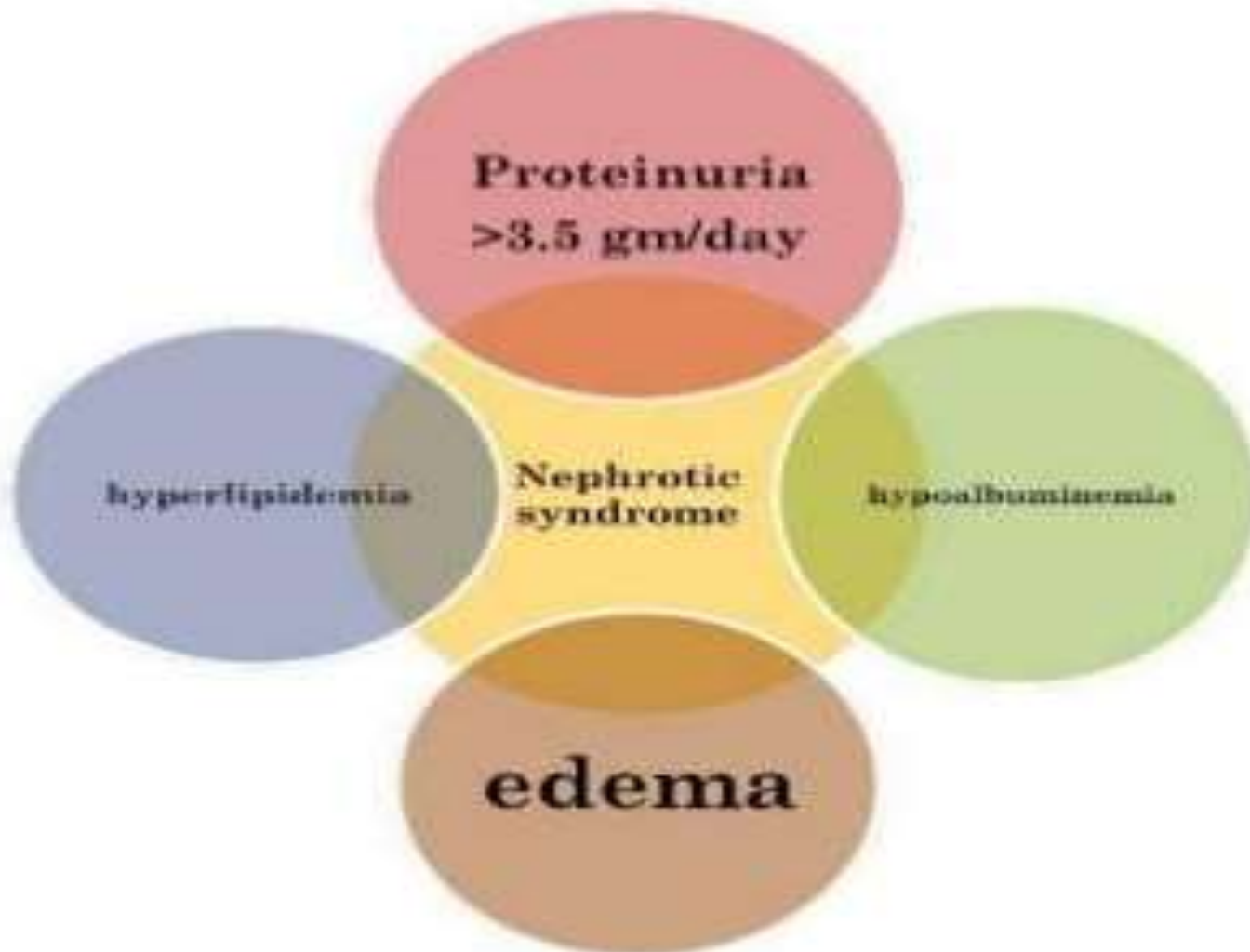
TYPES

Nephrotic syndrome can be classified into

Primary- being a disease specific to the kidneys.

Secondary - being a renal manifestation of a systemic general illness

NEPHROTIC SYNDROME IS NOT A DISEASE



CAUSES

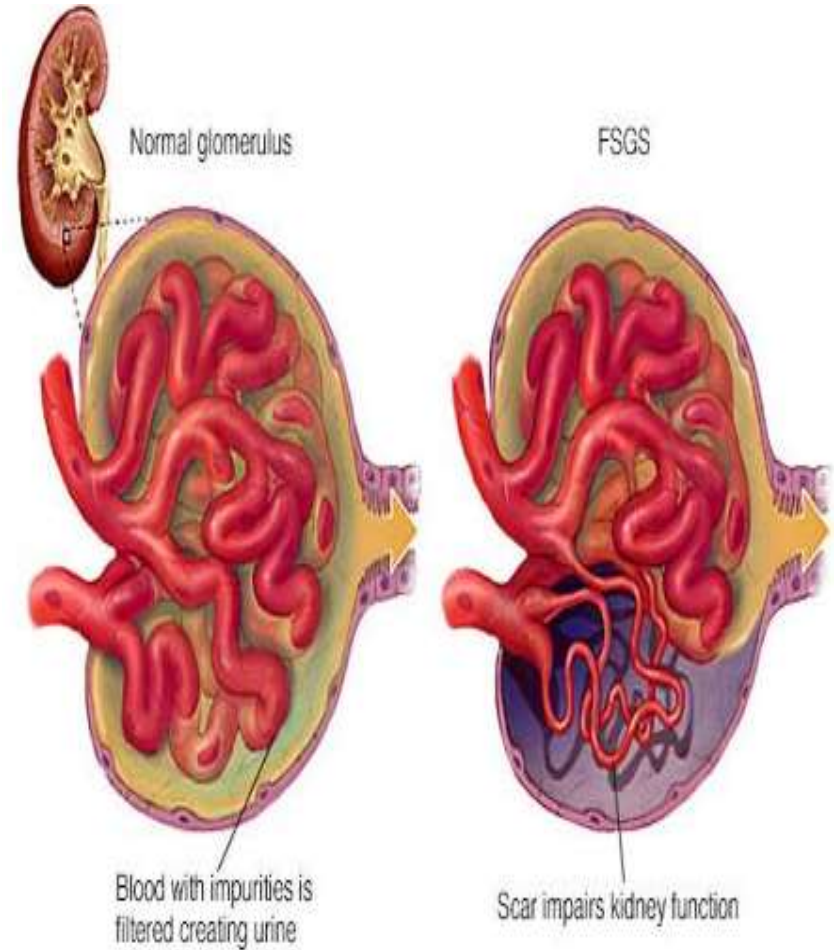
PRIMARY CAUSES:

- Focal segmental glomerulosclerosis (FSGS).
- Membranous nephropathy.
- Minimal change disease.
- Renal vein thrombosis .
- Rapidly progressive glomerulonephritis.
- Mesangial proliferative glomerulonephritis .

PRIMARY CAUSES

- **Focalsegmental glomerulosclerosis (FSGS).**

This is a condition in which the glomeruli become scarred from disease, a genetic defect, or an unknown cause.

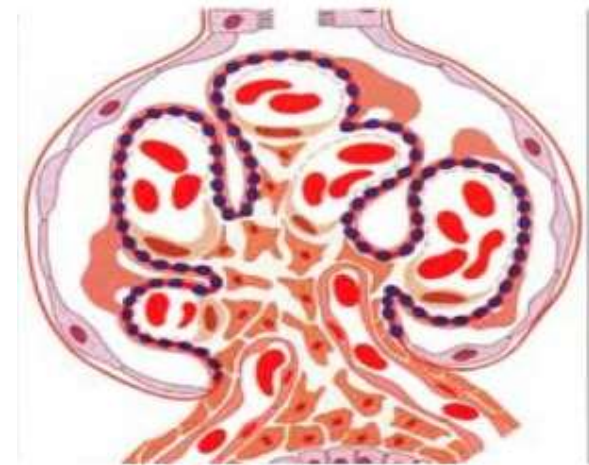
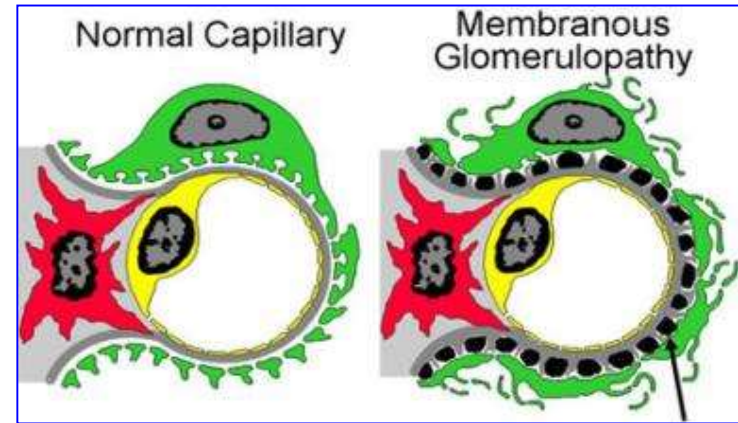


Membranous

nephropathy: In this disease, the membranes in the glomeruli thicken.

The cause of the thickening isn't known, but it may occur along with lupus, hepatitis B, malaria, or cancer.

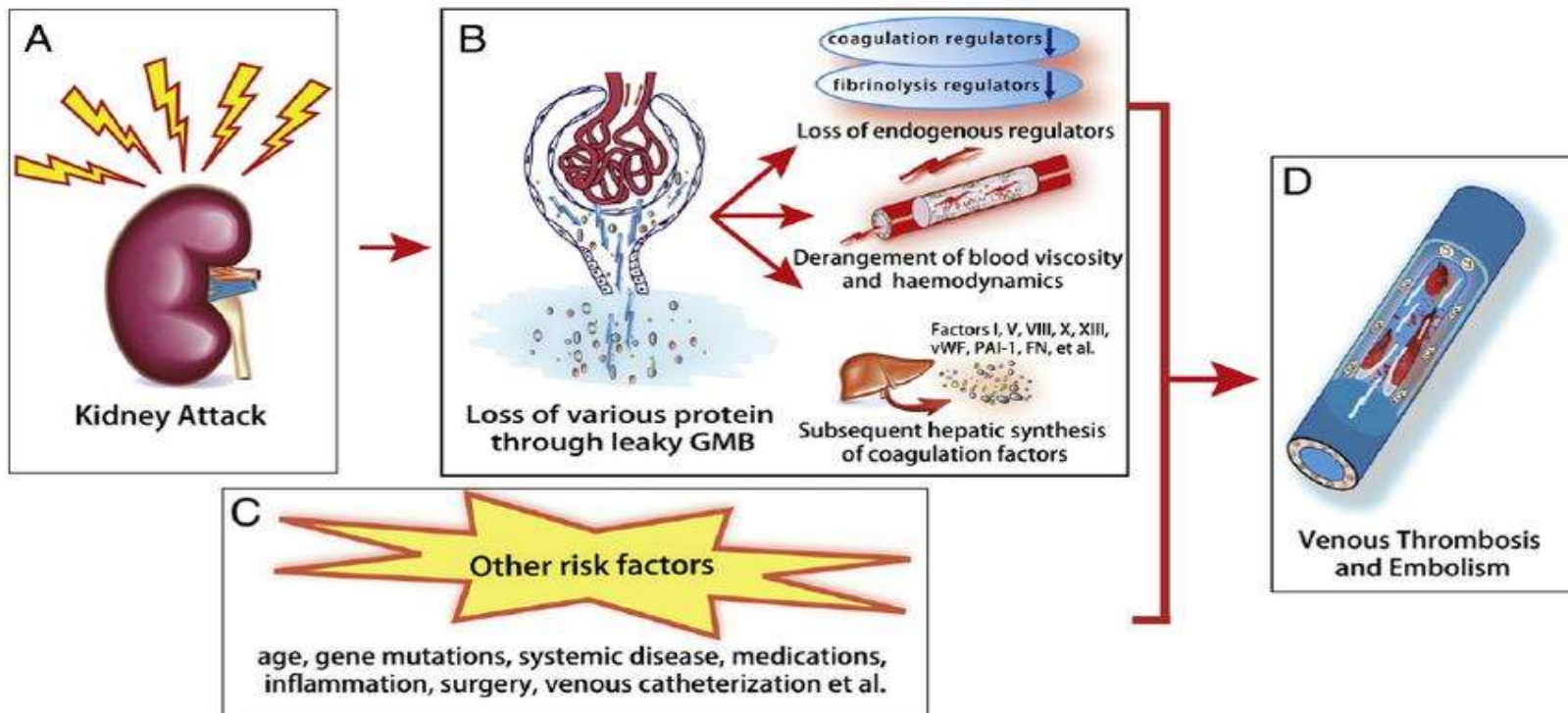
Minimal changes of disease



PRIMARY CAUSES

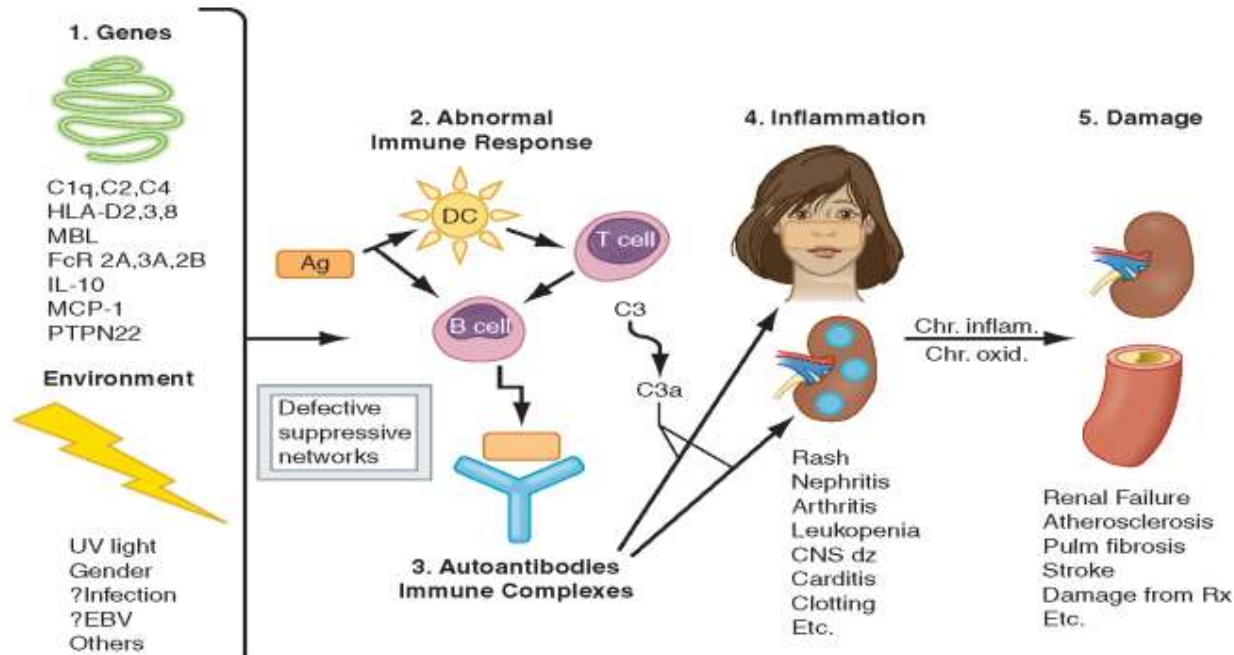
Renal vein thrombosis

Rapidly & Mesengial progressive glomerulonephritis

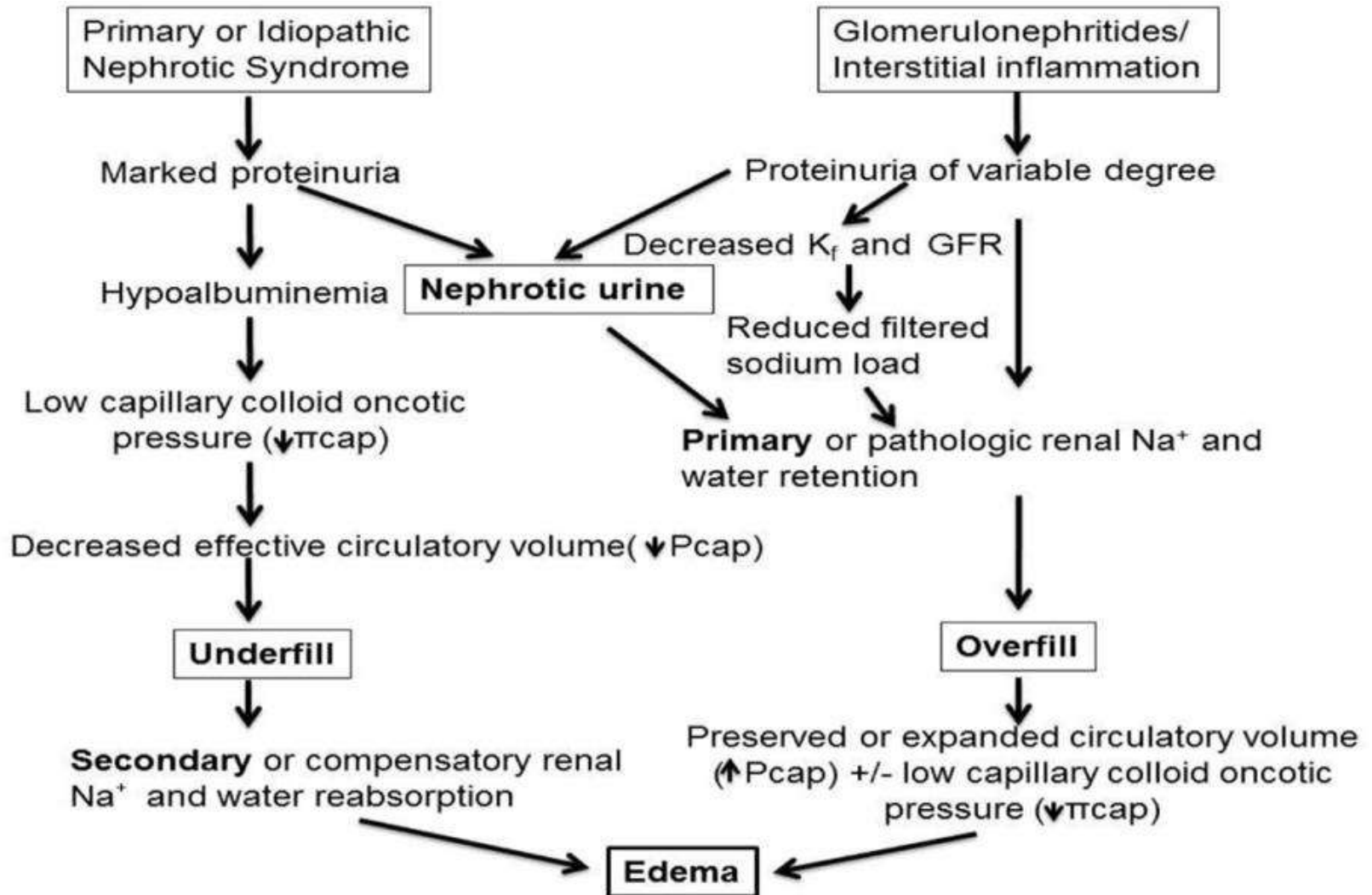


SECONDARY CAUSES

- Diabetes.
- Lupus.
- Amyloidosis



PATHOPHYSIOLOGY



Four main symptoms

- ❖ Protein urea
- ❖ Hypoalbuminemia
- ❖ Hyperlipidemia
- ❖ Edema

Other symptoms

- ❖ SOB (Shortness Of Breath)
- ❖ Mild Headache
- ❖ Fever
- ❖ Rash
- ❖ Joint Pain

- ❖ Weakness
- ❖ Malaise
- ❖ Anorexia
- ❖ Weight Gain
- ❖ Peri orbital Edema
- ❖ Irritability
- ❖ Ascites
- ❖ Hypertension
- ❖ Anemia Due To
Loss of RBCs
- ❖ Flank Pain
- ❖ Fatigue

Urine analysis (24 hour):

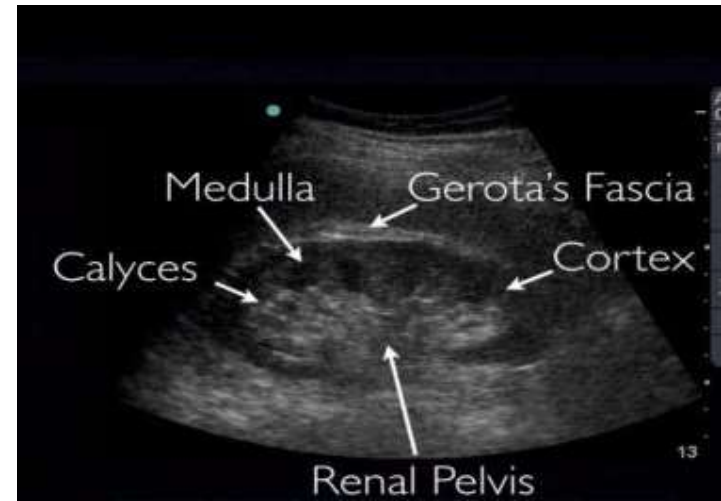
- ❖ Urinary total protein estimation – urine sample shows proteinuria (>3.5 g per liter per 24 hours)

Blood test: BUN

- ❖ Serum creatinine decreases.
- ❖ Serum protein decreases .
- ❖ Lipid profile: shows high level of
- ❖ Serum cholesterol- 200mg.
- ❖ Comprehensive metabolic panel(CMP) shows hypoalbuminemia- albumin level is <2.5g/dl



- Needle biopsy of kidney
- ECG
- KUB – X.ray
- Renal ultrasound
- Renal scan
- Intravenous Urogram (IVU).



For high blood pressure

Two types of blood pressure lowering medications.

❖ **Angiotensin-converting enzyme (ACE) inhibitors.**

❖ **Angiotensin receptor blockers (ARBs).**

effective in slowing the progression of kidney disease by reducing the pressure inside the glomeruli and thereby reducing albuminuria



TO RELIEVE EDEMA

DIURETICS:

- Medication that aids the kidneys in removing fluid from the blood.
- To reduce blood pressure as well as edema.
- **Frusamide** (1-44 mg/kg/day in 2 divided doses) may be prescribed.

- **Reduce High Cholesterol**

Statin medications may be given to lower cholesterol.

Corticosteroids

- Treatment with corticosteroids remains controversial in the management of nephrotic syndrome in adults.
- It has no proven benefit, but is recommended in some persons who do not respond to conservative treatment

Nursing Assessment:

- **Edema.** Observe for edema when performing physical examination of the child with nephrotic syndrome.
- **Weigh and measure.** Weigh the child and record the abdominal measurements to serve as a baseline.
- **Vital signs.** Obtain vital signs, including blood pressure.
- **Pitting edema.** Note any swelling about the eyes or the ankles and other dependent parts.
- **Skin.** Inspect the skin for pallor, irritation, or breakdown.

- Excess fluid volume related to fluid accumulation in tissues and third spaces.
- Risk for imbalanced nutrition: less than body requirements related to anorexia.
- Risk for impaired skin integrity related to edema.
- Fatigue related to edema and disease process.
- Risk for infection related to immunosuppression.
- Deficient knowledge of the caregiver related to disease process, treatment, and home care.
- Compromised family coping related to care of a child with chronic illness.

ASSESSMENT

- Define Nephrotic Syndrome
- Enumerate The Clinical Manifestions
- List The Diagnostic Measures
- What Are The Drugs Used For Nephrotic Syndrome



References



- BRUNNER & SUDDARTH, MEDICAL SURGICAL NURSING, 1ST EDITION
- LEWIS'S, MEDICAL SURGICAL NURSING, 9TH EDITION
- M.P SHARMA, MEDICAL SURGICAL NURSING, 1ST EDITION, AITBS PUBLISHERS

