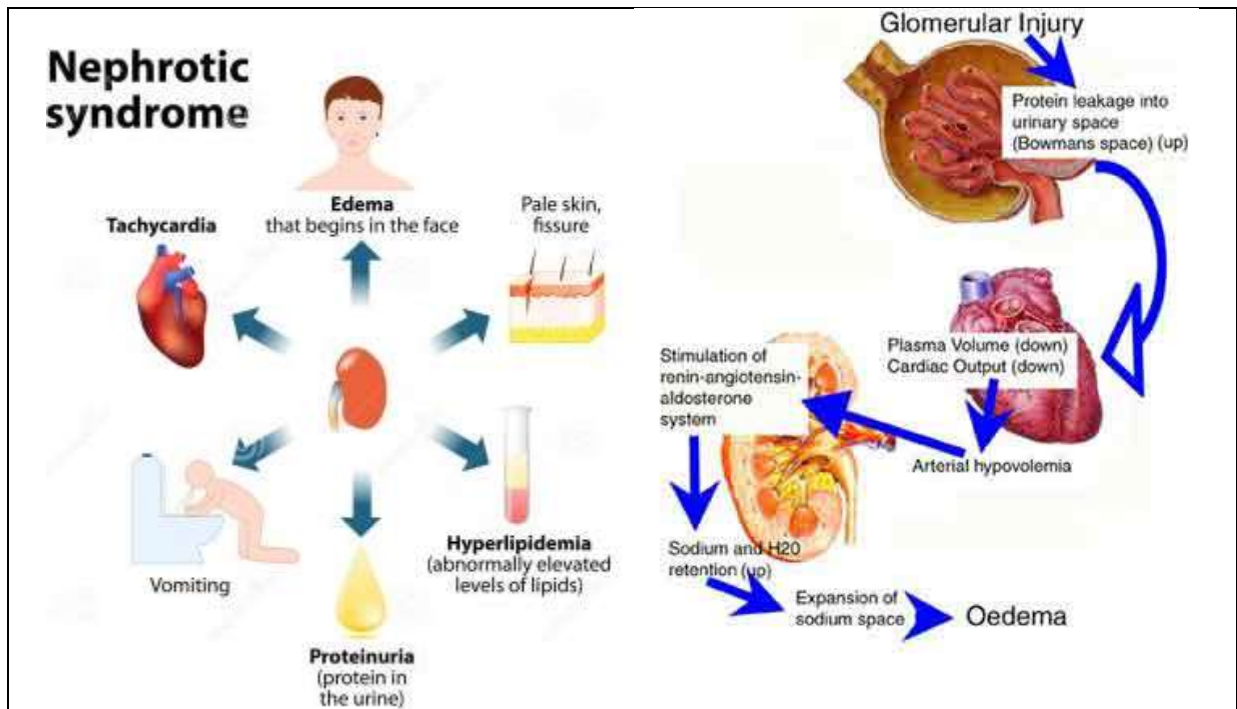


XIX. Diseases of the Urinary System

Subacute Diffuse Glomerulonephritis		IV-1.3192
Kidney:	Size:	<ul style="list-style-type: none"> • <i>Is increased</i>
	Appearance:	<ul style="list-style-type: none"> • <i>Cloudy</i> • <i>Pale (large white kidney)</i>
	Colour:	<ul style="list-style-type: none"> • <i>Greyish-white</i>
	Capsule:	<ul style="list-style-type: none"> • <i>Tense</i> • <i>Strips off easily (most parts)</i>
	Subcapsular surface:	<ul style="list-style-type: none"> • <i>Smooth</i> • <i>Pale whitish</i> • <i>Stippled with foci of fatty degeneration: Small & Yellow</i>
	Consistence:	<ul style="list-style-type: none"> • <i>Firm (or softer than normal)</i>
	Cut surface:	<ul style="list-style-type: none"> • <i>Swollen</i>
	Cortex:	<ul style="list-style-type: none"> • <i>Increased in thickness (swollen)</i> • <i>Greyish-white (pale)</i>
	Mottled with:	<ul style="list-style-type: none"> • <i>Small opaque yellow patches</i> • <i>Fatty streaks</i> • <i>Blurred (or no usual) vascular markings</i>
	Medulla:	<ul style="list-style-type: none"> • <i>Pale reddish-greyish</i> • <i>Demarcated from cortex</i> • <i>Is relatively darker</i>
	Blood vessels:	<ul style="list-style-type: none"> • <i>No gross changes (+ normal)</i>
	Renal pelvis (and calyces):	<ul style="list-style-type: none"> • <i>No gross changes (+ normal)</i>
<p>N.B.1: Such an appearance of "large white kidney" May be present (with little variations) in:</p> <ol style="list-style-type: none"> (1) Subacute diffuse glomerulonephritis (Membranous glomerulonephritis). (2) Chronic lipid nephrosis. (3) Renal anoxia. <ul style="list-style-type: none"> • The kidneys appear large, pale and soft (diffuse renal oedema and fatty change). • There may be little differences (if any) in the gross picture of subacute nephritis (so-called extra-capillary glomerulonephritis → glomerular hypercellularity), from the acute diffuse glomerulonephritis. • In typical or/and early cases of the subacute type, there are no contraction, no scarring, no granularity and no petechiae. 		



N.B.:

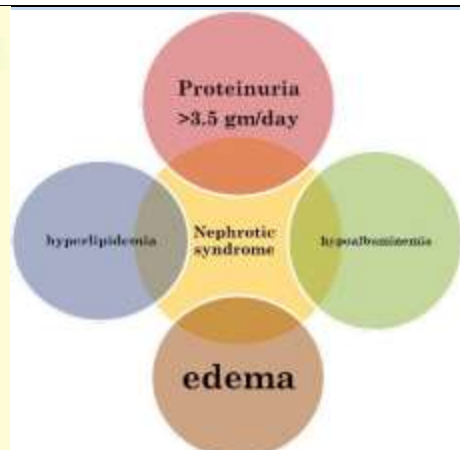
- Clinically, there are **pallor, anaemia, oedema** (earliest in face - in morning - and feet) that may be generalized → anasarca; and, is due to **hypoproteinaemia, retention of sodium and water, and proteinuria chiefly of albumin** → reversal of the albumin-globulin ratio in blood), **hypercholesterolaemia & hyperlipidemia**.
- In association with these, there may (or may not) be present some residual signs of acute nephritis or/and later on some early signs of the chronic phase.

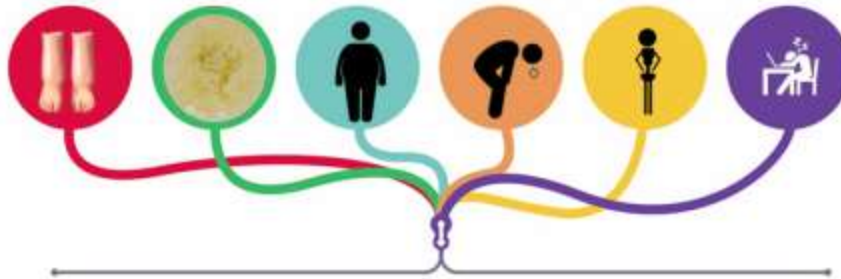
N.B.:

- Subacute nephritis (glomerulo-tubular nephritis) is the stage of degeneration + some proliferation (from the first stage) + some atrophy or/and fibrosis (from the third stage).
- In this stage the three main constituents of the kidney are involved but with varying extent (*glomeruli, tubules and arteries as well as the interstitial tissue*).

Causes of Nephrotic Syndrome

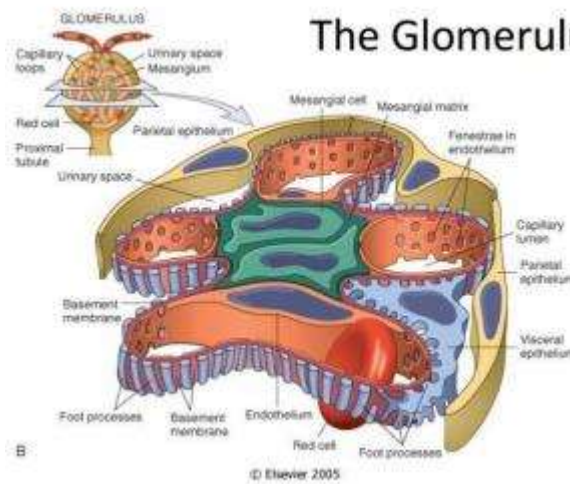
- Diabetic nephropathy
- Membranous nephropathy
- Minimal change disease
- Focal segmental glomerulosclerosis
- Mesangiocapillary GN
- Renal amyloidosis



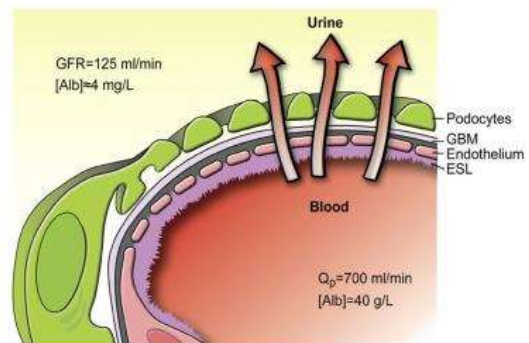
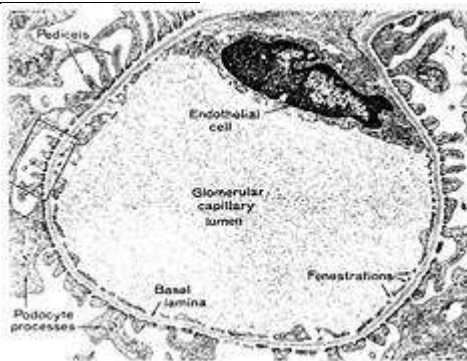


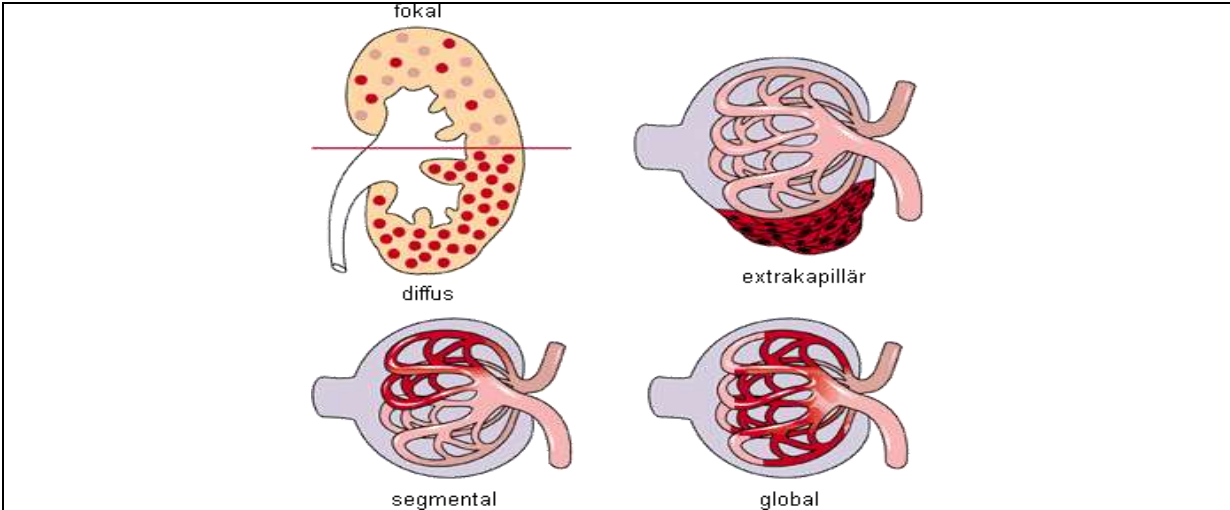
signs and symptoms of Nephrotic syndrome

- 1 **Edema**
- 2 **Foamy urine**
- 3 **Weight gain**
- 4 **Fatigue**
- 5 **Anorexia**
- 6 **Feeling very tired**



The Glomerulus





Podocytes and the slit diaphragm

(a)

Flow

Bowman's capsule

Tubule

Urinary space

Glomerulus

Arterioles

Capillary

(b)

Primary process

Foot process

Podocyte

Slit diaphragm

Endothelium

Glomerular capillary

(c)

Urinary space

Slit diaphragm

Foot process

GBM

Fenestrated endothelium

Plasma filtration

Filtration barrier

(b)

FP

CB