

XIX. Diseases of the Urinary System



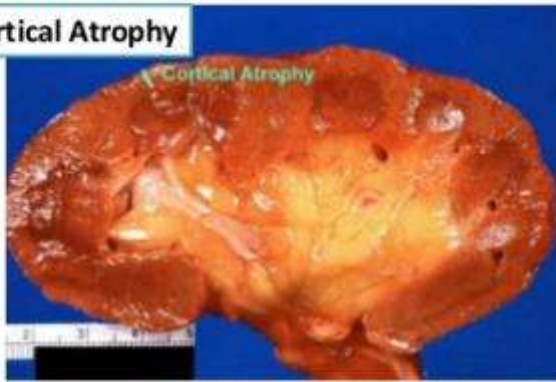
Gross Features

Small size



Contracted, granular kidney
Normal sized kidney

Cortical Atrophy



Contracted, diffuse granular kidneys

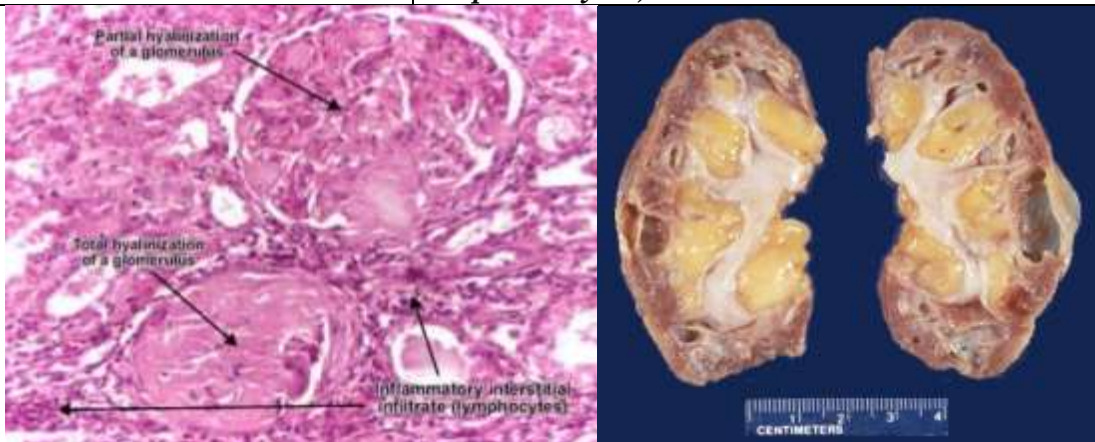


Chronic Diffuse Glomerulonephritis

IV-1.3193

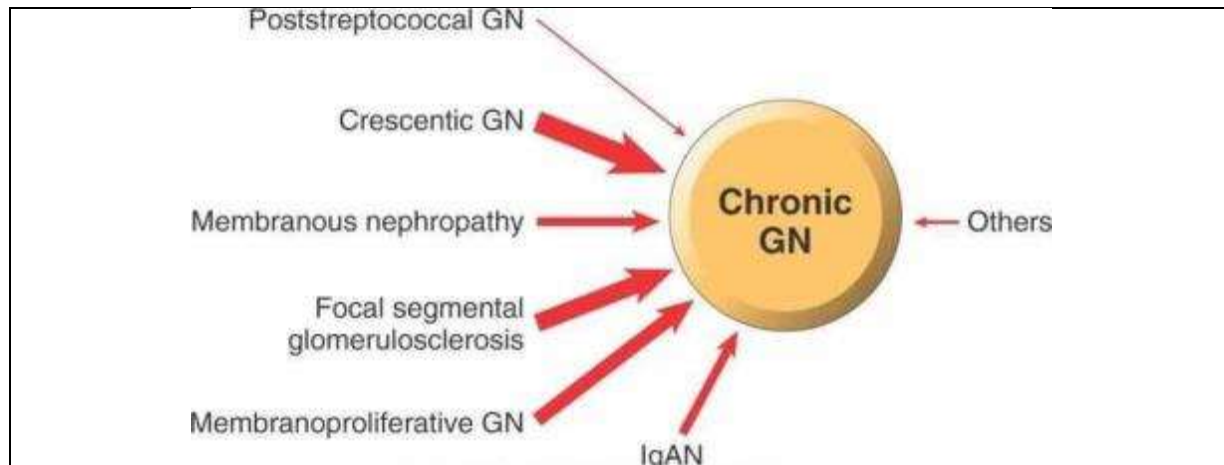
Kidney:	Size:	<ul style="list-style-type: none"> • <i>Diminished (small)</i> • <i>Contracted</i>
	Capsule:	<ul style="list-style-type: none"> • <i>Thickened</i> • <i>Adherent</i> • <i>Strips off with difficulty (decortication)</i>
	External surface:	<ul style="list-style-type: none"> • <i>Finely and diffusely-granular</i> • <i>Roughly granular (in some parts)</i> • <i>Uniformly greyish-white</i> • <i>Intervening red depressed areas</i>

Consistence:	<ul style="list-style-type: none"> • Firm
Cut surface:	<ul style="list-style-type: none"> • Shrunken
Cortex:	<ul style="list-style-type: none"> • Pale and irregular • Atrophied (narrowed) • Obliteration of pattern • Loss of architectural markings • Contracted (scarred) • Whitish-reddish or mottled • Shows small retention cysts
The cysts:	<ul style="list-style-type: none"> • Subcapsular • Small • Contain a clear or yellowish-brown fluid
Medulla	<ul style="list-style-type: none"> • Somewhat atrophied • Shrunken (slightly) • Poorly-differentiated from cortex • Paler than usual
Renal vessels (small arteries):	<ul style="list-style-type: none"> • Few only show gross changes • Some patent arteries • Moderately thick-walled arterioles
Renal pelvis (and calyces) :	<ul style="list-style-type: none"> • Prominent but do not gape • No gross changes (normal)
Pelvic fat:	<ul style="list-style-type: none"> • Increased (compensatory for loss of renal parenchyma)



N.B.I:

- Chronic diffuse glomerulonephritis may follow acute or subacute nephritis which were clinically evident or, there may be no history of previous phases which were so mild that they were undetected.
- Usually, the kidneys are small, contracted and firm.
- The capsule is firmly adherent and when peeled off, it produces tearing or decortication.
- The subcapsular surface is rough, irregularly-granular and pitted (irregular-shrinkage)



- The cortex is irregular (narrowing and scarring) and shows disappearance of the normal vertical cortical markings.
- The renal pelvis is dilated and contains an increased amount of fat.
- **The blood vessels have thick walls but not all of them are affected and they seldom stand out (no apparent gaping differentiates it from the nephrosclerotic kidney of benign hypertension and the chronic pyelonephritic kidney).**
- **The symmetry and diffuseness of scarring in chronic diffuse glomerulonephritis are helpful for differentiation.**

N.B.2 :

Clinically, the manifestations are related to impairment of function, retention of urea and hypertension.

At first, pallor, slight (or no) albumin and casts in urine, oedema and easy fatigue (stage of latency).

Later on, headache, disappearance of oedema (due to rise of blood-protein) or its increase (cardiac in origin), slowly-progressive rise of blood-pressure and some rise in blood-urea (stage of relative renal insufficiency).

Later still, some previous symptoms become severer together with nausea, vomiting, wasting, dimness of vision, anaemia, rapid rise of blood-pressure, marked rise of blood-urea,

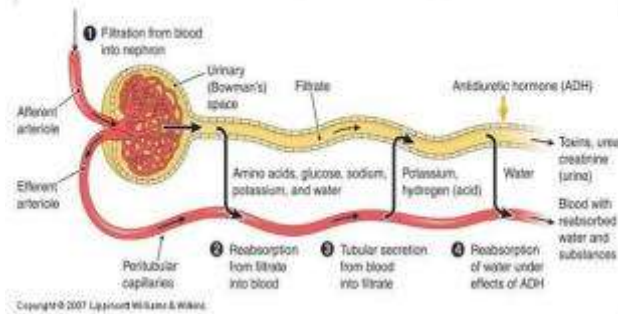
albuminuric retinitis and vascular retinopathy (silver-wire arteries, haemorrhages and white patches), hypertensive encephalopathy (attacks of convulsions, arteriolar spasm, fall in blood calcium, and cerebral oedema) and cardiac hypertrophy (stage of absolute renal insufficiency).

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The urine is characteristic:

- Polyuria,
- Low specific gravity and Fixed 1010
- Albumin and casts are present; and,
- There may be occasional haematuria.

The mechanism of urine formation



Death is due to :

1. Uraemia, (very common),
2. Cardiac failure (common),
3. Cerebral and other haemorrhages (uncommon) or
4. Intercurrent infection (occasional).

Specific Symptoms

Hypertension
• High blood pressure

Eyes
• Conjunctivitis

Kidney Disease
• Oliguria
• Anuria

Central Nervous System
• Headache
• Convulsions

Nail
• Splinter hemorrhages

Rapidly Progressive
Glomerulonephritis


Glomerulonephritis

For More Information Visit: www.ePainAssist.com

CHRONIC RENAL FAILURE (CRF)

ESRD -END STAGE RENAL DISEASE

↓ 15 ml/min GFR

- 
- Neurological
Weakness / Fatigue
Confusion
 - Cardiovascular
↑BP
Pitting Edema
Periorbital Edema
↑CVP
Pericarditis
 - Pulmonary
SOB
Depressed Cough
Thick Sputum
 - GI
Ammonia Odor to Breath
Metallic Taste
Mouth / Gum Ulcerations
Anorexia
Nausea / Vomiting
 - Psychological
Withdrawn
Behavior Changes
Depression
 - Hematological
Anemia
Bleeding Tendencies
↑ Serum K
 - Skin
Dry Flaky
Pruritus
Ecchymosis
Purpura
Yellow-Gray Skin Color
 - Musculoskeletal
Cramps
Renal Osteodystrophy
Bone Pain

Hemodialysis

Evaluate access site for:
Patency & signs of infection
DO NOT take BP or obtain
blood samples from extremity
that has access site.