
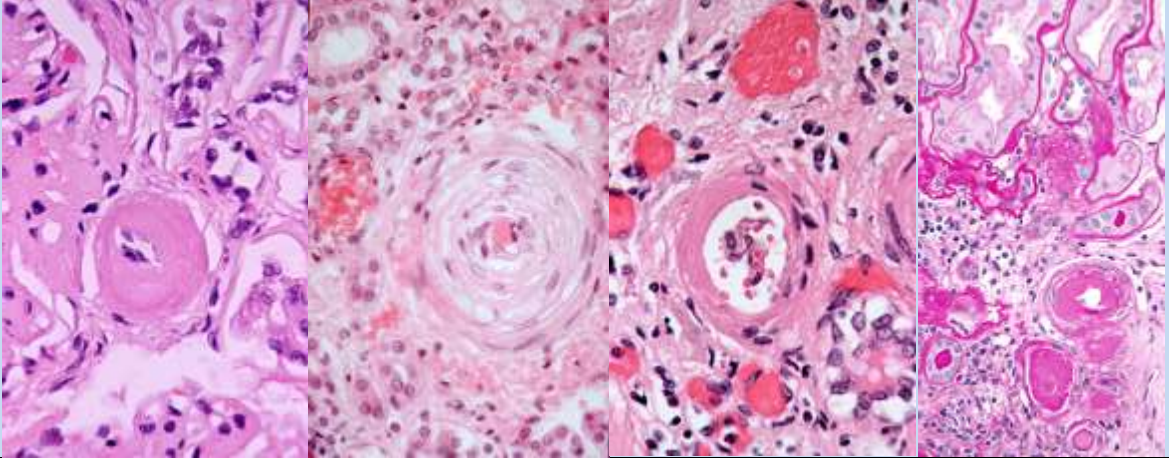
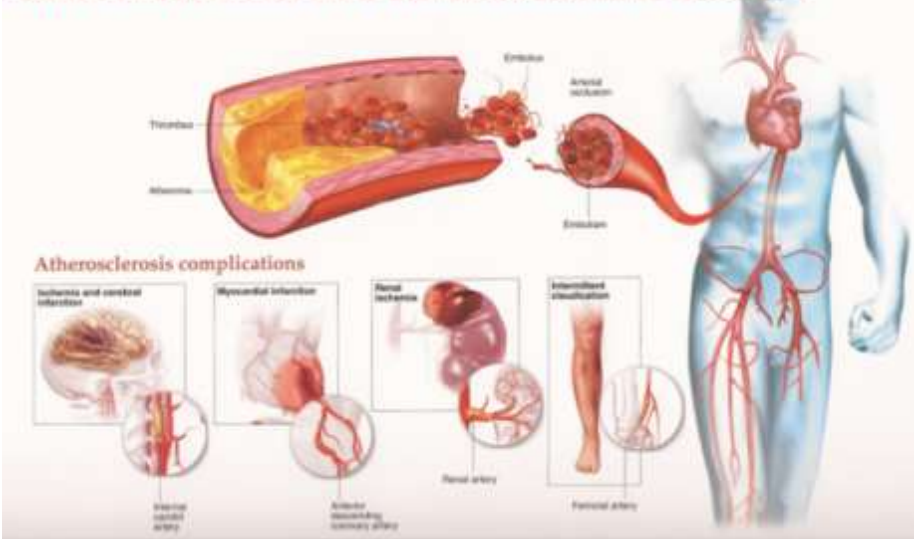


XIX. Diseases of the Urinary System

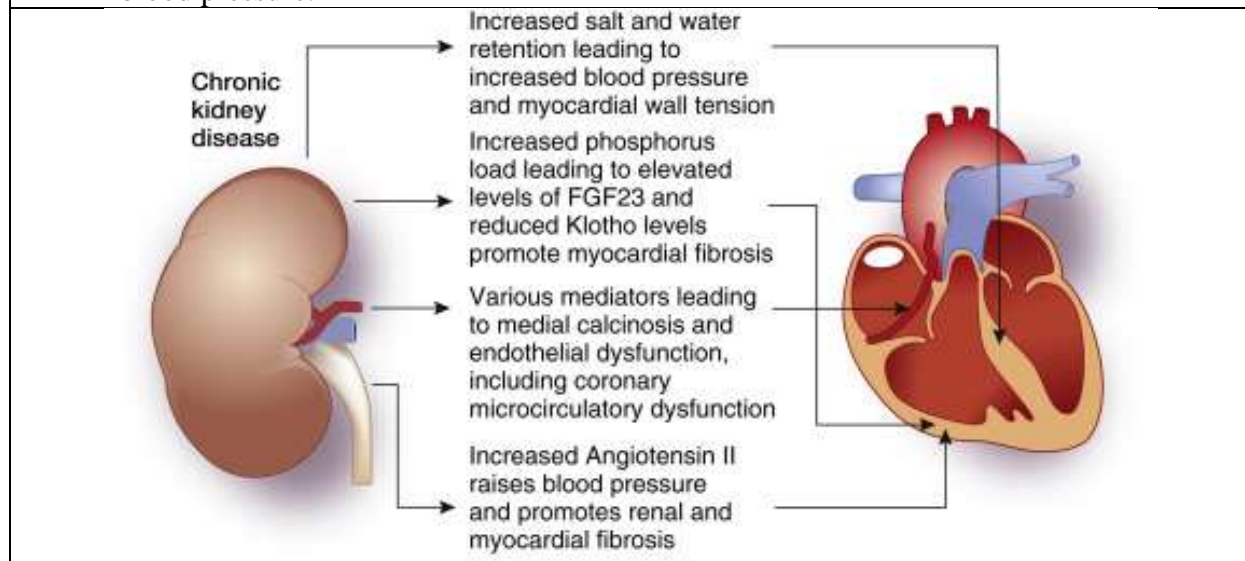
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|---|-------------------------------|---|
|  | | |
|  | | |
| Atherosclerosis (senile arteriosclerotic kidney) IV-1.172 | | |
| Kidney: | Size: | <ul style="list-style-type: none"> Shrunk and rather small |
| | Capsule: | <ul style="list-style-type: none"> Strips off easily (some parts) |
| | Subcapsular surface: | <ul style="list-style-type: none"> Deep irregular grooves |
| | Cut surface: | <ul style="list-style-type: none"> Irregular |
| | Cortex: | <ul style="list-style-type: none"> Coarse irregularity – Ischaemic atrophy of some parts Asymmetrical patchy depressed scars: <ul style="list-style-type: none"> Pale granular Wedge-shaped |
| | Medulla: | No particular change |
| | Renal-artery-branches: | <ul style="list-style-type: none"> Atheromatous patches Irregularly narrowed by the atheroma No gross hypertensive changes in the vasculature within the renal tissue |

Atherosclerosis and cardiovascular disease



N.B.: Atherosclerotic Reno-vascular Disease (ARVD)

- This condition may occur at old age **where atheroma is common**.
- When the branches of the renal artery show atheroma, the affected kidney becomes **contracted**, shows **gross scars and depressions simulating old (healed) infarcts**.
- If the vascular lesions are more diffuse, the kidney **appears coarsely-granular (symmetric contraction of the whole kidney)**.
- With these anatomical changes, the functional manifestations are:
- A trace of albumin in urine.
- Occasional casts.
- Early in the disease, there is usually no evidence of renal inadequacy and no raised blood pressure.



Chronic Venous Congestion IV-1.211

| | | | | |
|----------------|--|---|--------------|--|
| Kidney: | Size: | <ul style="list-style-type: none"> Moderately increased | | |
| | Capsule: | <ul style="list-style-type: none"> Strips off easily Tense and thick | | |
| | Subcapsular surface: | <ul style="list-style-type: none"> Smooth (in most parts) Very fine granularity (occasional) Purplish-grey (or dark red) | | |
| | Consistence: | <ul style="list-style-type: none"> Firm | | |
| | Cut surface: | <ul style="list-style-type: none"> Dark red | | |
| | Cortex: | <ul style="list-style-type: none"> Increased in thickness Purplish-grey | | |
| | | <table border="0"> <tr> <td style="text-align: right;">With:</td> <td> <ul style="list-style-type: none"> Dark red lines Red dots in pale areas of cortex </td> </tr> </table> | With: | <ul style="list-style-type: none"> Dark red lines Red dots in pale areas of cortex |
| With: | <ul style="list-style-type: none"> Dark red lines Red dots in pale areas of cortex | | | |
| | Medulla: | <ul style="list-style-type: none"> Prominent venae rectae at base of pyramids Dark purple and congested Well-differentiated from cortex | | |



N.B.:

- Chronic venous congestion of the kidney is sometimes described as the **"beet-root kidney"** because of its dark purplish red colour.
- This patient died from **congestive heart failure** (right-side) due to mitral stenosis (rheumatic in origin).
- Such a condition may also result from obstruction in the pulmonary circulation (Of a chronic nature).

Hormones Acting on the Nephron / Diuretics and Their Site of Action

