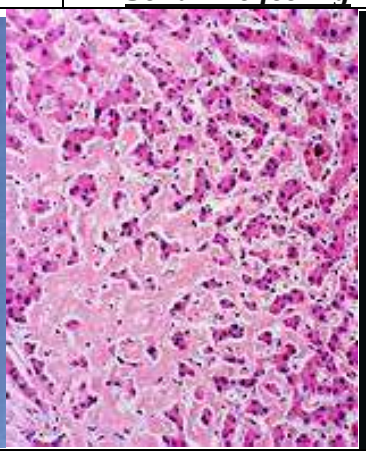
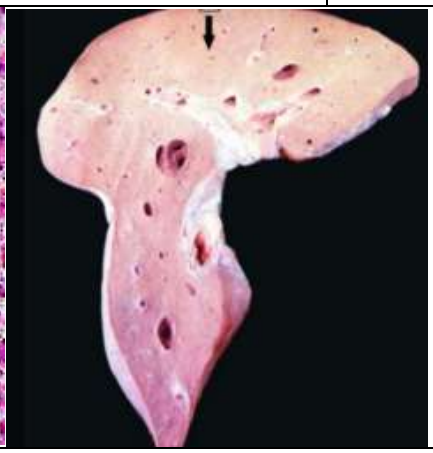
XVIII. DISEASES OF THE DIGESTIVE SYSTEM

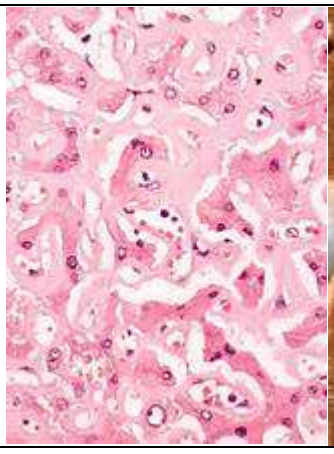
LIVER

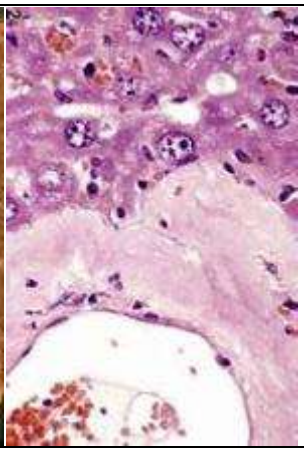
Amyloid Disease		**III - 6. 113**			
Liver;	***Size:***	• ***Is increased***			
	Borders:	• ***Moderately-sharp***			
	External surface:	• ***Smooth*** • ***Greyish-brownish***			
	Cut surface:	• ***Semi translucent*** • ***Waxy (in patches or is diffuse)*** • ***Shows a homogeneous amyloid substance*** • ***Looks dark brown in a greyish-background***			
	Consistence:	• ***Firm-elastic*** • ***Solid-like feeling***			

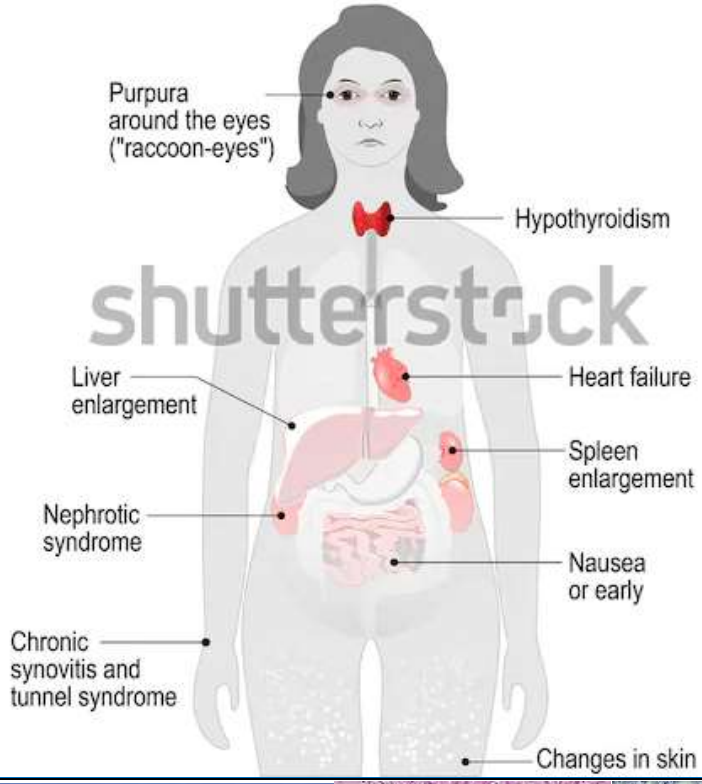
N.B.:

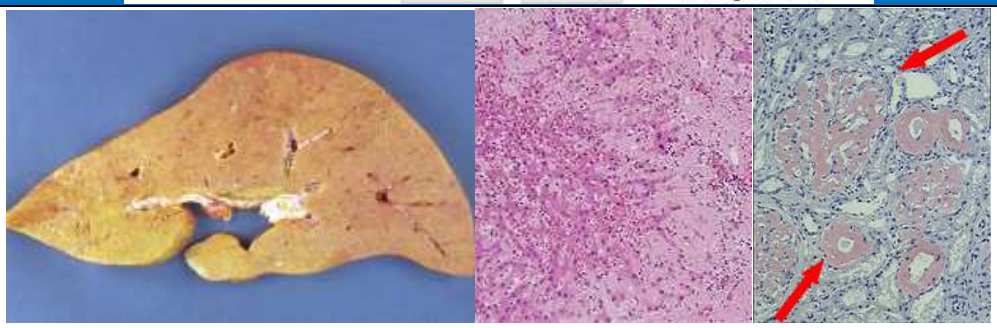
- ***The patient was suffering for a very long time from chronic pulmonary tuberculosis (fibrocaseous) with suppuration (secondary pyogenic infection).***
- ***This is part of generalized secondary amyloidosis.***
- ***The liver may occasionally show primary amyloidosis.***
- ***In both cases there is hepatomegaly.***
- ***Liver-failure is very rare (and only in very severe cases of amyloidosis).***





AMYLOIDOSIS
signs and symptoms



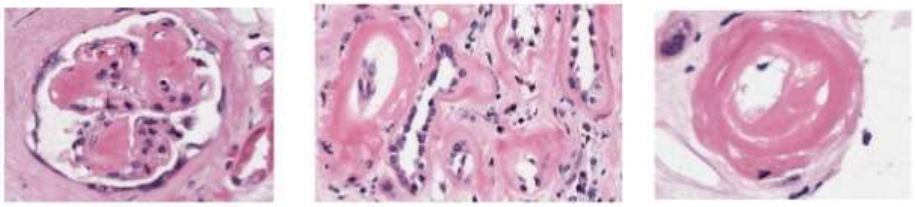


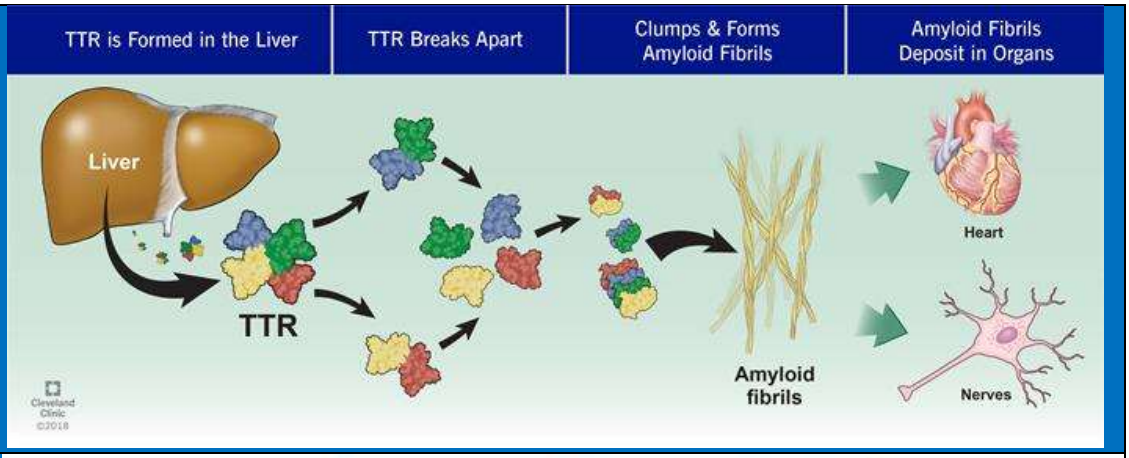
Can involve any part of kidney! But glomerular lesions predominates.

They appear as amorphous material in mesangium and capillary loops

Tubules : deposits near basement membrane. Later seen in connective tissue between them/interstitium

Vessels: deposits in the walls of arterioles leading to narrowing





Macroscopy/ Gross examination

May or may not be visible

If the deposits are too much, then the organ is enlarged, gray, waxy and firm.

Demonstration of amyloid in gross specimens

Oldest method, since the time of Virchow!

Apply **Lugol's iodine** on the cut surface → The area containing amyloid stains **deep brown**

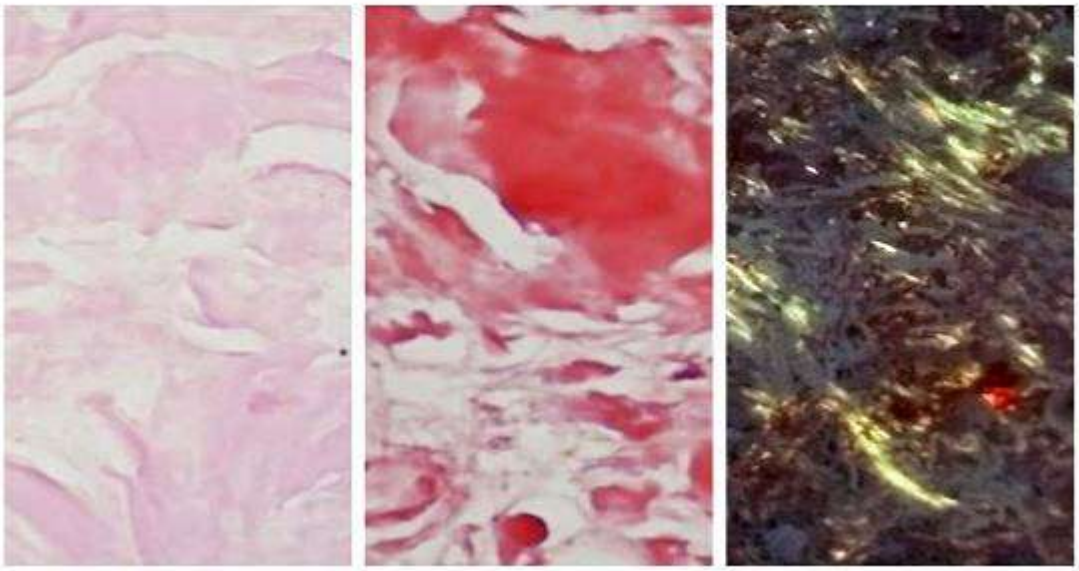
Application of dilute sulphuric acid ↓ **Blue**

The above property is similar to staining property of starch! Hence the name Amyloid!!!

* CLASSIFICATION

Hereditary	Non hereditary	
	Generalised	Localised
1 Familial Mediterranean fever	1 Systemic senile amyloidosis	1 Senile cerebral amyloidosis
2 Familial amyloidotic polyneuropathy	1 Primary amyloidosis (immunocyte dyscrasias) 2 Secondary amyloidosis (reactive systemic amyloidosis) 3 Hemodialysis associated amyloidosis	2 Endocrine system related a. Medullary Ca thyroid b. Islets of langerhans c. pheochromocytoma d. undifferentiated Ca stomach 3 Isolated atrial amyloidosis

H & E | Congo Red Stain | Polarizing Microscopy



Staining chararcteristics of Amyloid

1. **Stain on Gross**- oldest method used by Virchow on cut section of gross specimen is **Lugols Iodine** which imparts **mahogany brown** colour to the amyloid deposit which on addition of sulfuric acid turns **blue.**