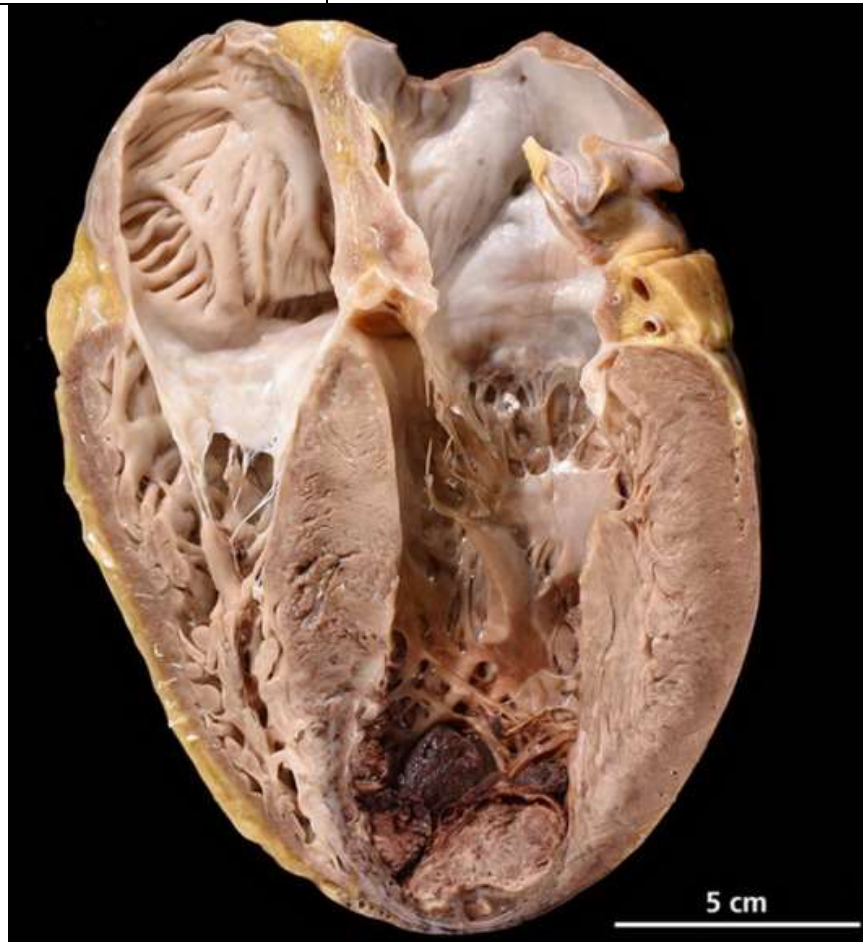


XV. Diseases of the Cardiovascular System

II - Arteries:	1. Aneurisms :	Aortic aneurism (characteristic laminated appearance),		
	2. Atheromatous ulcers:	Coronary arteries. Arteries of limbs. Cerebral arteries.		
III - Veins:	1. Abdominal veins. 2. Pelvic veins. 3. Femoral veins.			
Thrombosis in veins is common in:				
	1. Thrombophlebitis:	<ul style="list-style-type: none"> • Cavernous sinus thrombosis due to infection of face. • Pelvic vein thrombosis due to infection of uterus. 		
	2. Venous thrombosis (non-inflammatory):	This is the commonest of all; in :		
		<ul style="list-style-type: none"> • Veins of legs after operations. • Congestive heart failure. • Trauma. 		



Causes of thrombosis:

1. Damage of the vascular endothelium:

- (a) Degenerative diseases (atheroma, polyarteritis nodosa etc.),
- (b) Excess heat; excess cold; chemicals,
- (c) Injury to the wall (anoxia; foreign bodies; corrosive action; rupture; ligation; torsion; cautery; pressure),
- (d) Injection of varicose veins.

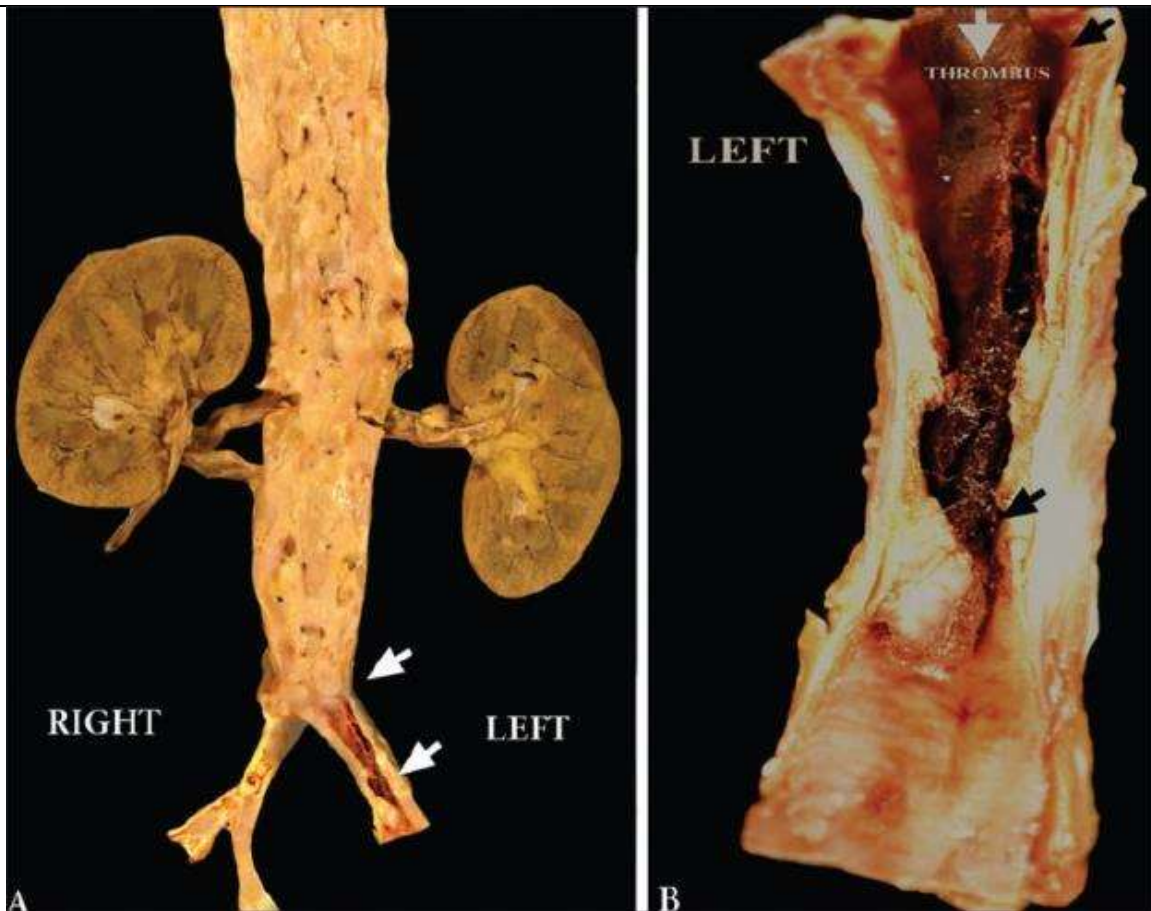
2. Slowing of the blood flow (stasis).

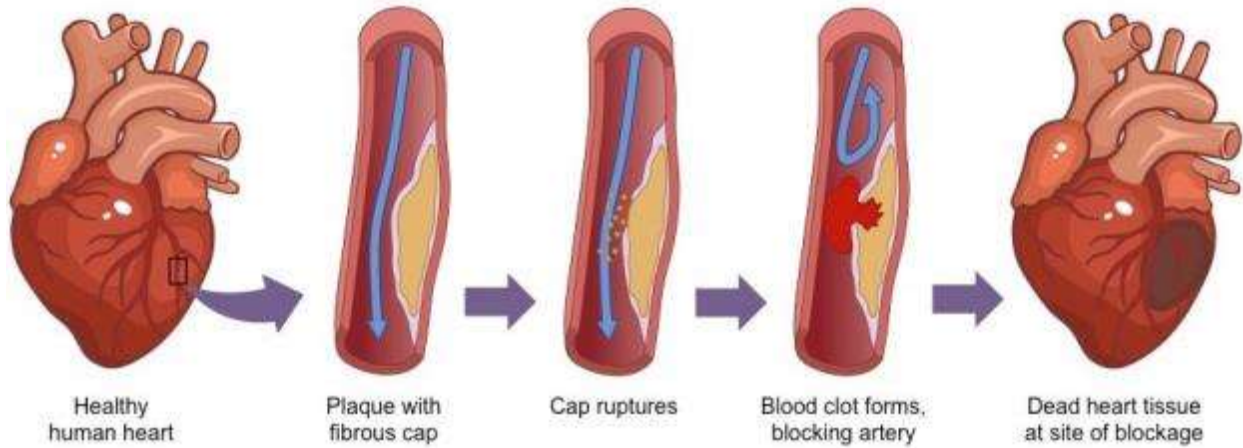
3. Changes in the blood itself:

- (a) Increase plasma-proteins,
- (b) Increase vitamin K,
- (c) Deficiency of heparin,
- (d) Increased viscosity,
- (e) Increased number of platelets or change in their character.
- (f) Factors which help clotting of blood.

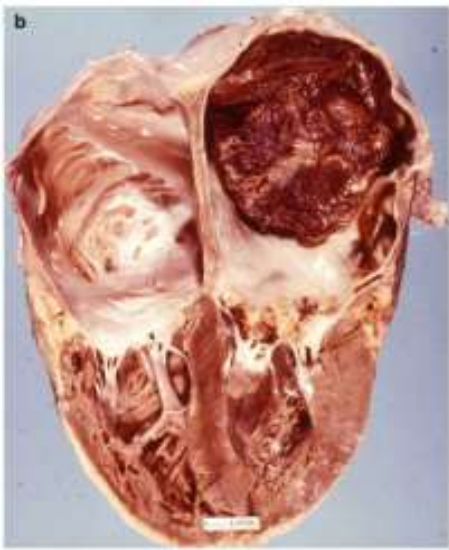
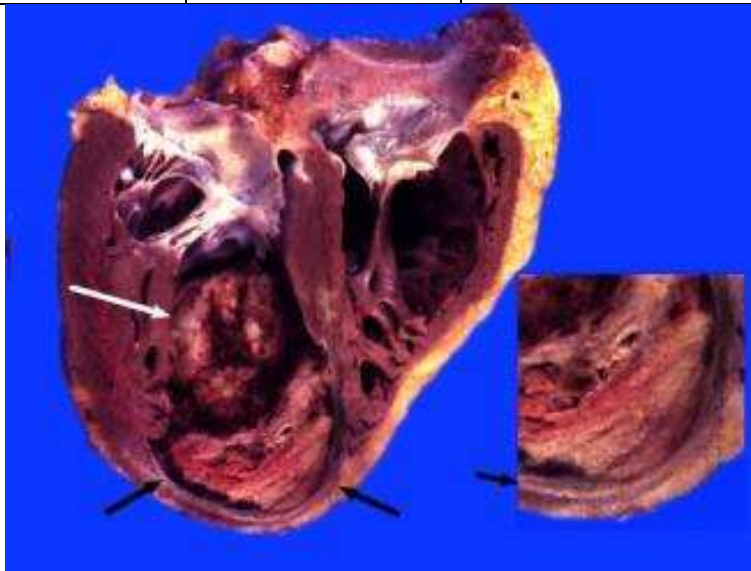
4. Miscellaneous:

(Abnormality in the endothelial lining; thrombophlebitis; toxins; snake venom; some micro-organisms; mechanical or electrical injury; veins invaded by malignant tumours etc...).





Thrombosis				
Heart:	<ul style="list-style-type: none"> • Shows no particular gross changes 			
Aorta: <i>(below renal branches):</i>	<ul style="list-style-type: none"> • Shows a thrombus 			
	The thrombus :	<ul style="list-style-type: none"> • Moderate in size • Red (in parts) grey or greyish-red (in parts) • Is elongated • Extending into femoral and hypogastric vessels 		



N.B.:

A thrombus is a laminated stratified structure formed,

- In the heart or blood vessels
- During life,
- From the elements of the streaming blood.

It has the following characteristic features :

1. Adherent to the site of origin of the vessel-wall.
2. Firm in consistence.
3. Often friable in most parts).
4. Has a rough granular external surface.
5. Greyish-red or reddish-grey in colour.
6. It shows white lines (sheets of platelets) projecting over the surface (**lines of Zahn**).

The elements of a thrombus, later on, may fuse together form a hyaline mass.

