

XV. Diseases of the Cardiovascular System

N.B.:

- **Atheromata commonly appear in the descending aorta and are chiefly marked in the lower abdominal portion.**
- **They appear crowded near the orifices of the intercostal and lumbar arteries**
- **The dangerous effects lie in the rigidity of the vessel, ulceration of the patches and the development of thrombosis with its sequels.**

Aetiology and pathogenesis of atheroma:

- Several factors such as
 - **Heredity,**
 - **Mechanical injury,**
 - **Senile changes,**
 - **Endocrine disorders and**
 - **Hypertension**
- Appear to play some role in the development of atherosclerosis, but the pathogenesis of the disease enters mainly around theories including
 - **The lipid,**
 - **The infective and**
 - **The thrombotic theories.**

Factors which are believed to account for the development of atherosclerosis are:

1. **Mechanical and thrombogenic** factors.
2. **Humoral factors** (effect of blood lipids, heparinoid substances in blood and other metabolic factors).
3. **Factors** of age, occupation, psychic state, stress, hypertension and endocrine imbalance.
4. **Unknown factors.**



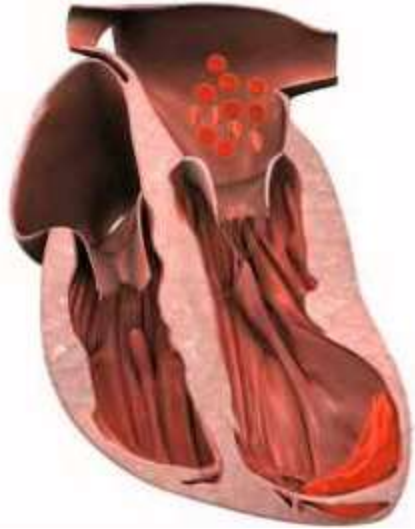
<p>Figure 48 Nature Healed Infarct and Aneurism Specimen No. 1-3.2Y2 Reference P. 130</p>	<p>Figure 49 Nature Hypertrophy and Dilatation Specimen No. 1-3.021 Reference P. 131</p>
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Atherosclerosis, Cardiac Aneurism

Heart	Is enlarged		
Left ventricle	Myocardium :	Hypertrophied Shows thin pale white patches	
	Apex :	Thin Pale white Shows an aneurismal dilatation	
Aortic cusps	<ul style="list-style-type: none"> • Show atheromatous patches • Degenerative changes • Fibrosis • Distortion • Are thickened (by sclerosis) • Opaque • Adherent to each other 		
Coronary arteries	Show atheromatous elevations		
Aorta	Shows atheromatous patches		

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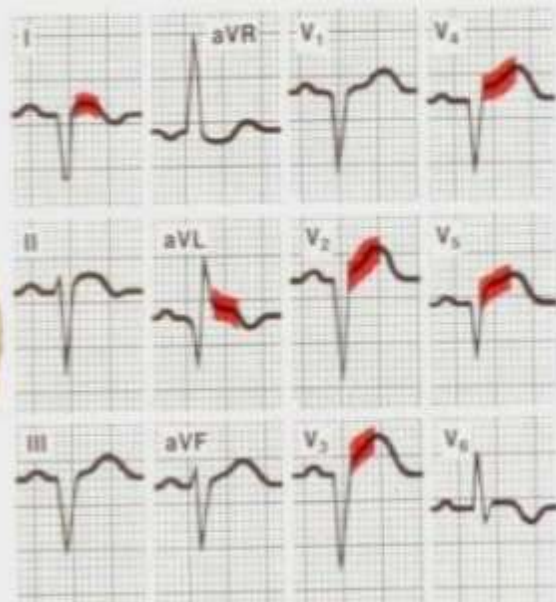
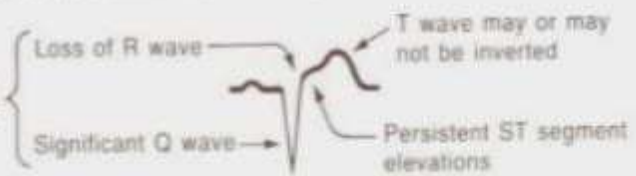
- Thrombosis of an atheromatous anterior descending branch of the left coronary artery
→ **Infarct at the anterior wall of the left ventricle at apex of heart**
→ **Weakening of the heart wall even when the infarct has healed (by thin fibrous tissue)**
→ **Bulging at apex of ventricle → ventricular or apical aneurism.**
- **This aneurism may rupture, or thrombosis may occur on the roughened endocardial surface. Detachment of parts of the thrombus → emboli.**
- **Rigidity of aortic valve and cusps → aortic regurgitation → hypertrophy of the heart.**



ST Segment Elevations (continued)

Ventricular aneurysm

Characteristic ECG changes



ST segment elevations persist for over 3 months in area of infarct

