

**DEFINITION**

1. **Endocarditis** is the term applied to inflammation of the endocardium, the lining membrane of the heart. The heart valves, which are specialised endocardial structures, are characteristically involved.
2. Endocarditis may be either **non-infective** or **infective**.

**CLINICAL MANIFESTATIONS**

3. The condition may present with fever, breathlessness, lassitude or through the effect of thrombi thrown off from the valve lesions. The onset may be abrupt or insidious, depending upon the type.

**AETIOLOGY****Non-infective endocarditis**

4. The classic examples of non-infective endocarditis are those lesions seen in association with **rheumatic heart disease**. Damage to the delicate endothelial covering of the heart valves leads to the deposition of platelets and fibrin. The process is exaggerated with abnormal heart valves, or where a jet of blood impinges on the endocardium. The endocarditis in this instance is merely a manifestation of the underlying condition.

**Infective endocarditis**

5. **Infective endocarditis** is almost wholly confined to patients with a pre-existing valvular abnormality, which may be due to rheumatic (non-infective) endocarditis or to congenital abnormalities of the heart such as patent ductus arteriosus, septal defects, coarctation of the aorta, bicuspid aortic valve (instead of the normal 3 cusps, there are only 2). Infection can also affect prosthetic heart valves and is recognised to occur in intravenous drug abusers who may not have an underlying valvular abnormality.
6. The condition results from direct infection of the endocardium (especially of the valves) by organisms circulating in the blood. Depending on the virulence of those organisms, the endocarditis presents in two main clinical forms, acute and subacute.
  - 6.1. **Acute infective endocarditis** is a rapidly progressive form caused by virulent pyogenic organisms. The source of infection is often apparent, arising as a complication of such illnesses as pneumonia, osteomyelitis, furunculosis or gonorrhoea. *Staphylococcus aureus* is the most commonly implicated organism in acute infective endocarditis.

- 6.2. **Subacute infective endocarditis** is caused by organisms of low virulence, most commonly by the alpha-haemolytic *Streptococcus viridans*. The initial bacteraemia frequently follows tooth extraction, when transitory invasion of the bloodstream by these organisms is common in the presence of minor oral infections. Less commonly, infection may be caused by *Haemophilus* species or by members of the coliform group. Subacute infective endocarditis is considerably commoner than the acute form and, being more insidious in onset, is more difficult to diagnose in the early stages.

## CONCLUSION

7. **Endocarditis** is an inflammatory condition of the lining membrane of the heart. It may be non-infective or infective, the former resulting from an effect of rheumatic fever, the latter resulting from infection introduced from outside the body affecting usually an already damaged heart.

## REFERENCES

Durack D T. Endocarditis. In: (Eds) Wyngaarden J B, Smith L H and Bennett J C. Cecil Textbook of Medicine. Philadelphia. W B Saunders Company. 19<sup>th</sup> Ed. 1992. p1638-1647.

de Bono D P and Boon N A. Diseases of the cardiovascular system - Infective Endocarditis. In: (Eds) Edwards Christopher R W and Bouchier Ian A D. Davidson's Principles and Practice of Medicine. 16<sup>th</sup> Ed. 1991. Edinburgh. Churchill Livingstone. p301-303.

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