

**DEFINITIONS**

1. The term **Mitral Valvular Disease** covers two forms of damage to the mitral valve of the heart -
  - 1.1. **Mitral Stenosis**, a condition in which the mitral valve is narrowed, thus offering an obstruction to the blood flow.
  - 1.2. **Mitral Regurgitation**, a condition in which the valve fails to close properly. The term **Mitral Incompetence** is sometimes used for this condition but, as a stenotic valve is also not competent in the true sense of the word, this term is better not used.
2. Dominant mitral stenosis with some, lesser, degree of regurgitation is the commonest form of the disease but all grades of the combination occur and either lesion may occur alone, pure stenosis being more common than pure regurgitation.

**CLINICAL MANIFESTATIONS****MITRAL STENOSIS**

3. This condition may be asymptomatic and remain so for many years but, in most patients, breathlessness on effort tends to occur in early adult life and, as a rule, steadily increases. Sudden attacks of breathlessness, usually at night, are not uncommon and may even appear in mild cases. Spitting of blood may occur at various stages of the disease.
4. Atrial fibrillation, evidence by rapid heartbeat, palpitations, increased breathlessness and fatigue, marks the onset of a definite stage of deterioration.

**MITRAL REGURGITATION**

5. There are no symptoms peculiar to this condition, the pure lesion being well tolerated. The early symptoms are palpitations, fatigue and breathlessness, indicating, as with mitral stenosis, commencement of heart failure.

**AETIOLOGY****MITRAL STENOSIS**

6. Rheumatic Fever remains the predominant cause of Mitral Stenosis although the condition can be congenital or arise as a result of calcification of the mitral valve annulus in the elderly, especially when the valve is congenitally abnormal.
7. Rheumatic Fever, a condition which follows upon upper respiratory tract infection with haemolytic streptococci, may lead to fibrosis and scarring of the valves of the heart, particularly the mitral valve. This scarring will not necessarily reveal itself at the time but, many years later, will result in mitral valve disease giving rise to symptoms and signs.

## MITRAL REGURGITATION

8. Although Rheumatic Fever remains an important cause of this condition, it has been overtaken as the leading cause by **Mitral Valve Prolapse**, a condition resulting from congenital abnormality or degenerative myxomatous changes and often found in connective tissue diseases, and sometimes in coronary artery disease. The cause of rheumatic fever has been mentioned at paragraph 7 above.
9. Other causes of mitral regurgitation are -
  - 9.1. diphtheria, myocarditis or cardiomyopathy, which can produce dilatation of the mitral valve ring.
  - 9.2. myocardial infarction which may produce papillary muscle dysfunction or rupture.
  - 9.3. trauma to the mitral ring.
  - 9.4. several congenital heart conditions, such as partial atrio-ventricular canal, corrected transposition of the great arteries and isolated cleft of the mitral valve.

## CONCLUSION

10. Mitral Valvular Disease is usually a combination of mitral stenosis and mitral regurgitation although either condition may exist alone. Both of these conditions result from disruption of mitral valve function, causes of such disruption being listed at paragraphs 6, 7, 8 & 9 above.

## REFERENCES

Rackley C E. Valvular Heart Disease. In: Wyngaarden J B, Smith L H and Bennett J C (Eds). Cecil Textbook of Medicine. Philadelphia. W B Saunders Company. 19<sup>th</sup> Ed. 1992. p326-331.

de Bono D P and Boon N A. Diseases of the cardiovascular system - Diseases of the Heart Valves. 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. p293-296.

December 1992