

## Study of Clinical Profile of Mitral Valve Prolapse

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**Abstract:** Mitral valve prolapse (MVP) is the most common valvular abnormality, affecting approximately 2-3% of the population in the United States. MVP usually has a benign course, but it occasionally leads to serious complications, including clinically significant mitral regurgitation (MR), infective endocarditis, sudden cardiac death, and cerebrovascular ischemic events. 100 diagnosed case of mitral valve prolapse (by echocardiography) were studied retrospectively. Most common age group was 15-39 years. 2) Most common symptom was palpitation with chest pain. 3) Most common sign was systolic click. 4) Most common ECG finding was early repolarization. MVP is benign entity which most commonly affects young age group. Most of patients present with chest pain and palpitation but some may be symptom free. Most common ECG finding was early repolarisation but to consider this as diagnostic test we need more broader study.

**Keywords:** Mitral Valve Prolapse (MVP), Chest Pain, Palpitation, systolic click, early repolarization.

**INTRODUCTION**

Mitral valve prolapse (MVP) is the most common valvular abnormality, affecting approximately 2-3% of the population in the United States [1, 2]. It is generally defined as the systolic displacement of one or more abnormally thickened, redundant mitral leaflet (s) into the left atrium during systole [3].

It may be familial or sporadic with the majority of data favoring an autosomal dominant pattern of inheritance in a large proportion of individuals with MVP [4, 5]. It is also the most common cause of isolated mitral regurgitation (MR) requiring surgical repair [6].

MVP usually results in a benign course. However, it occasionally leads to serious complications, including clinically significant MR, infective endocarditis, sudden cardiac death, and cerebrovascular ischemic events.

Mitral valve prolapse (MVP) usually occurs as an isolated entity. It also commonly occurs with heritable disorders of connective tissue, including Marfan syndrome, Ehlers-Danlos syndrome, osteogenesis imperfecta, and pseudoxanthoma elasticum [7, 8]. MVP has also been described in association with a secundum atrial septal defect and hypertrophic cardiomyopathy.

**OBJECTIVE**

To study clinical profile of mitral valve prolapse.

**MATERIALS AND METHODS**

Study was done retrospectively. Diagnosed case of mitral valve prolapse by echocardiography were studied. Total 100 cases were studied. ECG, echocardiography, history and physical examination and routine investigations were studied.

**Source of data**

Case records of patients from Department of Cardiology, Gajra Raja Medical College, Gwalior (M.P.).

**Inclusion criteria**

Patients with

- Age > 15 years
- Mid systolic click
- Late systolic murmur or both
- 2D Echo evidence of mitral valve prolapse

**Exclusion criteria**

- Patients with cardiomyopathy and coronary artery disease.
- Patients with valvular heart disease other than mitral regurgitation.

## RESULTS

**Table-1: Age and gender wise distribution**

Age group (years)	Male	Female	Total
15-39 (Young group)	22	26	48
40-59 (Middle group)	17	15	32
> 60 (Elder group)	9	11	20
Total	48	52	100

48% patients belonged 15-39 years age group. Least affected age group was elder group (> 60 years).

**Table-2: Distribution of cases according to symptoms**

Symptoms	No. of patients
Symptom free	15
Palpitation only	33
Palpitation with chest pain	58
Breathlessness	19
Syncope	3
Anxiety	4

Most common symptom was palpitation with chest pain. 58% patients had this complaint followed by

palpitation only (33%). 15% were patients were symptom free.

**Table-3: Distribution of cases according to physical signs**

Physical sign	Young group	Middle group	Elder group
Pansystolic murmur	1	2	7
Late systolic murmur ± click	18	9	8
Systolic click only	27	20	4
Tachycardia	2	1	1

Among young and middle age group systolic click was most common sign followed by late systolic murmur with or without click. Among elder group

significant number (7 out 20) patients were having pansystolic murmur.

**Table-4: ECG changes**

ECG changes	No. of patients
Early repolarization	69
- Inferior leads	40
- I, aVL	15
- I, aVL and inferior leads	14
Atrial fibrillation	4
VPCs (Ventricular premature complexes)	7
APCs (Atrial premature complexes)	2
SVT (Supraventricular tachycardia)	2

Most common ECG finding was early repolarization (elevation of J-point), which was most common in inferior leads. Other ECG findings were atrial fibrillation, VPCs, APCs and SVT.

**DISCUSSION**

We found in our study that most common age group was 15-39 years. There is decline in prevalence in later life reason behind that is unclear.

Most common symptom was palpitation with chest pain followed by palpitation only. A significant

number of patients were symptom free which were diagnosed coincidentally.

Frequency of isolated click declined with age in our study and finding of Beton *et al.*, [9] were similar. We also found that significantly great proportion of elderly patients was having pansystolic murmur. Most common ECG finding was early repolarization changes in inferior leads.

**CONCLUSION**

MVP is benign entity which most commonly affects young age group. Most of patients present with

chest pain and palpitation but some may be symptom free. Most common ECG finding was early repolarisation but to consider this as diagnostic test we need more broader study.

**Ethical clearance:** Taken from Institutional Ethical Committee, Gajra Raja Medical College, Gwalior (M.P.).

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