Mitral Valve Prolapse (Barlow Syndrome) — Diagnosis and Treatment

See online here

Acquired valvular heart diseases may manifest as insufficiencies (i.e., the incomplete closure of the valve), as a stenosis (i.e., a narrowing of the valve), or as a combined valvular defect. In principle, all valves can be affected. The aortic valve stenosis and the mitral regurgitation are particularly frequent.

Introduction

Mitral valve prolapse syndrome refers to the occurrence of symptoms in the event of a mitral valve prolapse. Mitral valve prolapse is a common abnormality of adulthood and does not generally require treatment, as long as it remains asymptomatic.

Definition
Mitral valve prolapse refers to the **bulging of parts of the mitral valve cusp during systole in the left atrium**. If symptoms occur, the disease is called mitral valve prolapse syndrome. Mitral valve prolapse can result in mitral regurgitation and is considered the most common cause of isolated mitral regurgitation.

### Epidemiology

#### Prevalence of mitral valve prolapse

Mitral valve prolapse is common in industrialized countries. It is the most common cardiac valve anomaly in adulthood. About 3–4% of adults have this anomaly, for which an **autosomal dominant inheritance** is suspected. Women are affected more often than men.

### Etiology

#### Causes of mitral valve prolapse

Mitral valve prolapse may be due to a **disproportion in the size of the valves, left ventricle, and valve-retaining apparatus**. **Connective tissue weaknesses**, such as Marfan syndrome or myxomatous degeneration, could also be a cause.

### Classification

#### Types of mitral valve prolapse

A distinction is made between a **primary idiopathic mitral valve prolapse**, which involves, among other things, disproportionate valve sizes and myxomatous changes, and a **secondary mitral valve prolapse**. The secondary form results from systemic diseases such as Marfan syndrome, and could also involve CHD or an atrial septal defect.

### Symptoms and Clinical Presentation

Only about 10% of affected individuals show symptoms, which include **arrhythmias** and **palpitations**, **syncope**, **dyspnea**, and **diminished performance**, as well as **anxiety**.
and atypical chest pain.

Diagnosis

Physical and radiological examination of mitral valve prolapse

Physical examination often shows an asthenic body type with decreased body weight and hypotension.

During auscultation, a mid-systolic clicking sound can be heard over the cardiac apex, followed by a short systolic murmur of mitral regurgitation. A late systolic murmur can also be heard.

These sounds could shift toward early systole when standing or during the Valsalva maneuver, and toward late systole when squatting.

**ECG** is often unremarkable, possibly characterized by a flattened T.

<table>
<thead>
<tr>
<th>Maneuvers</th>
<th>S1-click interval</th>
<th>Onset of late systolic murmur in relation to S1</th>
<th>Duration of a late systolic murmur in relation to the total duration of systole</th>
</tr>
</thead>
</table>
Echocardiography can well identify a mitral valve prolapse. The so-called hammock phenomenon can be observed here when the mitral valves are curved into the left atrium.

Treatment

Treatment options for mitral valve prolapse

If patients are asymptomatic and have no arrhythmias or mitral regurgitation, no treatment is necessary. Re-assessments should be performed in 5-year intervals. Patients with higher-grade mitral regurgitation should, however, observe some specific behaviors. This includes maintaining a normal weight, abstaining from nicotine, alcohol, and caffeine, as well as avoiding strenuous exercise and sports. Re-assessments should be performed in 1 to 3-year intervals in these cases.

Complications

A mitral valve prolapse can lead to mitral regurgitation. Endocarditis and arrhythmias are also complications and could result in arterial embolisms. Sudden cardiac death occurs at an incidence of approx. 1%. For prophylaxis of complications,
oral anticoagulants may be used, as well as endocarditis prophylaxis. The administration of antiarrhythmic or an ICD implantation may also be indicated.

References


Legal Note: Unless otherwise stated, all rights reserved by Lecturio GmbH. For further legal regulations see our legal information page.