Second Degree Atrioventricular Block
(2nd Degree Heart Block)

Second degree atrioventricular block is a type of heart block. The heartbeat is a coordinated contraction between the upper and lower chambers of the heart. This coordinated contraction happens because of an electrical impulse that is sent from the upper chambers of the heart to the lower chambers of the heart. The electrical impulse causes the heart to beat and pump blood. Normally, this electrical impulse is transmitted without delay. In a second degree heart block, an interruption occurs in the heart's electrical impulse between the upper and lower chambers of the heart. When this happens, the heart does not beat in a timely manner and affects the amount of blood pumped by the heart.

There are two types of 2nd degree heart block:

- Mobitz Type 1. In this type of 2nd degree heart block, the electrical impulse is gradually delayed more and more until the heart misses a beat. This type of 2nd degree heart block is less serious than Mobitz type 2.

Mobitz Type I

- Mobitz Type 2. This type of 2nd degree heart block is more serious and can become a more severe form of heart block. With Mobitz type 2, some of the electrical signals are blocked and do not reach the lower chambers of the heart. This can occur suddenly and without warning. Some people may need a permanent pacemaker with this type of heart block.

Mobitz Type II

CAUSES

The cause of 2nd degree heart block may be a result of:

- Age. The heart's electrical system can degenerate due to the aging process.
- Heart attack. A heart attack can cause scarring which can damage the heart's electrical system.
- Open heart surgery can damage and scar areas of the heart which affect the heart' s electrical system.
- Heart medication such as beta and calcium channel blockers. These kinds of medications can affect the electrical impulse of the heart and can slow the heart rate if the dosage is too high.

SYMPTOMS

- Mobitz type 1 - Generally no symptoms are noticed but may have symptoms listed under Mobitz type 2.
- Mobitz type 2 - Compared to Mobitz type 1, greater likelihood of the following symptoms:
  - Fatigue.
  - Shortness of breath.
  - Dizziness or lightheadedness.
  - Fainting.
  - Chest pain.

DIAGNOSIS

- Electrocardiogram (EKG). An EKG is a tracing of the heartbeat and can show a 2nd degree heart block.
- Holter monitor. A holter monitor is a continuous heart rhythm recording for 24 hours. This can be helpful in determining the kind of heart block you have and how it can be treated.
- Electrophysiology (EP) study. This is a procedure which tests the electrical pathway of your heart. This type of test is done by a specialist who places *catheters* (long thin tubes) in your heart. The catheters are used to study your heart and record your heart's electrical signals.

TREATMENT

- Mobitz Type 1. Generally, no treatment is needed.
- Mobitz Type 2. A permanent pacemaker may be needed.
- Heart medications such as beta blockers or calcium channel blockers can slow the heart rate. Your caregiver may need to adjust your heart medication if this is the cause of your heart block. Adjusting your heart medication my reverse the heart block.

SEEK MEDICAL CARE IF:

- You have unexplained fatigue.
- You feel lightheaded.
- You feel faint.
- You feel your heart skipping beats or your heart beats very fast.

SEEK IMMEDIATE MEDICAL CARE IF:

- You have severe chest pain, especially if the pain is crushing or pressure-like and spreads to the arms, back, neck, or jaw. **THIS IS AN EMERGENCY. Do not wait to see if the pain will go away. Get medical help at once. Call your local emergency services (911 in the U.S.). DO NOT drive yourself to the hospital.**
- You notice increasing shortness of breath during rest, sleeping, or with activity.
- You "black out" or faint.

MAKE SURE YOU:

- Understand these instructions.
- Will watch your condition.
- Will get help right away if you are not doing well or get worse.

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