

# Shoulder blocks

Ramen blocks are divided into right and left Tawar's ramen blockade.

## Blockade of the right arm of Tawarov

Blockade of the right branch of Tawar (BPRT, English right bundle branch block, RBBB) is a disorder of conduction of the impulse through the myocardium arising as a result of the involvement of the conduction system of the heart and resulting in delayed depolarization (and therefore activity) of the right ventricle.

### Types

According to the width of the QRS complex, we distinguish 2 types of BPRT:

1. complete BPRT (QRS longer than 0.12 s, block of the proximal part of the right bundle of Tawar);
2. incomplete BPRT (QRS shorter than 0.12 s, block of the distal part of the right bundle of Tawar).

The normal width of the QRS complex is 0.06-0.11 s.

### Etiology

BPRT alone is hemodynamically insignificant. However, it can signal damage to the right heart . BPRT often occurs in:

- cor pulmonale chronicum (pressure overload of the right heart);
- cor pulmonale acutum (pulmonary artery embolism , pressure overload of the right heart);
- atrial septal defect (volume overload of the right heart);
- ischemic cardiomyopathy ;
- cardiomyopathy resulting from a valvular defect;
- congenital or idiopathic cardiomyopathy.

The ECG pattern of right bundle branch block can occur even in healthy people. This is mainly an incomplete BPRT with a normal width of the QRS complex in young endurance athletes (during endurance sports there is a volume load on the right ventricle).

### Diagnostics

The diagnosis of BPRT relies on an ECG . In case of complete BPRT :

- The QRS complex is extended above 0.11 s (3 small squares);
- in leads V1-V2 (right-sided leads, above the right ventricle) we observe the image of rSR' , descending depression of the ST segment and a negative T wave (it is typical for a complete BPRT that R ' is higher than r );
- in leads V4-V6, I and aVL (left-sided leads, above the left ventricle) we find a deep and wide S wave and a positive T wave .

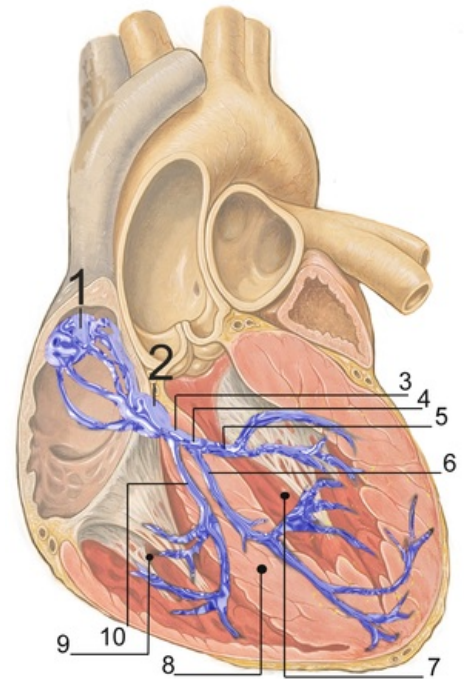
In the case of incomplete BPRT , the QRS complex lasts less than 0.12 s.

### Differential diagnosis

- Right ventricular hypertrophy,
- intraventricular block,
- non-specific transmission disorder,
- Brugada syndrome ,
- preexcitation syndrome ,
- posterior myocardial infarction ,
- ventricular rhythm.

## Blockade of Tawarov's left arm

Blockade of the left branch of Tawar (BLRT, English left bundle branch block, LBBB) is a disorder of conduction of the impulse through the myocardium arising as a result of an impairment of the conduction system of the heart and resulting in delayed depolarization (and therefore activity) of the left ventricle. The entire left ventricle is



Transduction system diagram: 1. SA node, 2. AV node, 3. Bundle of His, 4. Left bundle of Tawar, 5. Left posterior fascicle, 6. Left anterior fascicle, 7. left ventricle, 8. septum, 9. right ventricle, 10. right brachio Tawar

depolarized from the right from the right branch of Tawar, thereby widening and morphologically changing the QRS complex.

## Types

According to the width of the QRS complex, we distinguish 2 types of BLRT:

1. complete BLRT (QRS longer than 0.11 s);
2. incomplete BLRT (QRS ranging from 0.06–0.11 s).

The normal width of the QRS complex is 0.06–0.11 s.

## Etiology

BLRT alone is hemodynamically insignificant. However, it signals damage and/or increased strain on the left ventricle, which can be caused by the following conditions:

- cardiomyopathy ,
- valvular defects of the left heart,
- hypertension (hypertensive cardiomyopathy),
- CHD (ischemic cardiomyopathy).

## Complication

BLRT increases the risk of heart failure , MI , sudden cardiac death , AV block II. degree, AV block III. degrees.

## Diagnostics

Diagnosis of BLRT relies on ECG . In case of complete BLRT :

- The QRS complex is extended above 0.11 s (3 small squares) and bifurcated , in V6 resembles the letter "M" (RsR');
- in V1 we observe the QS or qRS image (qRS resembles the letter "W");
- in the lateral leads (V5, V6, I, aVL) there is an inversion of T waves and descending depression of ST segments (=secondary repolarization changes);
- axis is normal or deviated to the left.

In the case of incomplete BLRT, the QRS complex lasts 0.06–0.11 s.

**Attention! CAVE! BLRT makes diagnosis of MI impossible. If we suspect MI (pain of coronary origin) in a patient with left Tawar bundle branch block, it is always necessary to hospitalize this patient!!**

## Differential diagnosis

- Left ventricular hypertrophy,
- lateral MI,
- preexcitation syndrome.

## Links

### Related articles

- Antiarrhythmics
- Cardiac conduction system
- Heart rhythm disorders
- Bradyarrhythmias and bundle branch blocks

### External resources

- Blokáda pravého Tawarového ramienka (TECHmED) (<https://www.techmed.sk/blokada-praveho-tawaroveho-ramienka/>)
- Blokáda ľavého Tawarového ramienka (TECHmED) (<https://www.techmed.sk/blokada-laveho-tawaroveho-ramienka/>)

## References

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