

Diagnostic criteria for LSFB - 2018

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Electrocardiographic Criteria for LSFB

1. Normal QRS duration or with a minor increase (up to 110 ms). When associated with other fascicular or bundle blocks it could be ≥ 120 ms.
2. FP leads with no modifications: normal QRS.
3. Increased ventricular activation time or intrinsic deflection V1 and V2: ≥ 35 ms.
4. R wave voltage of V1 \geq than 5 mm;
5. R/S ratio in V1 > 2 ;
6. R/S ratio in V2 > 2 ;
7. S wave depth in V1 < 5 mm;
8. Possible small (embryonic) q wave in V2 and V3 or V1 and V2;
9. R wave of V2 > 15 mm;
10. RS or Rs pattern in V2 and V3 (frequent rS in V1) with R wave "in crescendo" from V1 through V3 and decreasing from V5 to V6;
11. Absence of q wave in left precordial leads V5, V6 and I (by absence of vector 1 AM). One first needs to exclude incomplete left bundle branch block (ILBBB), complete left bundle branch block (CLBBB) and Wolff-Parkinson-White (WPW);
12. Intermittent PAF during a hyperacute phase of myocardial infarction, or during an exercise stress test in patients with severe myocardial ischemia, and during early atrial extrastimuli with some degree of ventricular aberration;
13. Appearance of intermittent, rate-dependent q wave in V1 and V2.

The last Brazilian Guidelines for Interpreting Rest Electrocardiogram provided the following criteria for ECG diagnosis of LSFB:

Ø QRS duration < 120 ms, in general, close to 100 ms. The appearance of LFB does

Ø Not increase QRSD by more than 25 ms, due to multiple interconnections between the fascicles of the LBB ("passage way zone" of Rosenbaum). The QRS complex is slightly prolonged between 100 and 115 ms. Thus, LSFB pattern with a prolonged QRSD indicates the presence of additional

conduction disturbances such as other fascicular blocks, RBBB, MI, focal block, or a combination of these;

Ø ≥ 15 mm voltage R waves in V 2 and V 3 or from V 1 ;

Ø Increasing for all intermediary precordial leads and decreasing from V 5 to V 6 ;

Ø “r” wave jump may occur from V 1 to V 2 (“rS” in V 1 for R in V 2);

Ø Absence of QRS axis shift in the frontal plane;

Ø T wave polarity most of the times, negative in the right precordial leads.

Note: All these criteria are valid in absence of RVH, septal hypertrophy or lateral -wall MI and other causes of PAF.

Vectorcardiographic Criteria for LSFb (All in the HP)

1. QRS loop in the HP with an area predominantly located in the left anterior quadrant ($\geq 2 / 3$ of the loop area facing the orthogonal X lead: 0 to $\pm 180^\circ$);
2. Absence of normal convexity to the right of the initial 20 ms of the QRS loop;
3. Discrete dextro or rightward-orientation with moderate delay of the vector from 20 to 30 ms;
4. Anterior location of the 40–50 ms vector;
5. Posterior location with a reduced magnitude of the vector from 60 to 70 ms;
6. Maximal vector of the QRS loop located to the right of $+30^\circ$;
7. Intermittent anterior displacement of QRS loop
8. T loop with posterior orientation tendency (useful for the differential diagnosis with posterior MI);
9. The QRS loop rotation may be:
 - A. Counterclockwise: incomplete LSFb.
 - B. Clockwise: advanced or complete LSFb or in association with CRBBB, LAFB, or LPFB.