

Foundations EKG II - Unit 7 Summary

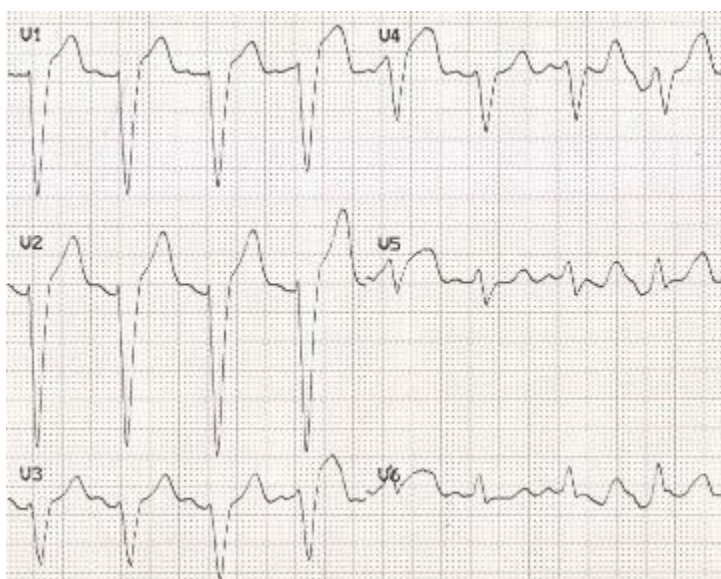
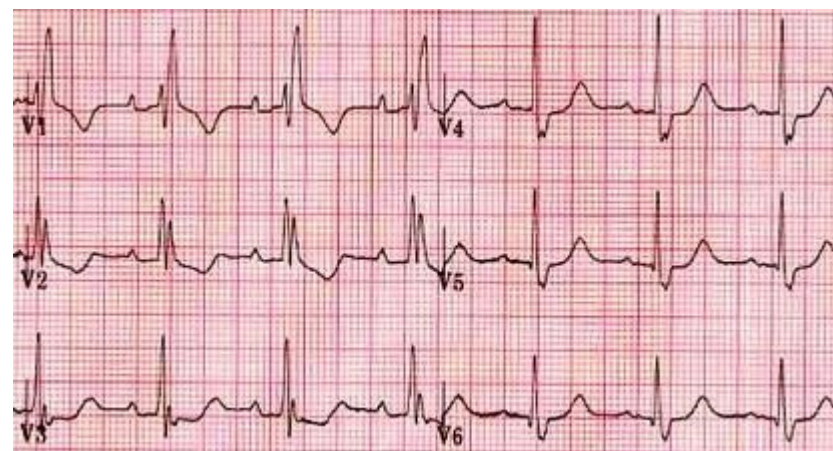
Approach to Fascicular Blocks

Bundle branch blocks distort normal EKG anatomy and can mask the normal signs of ischemia or arrhythmia. Identifying bundle branch blocks by criteria provides information about the electrical functioning of a patient's heart.

Right bundle branch block criteria:

- Wide QRS (>120ms)
- Tall R wave in V1-V3,
- Wide, slurred S wave in lateral leads (V5-V6)

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Left bundle branch block criteria:

- Wide QRS (>120ms)
- Dominant S wave in V1
- Broad monophasic R wave in lateral leads (V5-V6)

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High clinical suspicion of AMI based on history and exam in conjunction with EKG changes should guide diagnosis and treatment regardless of presence or absence of these criteria.



Ischemia in LBBB may be recognized using **Sgarbossa criteria** initially developed by Dr. Elena Sgarbossa:

Score ≥ 3 has reported sensitivity of 90% for MI

5 points: Concordant ST elevation $>1\text{mm}$ in leads with a positive QRS

3 points: Concordant ST depression $>1\text{mm}$ in V1-V3

2 points: Excessively discordant ST elevation $> 5 \text{ mm}$ in leads with a negative QRS complex

Dr. Steve Smith created the **Modified Sgarbossa Criteria** (Good explanation by Dr. Salim Rezaie at [ALIEM](#))

The rule is positive if any of the following is present:

≥ 1 lead with $\geq 1 \text{ mm}$ of concordant ST elevation

≥ 1 lead of V1-V3 with $\geq 1 \text{ mm}$ of concordant ST depression

≥ 1 lead anywhere with $\geq 1 \text{ mm}$ STE and proportionally excessive discordant STE and STE divided by S-wave depth less than or equal to -0.25

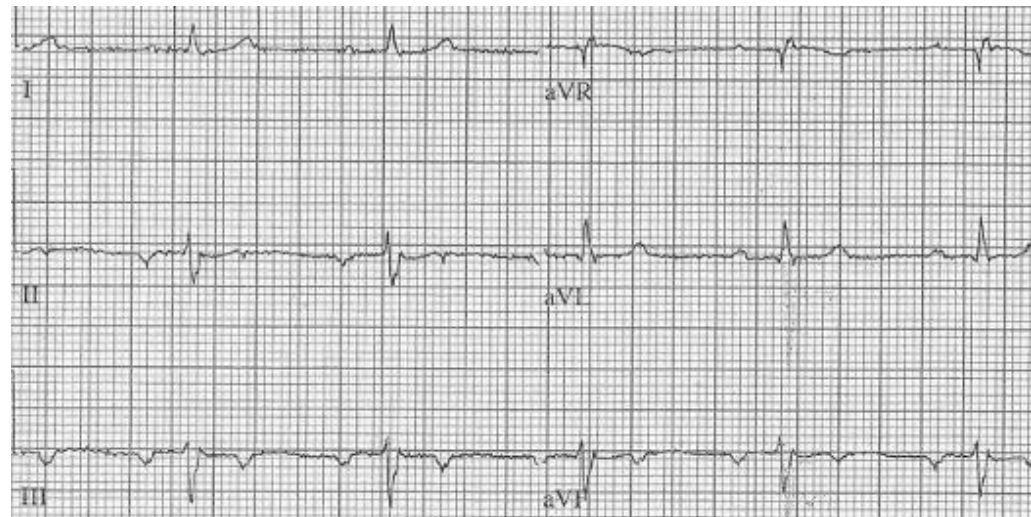
In the example below: $\text{III} = 3/-20 = -0.15$ $\text{aVF} = -0.21$



Courtesy of Dr. Steve Smith of [Dr. Smith's ECG Blog](#)

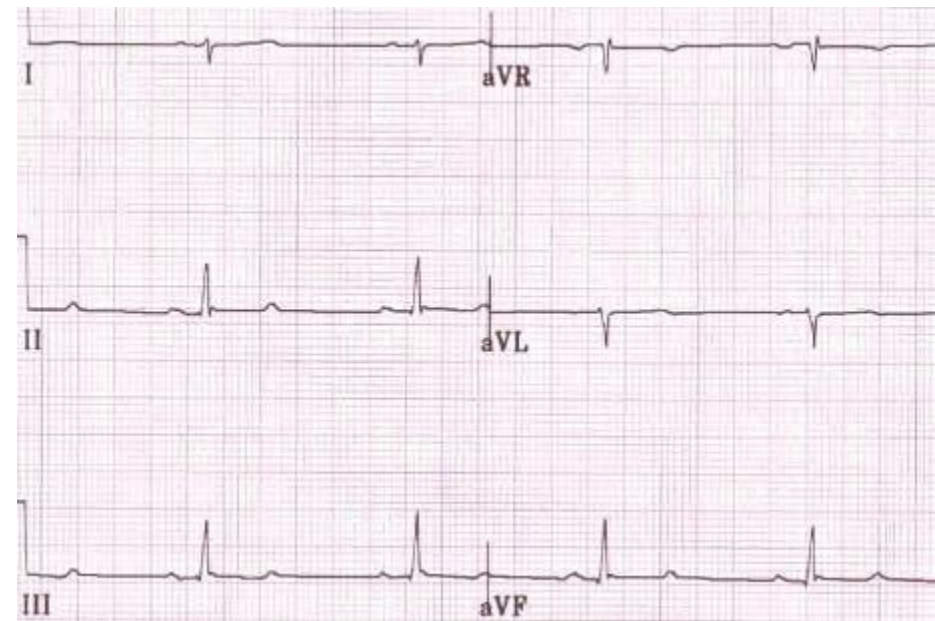
Left Anterior Fascicular Block

- Left axis deviation
- Small q waves with tall R waves in I and aVL
- Small R waves with deep S waves in II, III, & aVF
- Normal QRS duration
- Increased QRS voltage in limb leads



Left Posterior Fascicular Block

- Right axis deviation
- Small Q waves with tall R waves in II, III, and aVF
- Small R waves with deep S waves in I and aVL
- Normal QRS duration
- Increased QRS voltage in the limb leads
- No other cause of right axis deviation



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Note: Any fascicular block associated with 1st degree AV block in a patient with syncope or other symptoms should prompt the consideration of intermittent third degree heart block. This may require pacemaker placement.