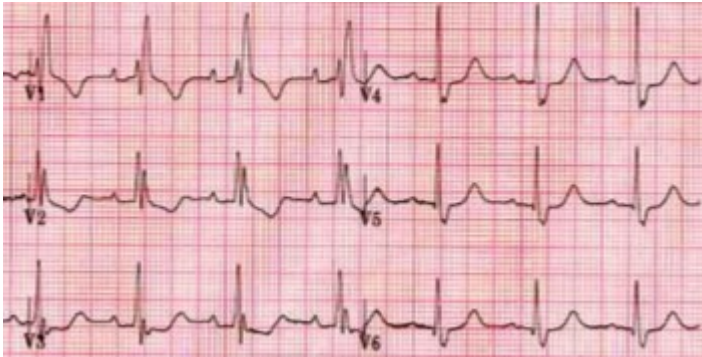


# Foundations EKG II - Unit 7 Summary

Bundle branch blocks distort normal EKG anatomy and can mask the normal signs of ischemia or arrhythmia the EM physician looks for. 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)

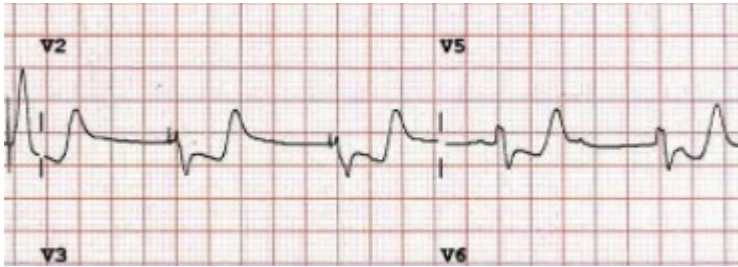


## Left bundle branch block criteria:

- wide QRS (>120ms)
- dominant S wave in V1
- broad monophasic R wave in lateral leads (V5-V6)

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Courtesy of Steve Smith of Dr. Smith's ECG Blog

Ischemia in LBBB may be recognized using **Scarbossa's criteria**:

- concordant ST elevation  $>1\text{mm}$  in leads with a positive QRS
- concordant ST depression  $>1\text{mm}$  in V1-V3

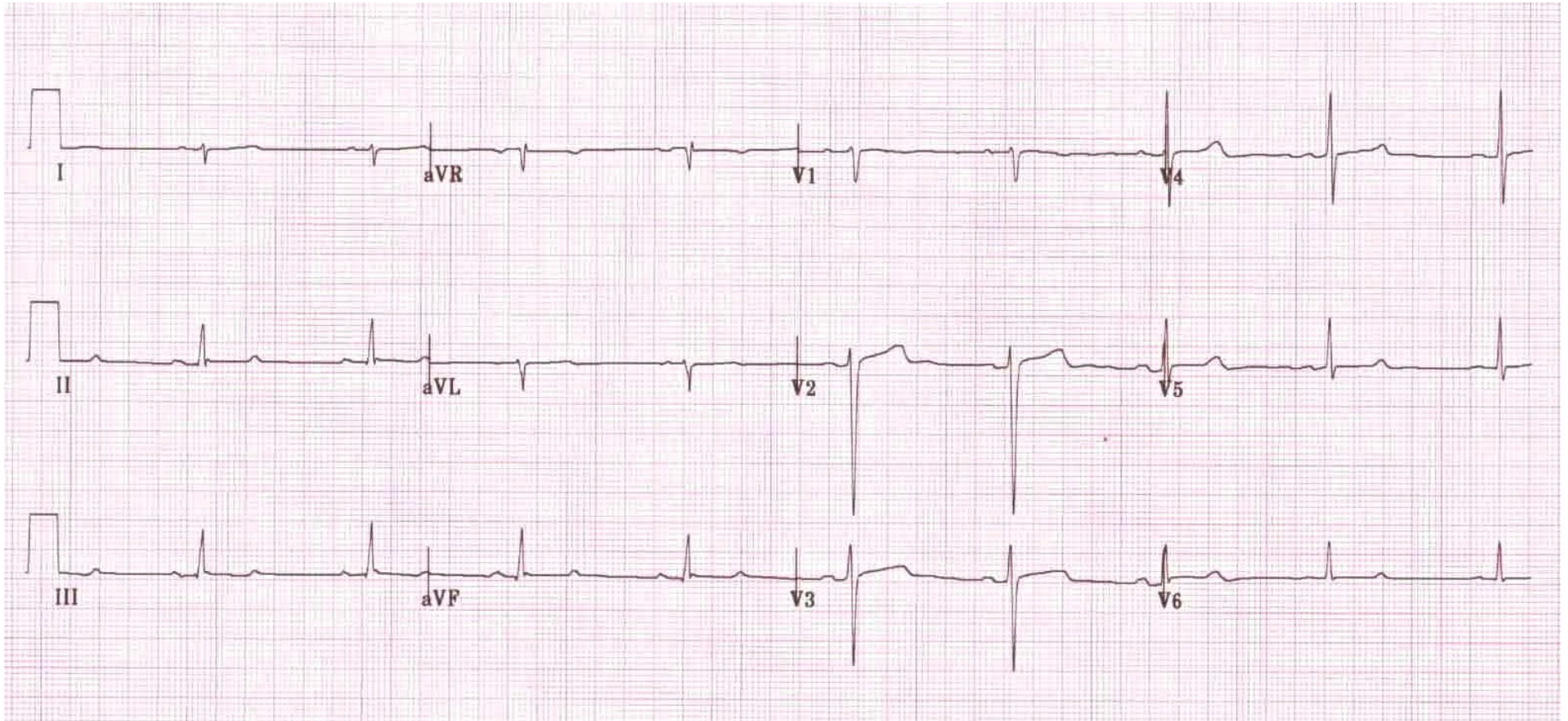
With the addition of:

**Modified Smith's criteria:**

ST discordance greater than  $1/4$  the height of the QRS complex

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.

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.



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### **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, and 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