

Foundations EKG II - Unit 9 Summary Miscellaneous Ischemia

Impressive T wave inversion on EKG has a differential diagnosis that includes acute myocardial ischemia among others.



Diffuse T wave inversion can indicate **increased intracranial pressure**. Typically, T waves are asymmetric with a bulge. This is most commonly caused by intra-parenchymal and non-traumatic subarachnoid hemorrhage, but can also be seen with massive ischemic stroke or tumor.

Courtesy of Susan Torrey of torreyEKG.com







Deeply inverted T waves or biphasic T waves in V2-V4 during a pain-free interval may represent **Wellens Waves**. Wellens waves may occur with normal enzymes when a patient is not having pain and indicate a left anterior descending (LAD) occlusion. They should prompt a discussion with cardiology about performing cardiac catheterization however immediate activation may not be indicated if the patient is not having active pain. Serial EKGs should be obtained to evaluate for evolving ischemic disease.

Courtesy of Susan Torrey, MD of torreyEKG.com





EKG findings suggestive of right heart strain:

- Right axis deviation
- T wave inversions in inferior and anterior leads
- Incomplete RBBB
- STE with lead III, aVR, V1

Causes of right heart strain include pulmonary hypertension, pulmonary embolism, mitral stenosis, and chronic lung disease (among others).

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A new RBBB with a left anterior fascicular block can be seen in left main and left anterior descending artery occlusion. As a reminder, left anterior fascicular blocks are diagnosed as left axis deviation with small Q waves and tall R waves in leads I and aVL, small R waves with deep S waves in leads II, III, and aVF, and increased QRS voltage in the limb leads. This rhythm (new RBBB+LAFB) is at risk for degenerating into VT with likely cardiogenic shock.

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