

Common Myths and Fallacies in ECG (1)

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2010.8.23. SKH

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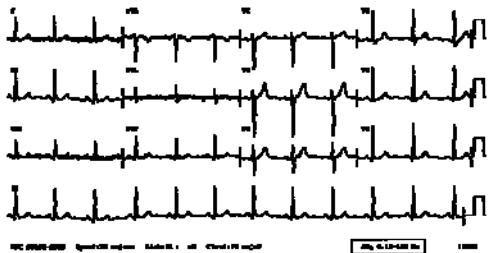
Preface

- All ECGs are classified as two kinds, that is, narrow QRS and wide QRS complexes.
- Wide QRS complexes are so-called "BBB".

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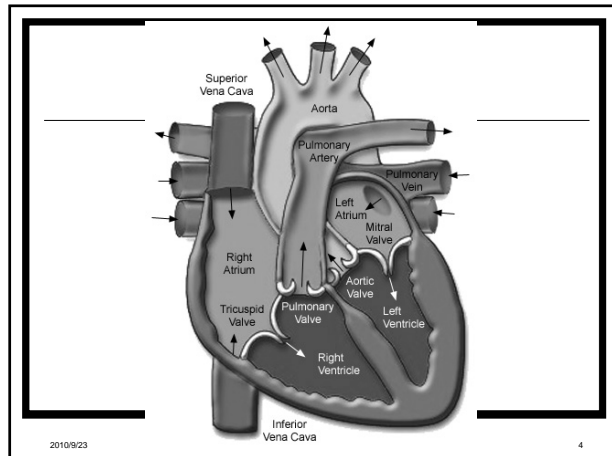
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Normal ECG



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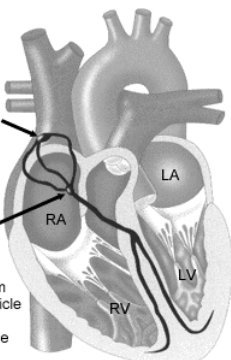
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Sinoatrial (SA) Node

Atrioventricular (AV) Node

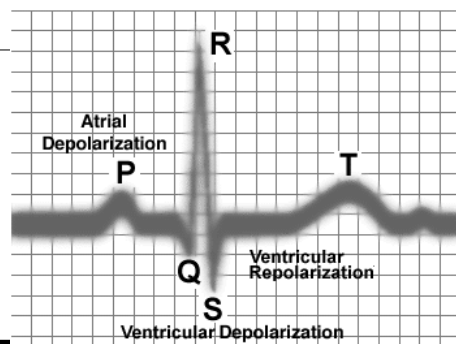
RA = Right Atrium
 RV = Right Ventricle
 LA = Left Atrium
 LV = Left Ventricle



- High Speed
- Midline Conduction

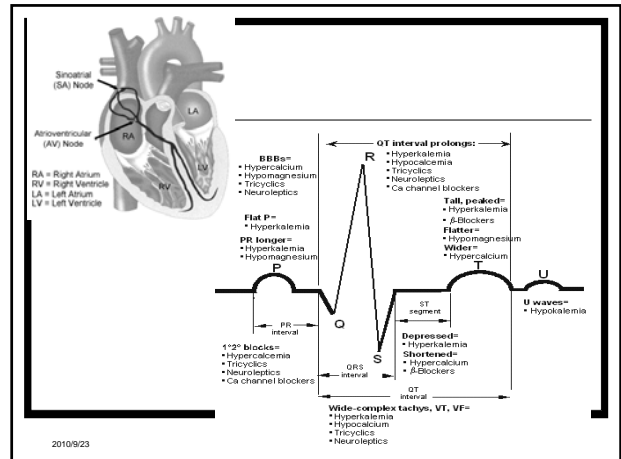
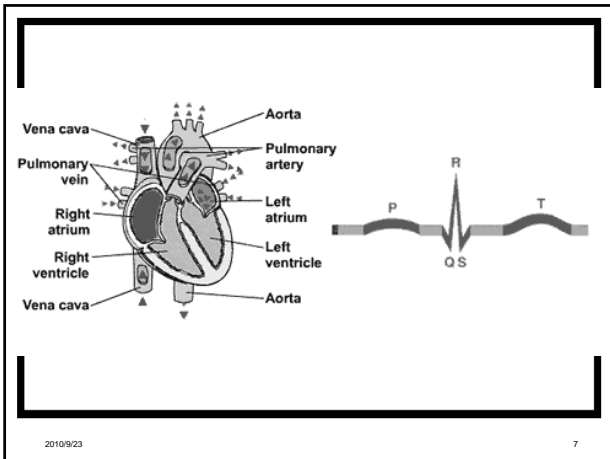
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Myth and Fallacy #1

- All wide QRS complexes originate from ventricle, whereas narrow ones from supra-ventricle.
- Wide QRS complexes:
 - RBBB and LBBB
 - VPC and VT
 - Ventricular pacing
 - WPW

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RBBB

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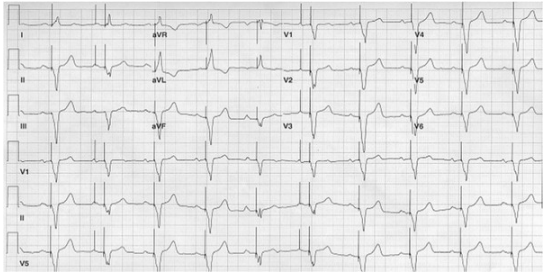
LBBB

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VT

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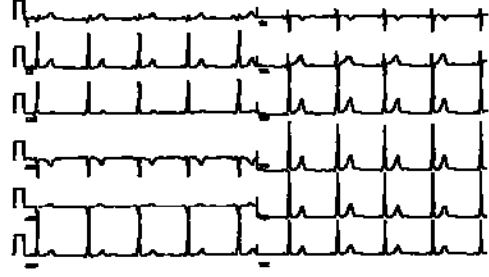
Ventricular Pacing



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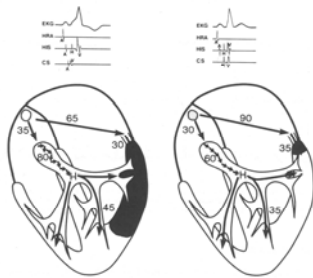
WPW Syndrome



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WPW Syndrome



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Fusion Beat

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VPC or APC



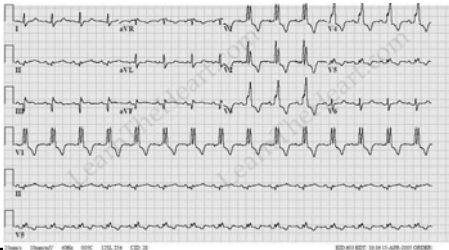
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Compensatory Pause

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Myth and Fallacy #2

- RSR' (or rsR') is characteristic of RBBB.



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VT (RBBB)

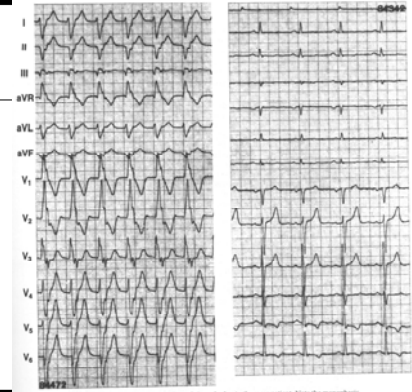
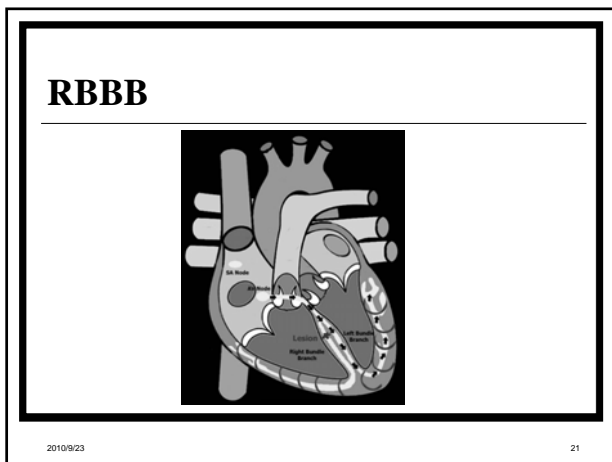
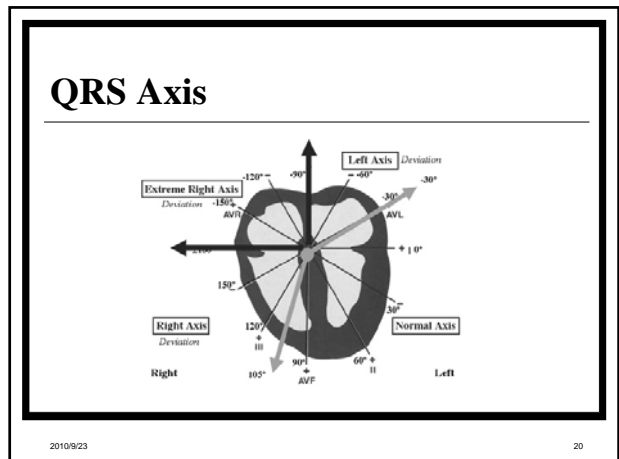
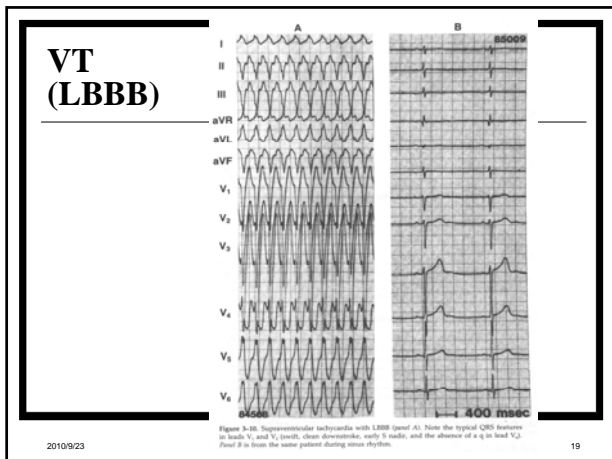


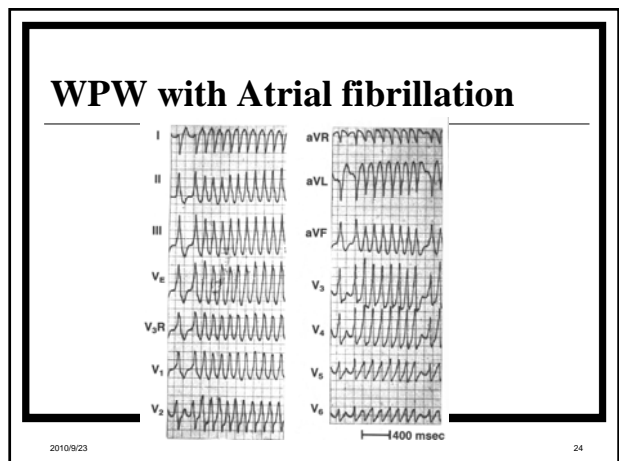
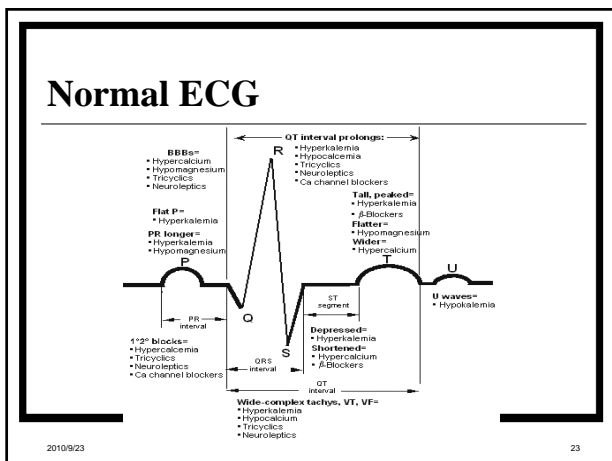
Figure 3-33. Ventricular tachycardia and atrial rhythm in the same patient. Note the monophasic R wave in lead V₁ and the deep S wave in lead V₆, signs of ventricular tachycardia. The northward axis is also a helpful clue.

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- ## Myth and Fallacy #3
- Which one of the following has the lowest conduction velocity?
 - Atrial myocardium
 - AV node
 - His bundle
 - Purkinje fiber
 - Ventricular myocardium
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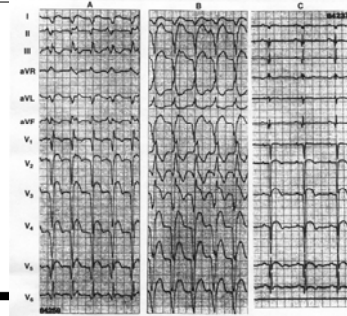
Myth and Fallacy #4

- Which one of the following criteria is the best for diagnosing wide QRS complex rhythm?
 - QRS complexes in all 12 leads should be wide.
 - QRS complexes in at least more than half leads should be wide.
 - QRS complexes in at least one lead should be wide.

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Wide or Narrow? VT or SVT?

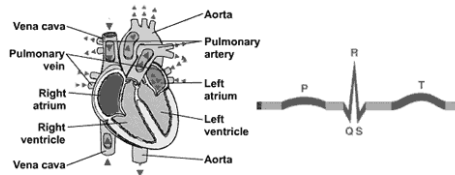


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Myth and Fallacy #5

- The electrical waves resulting from atrial repolarization are buried under QRS complexes.



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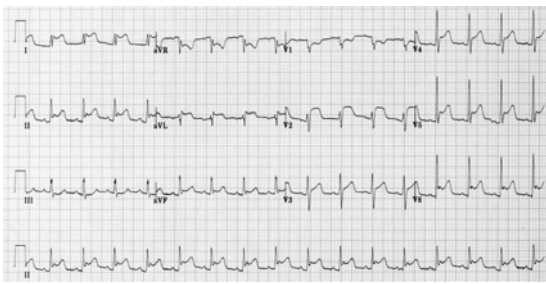
The Truth is ...

- The electrical waves resulting from atrial repolarization are disclosed in PR segment.
- So PR depression or elevation can be reasonably expected.
- TP segment instead of PR segment should be considered as the baseline for identifying ST segment deviation.

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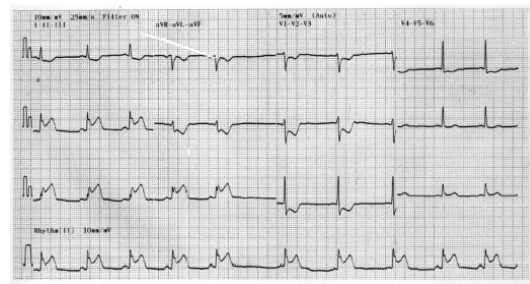
Pericarditis with PR Depression



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RA Myocardial Infarct Inferior MI with PR Elevation



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