



Premature Junctional Contractions (PJCs)

- PJCs are ectopic beats originating in the AV junction and occur earlier than expected.
- PJCs are usually caused by enhanced automaticity of junctional tissue.
- Like PACs, the QRS complex following a PJC is narrow and identical (or nearly identical) to one from a sinus beat.



PJCs: 8 Steps...

- 1. P wave: inverted (Lead II); occurs immediately before or after QRS (or may be buried in the QRS).
- 2. Atrial rhythm: irregular as a result of the PJC; underlying rhythm may be regular.
- 3. Atrial rate: that of the underlying rhythm.
- 4. PR Interval: short (<0.10)

PJCs: 8 Steps...

- 5. Ventricular rhythm: irregular as a result of the PJC; underlying rhythm may be regular.
- 6. Ventricular rate: varies according to the underlying rhythm.
- 7. QRS complex: early, normal size (≤ 0.10 sec), normal shape.
- 8. QT interval: usually within normal limits.













Junctional Rhythm: 8 Steps...

- 1. P wave: inverted (Lead II); occurs immediately before or after QRS (or may be buried in the QRS).
- 2. Atrial rhythm: regular.
- 3. Atrial rate: 40-60 beats/minute.
- 4. PR Interval: short (<0.10)

Junctional Rhythm: 8 Steps...

- 5. Ventricular rhythm: regular.
- 6. Ventricular rate: 40-60 beats/minute.
- QRS complex: early, normal size (<0.10 sec), normal shape.
- 8. QT interval: usually within normal limits.

Significance of Junctional Rhythm

- Due to the slow rate and loss of normal atrial depolarization ("atrial kick"), the patient may experience decreased cardiac output.
- If HR 60-100 beats/minute, it is called <u>Accelerated Junctional</u> rhythm
- If HR > 100 beats/minute, it is called <u>Junctional Tachycardia</u> (usually PJT, as it starts and ends abruptly)



Causes of Junctional Rhythm Medication effects Digoxin Beta blocking agents Calcium channel blocking agents Acute Inferior wall MI Electrolyte imbalances Valvular heart disease Cardiomyopathy Myocarditis

Junctional Rhythm: Interventions Increase heart rate: Atropine Pacemaker Identify and correct the cause. Medication review, D/C offending agent.