Atrial tachycardia

Disclaimer

All the content material provided here is only made for teaching purposes .

Atrial tachycardia is a form of supraventricular tachycardia, originating within the atria but outside of the sinus node. Both atrial flutter and multifocal atrial tachycardia are specific types of atrial tachycardia.

AKA: **Paroxysmal Atrial Tachycardia (PAT), unifocal atrial tachycardia, ectopic atrial tachycardia**

Pathophysiology of Atrial Tachycardia

- Usually due to single ectopic focus.
- The underlying mechanism can involve reentry, triggered activity or increased automaticity.
- May be paroxysmal or sustained.
- Multiple causes including digoxin toxicity, atrial scarring, catecholamine excess, congenital abnormalities; may be idiopathic.
- Sustained atrial tachycardia may rarely be seen and can progress to tachycardia-induced cardiomyopathy

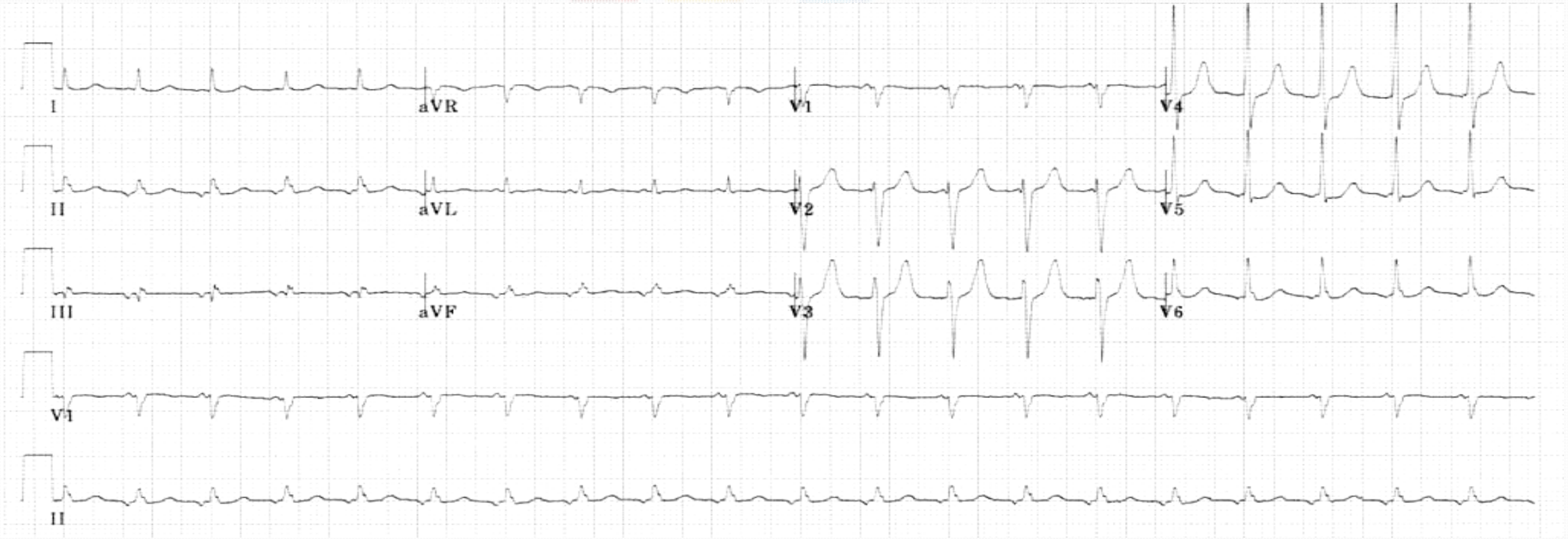
ECG Features of Atrial Tachycardia

- Atrial rate > 100 bpm.
- P wave morphology is abnormal when compared with sinus P wave due to ectopic origin.
- There is usually an abnormal P-wave axis (e.g. inverted in the inferior leads II, III and aVF)
- At least three consecutive identical ectopic p waves.
- QRS complexes usually normal morphology unless pre-existing bundle branch block, accessory pathway, or rate related aberrant conduction.
- Isoelectric baseline (unlike atrial flutter).
- AV block may be present — this is generally a physiological response to the rapid atrial rate, except in the case of digoxin toxicity where there is actually AV node suppression due to the vagotonic effects of digoxin, resulting in a slow ventricular rate ("PAT with block").

Ectopic atrial tachycardia:

•There is a narrow complex tachycardia at 120 bpm.

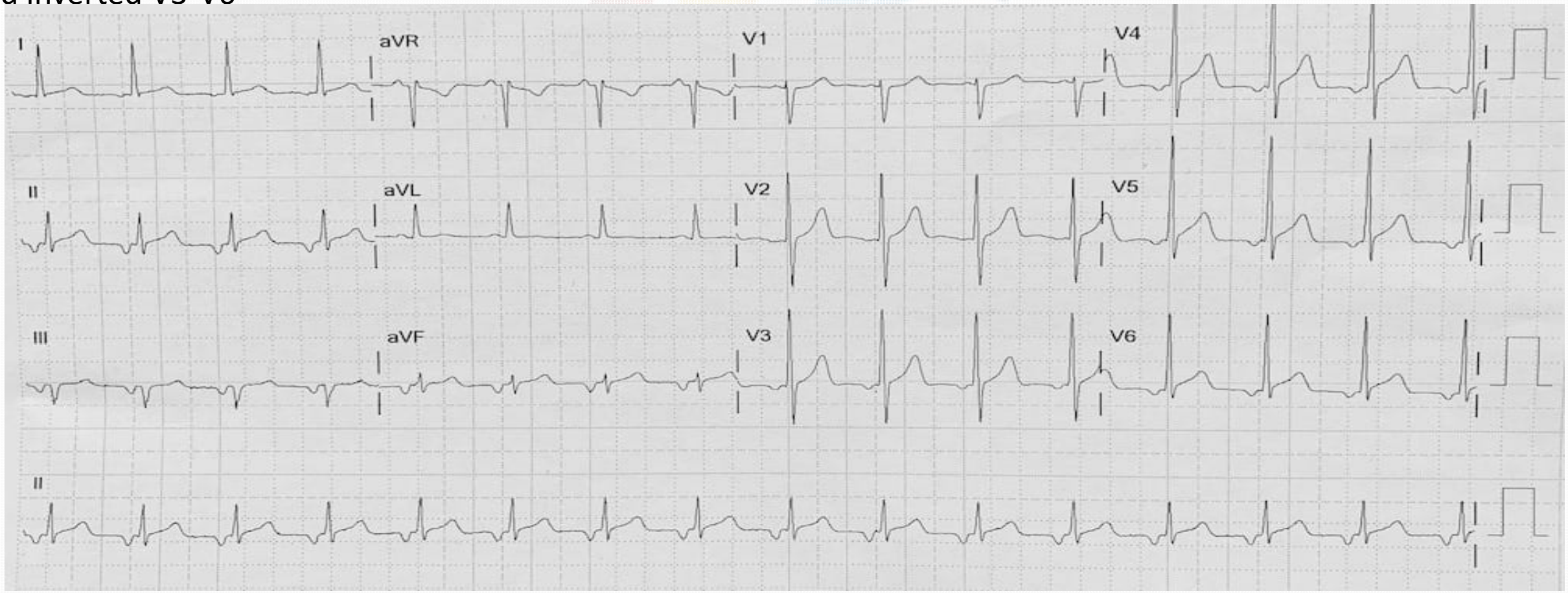
•Each QRS complex is preceded by an abnormal P wave — upright in V1, inverted in the inferior leads II, III and aVF.



Example 2

Ectopic atrial tachycardia:

- There is a narrow complex tachycardia at 95 bpm.
- Each QRS complex is preceded by an abnormal P wave — biphasic in V1; inverted in the inferior leads II, III and aVF; and inverted V3-V6



References

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