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"Pseudo Patterns"

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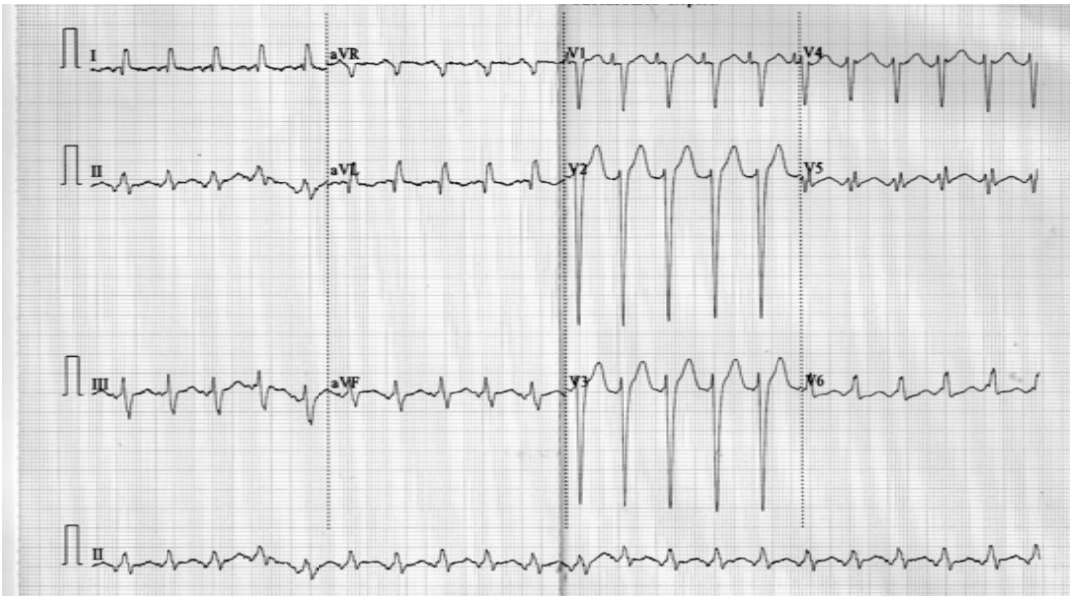

70 yrs old known LVD patient presents with palpitations and hemodynamically stable

1. Describe all ECG changes
2. Why is this clue?
3. What are practical implications?

ECG findings

This patient is not in sinus rhythm because

a. The p wave is inverted in L1
b. P Upright in avR
c. Abnormal P wave in V1

As the P waves are inverted in L1, V5,V6, and inferior leads and predominantly +ve in V1 (although not typical of dome and dart), the patient is ectopic atrial rhythm, i.e., from the left atrium. Because the heart rate is 125/min, the patient has ectopic atrial tachycardia (left atrial tachycardia). In addition, the patient has wide QRS due to LBBB. There are deep S waves in V2-V3. There is also the non-progression of R waves in V1-V4. The axis is leftward. The R waves in V5 V6 are dwarfed. Q waves are seen in LI, AVL, with deepest Q in avL. So, the overall ECG interpretation is

1. Left Atrial Tachycardia
2. LBBB
3. Deep S, non-progression in V2-V4
4. Dwarf R in V5, V6, Q in LI, avL -? Lateral MI

CLUE

The following pseudo patterns are seen:

1. "Pseudo technical dextrocardia" – inverted P waves in LI and AVL are because of Left atrial tachycardia and not because of limb lead reversal
2. "Pseudo RAE" – Tall P in V1 is because of Left atrial tachycardia and not because of RAE
3. "Pseudo LVH"- deep S waves in V2-V4 is because of LBBB and not because of LVH
4. "Pseudo ASMI" – a non-progression of R in V2-V4 is because of LBBB and not because of ASMI

5. "Pseudo Delta wave"- the initial slur-like wave in V6 is due to inverted P preceding the QRS and not because of pre-excitation. It is LBBB as the QRS widening is due to terminal delays in other leads.

That is why the clue of "Pseudo patterns" is given.

Practical Implications

This patient has Left atrial Tachycardia. It is preferable to have sinus rhythm in this patient because of age, associated CAD, and LV Dysfunction. As the patient is hemodynamically stable, IV amiodarone can be tried. Long-term management with carvedilol, ARNI, and aldosterone antagonists are indicated if the patient is eligible. If there are recurrent episodes, EP studies and RF ablation may be attempted.