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"The korean connection" routine ECG

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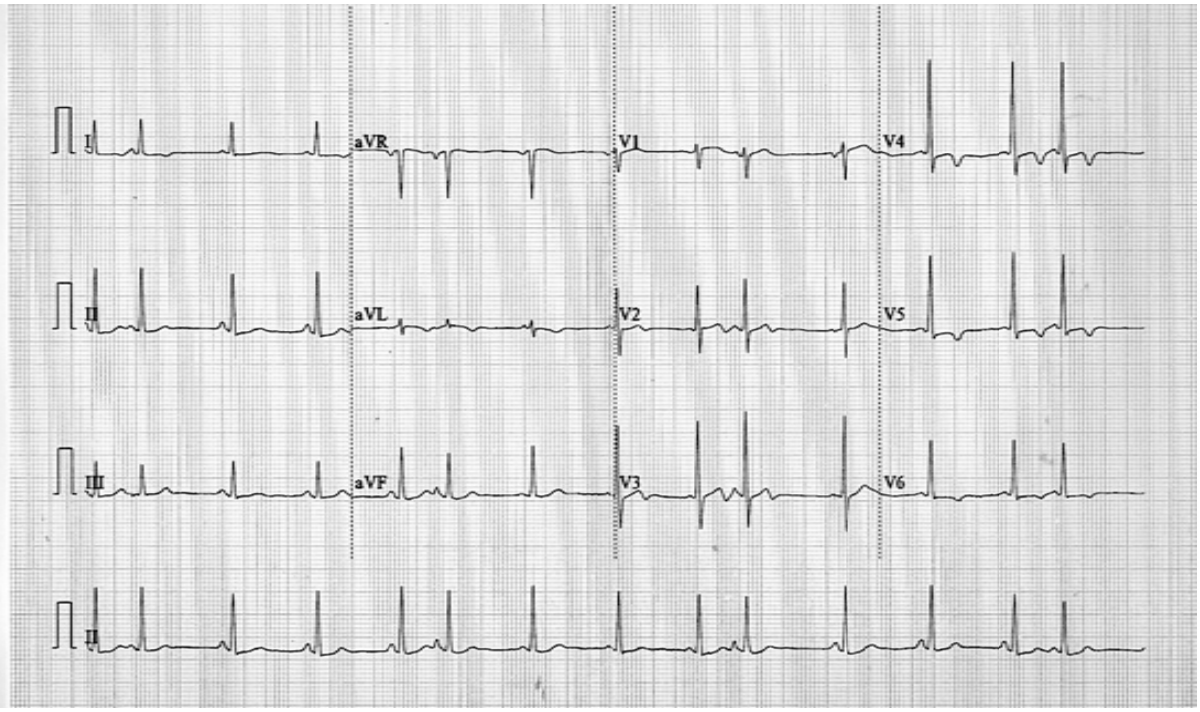

1. Describe all ECG changes
2. Why is this clue?
3. What are practical implications?

ECG Changes:

ECG shows sinus rhythm, normal axis, the lower limit of PR interval with a normal duration of QRS. In addition, there is mild coving ST elevation V2, V3, and T wave inversion V4 to V6. There are frequent atrial premature depolarisations (APDs) with normal conduction to ventricles. The APDs appear as Quadrigeminy. In V1, V2, V3, the P wave following the atrial premature beat is different from the first sinus beat. In L II, this abnormal P wave is persisting continuously for three beats intermittently. So, here there is atrial aberrancy following atrial premature beat (APD), and this is called Chung's Phenomenon. The ST T changes in anteroseptal leads may be fresh or old, depending upon the comparison with old ECGs.

The Clue:

The atrial aberrancy after APD is described by Edward K. Chung, who was born in Seoul, Korea, and subsequently moved over to the USA. The importance of Chung's phenomenon is that it represents atrial myocardial disease. This is why the clue of "The Korean Connection" is given.

Practical Implications:

1. Any fresh angina
2. Comparison with old ECGs
3. Decide about the fresh changes
4. To do Troponin
5. To rule out NSTEMI
6. Because of Chung's phenomenon, occult LV dysfunction should be looked for even though EF is normal (by Tissue Doppler Imaging and Automated Functional Imaging-Strain rate imaging).

7. The coronary angiogram and subsequent revascularisation depend upon the extent of Coronary Artery Disease by angiogram. (Comorbidities, frailty, as well as the mode of revascularization (PCI Vs. CABG).
8. If these ST changes are not new, one should look for septal dyskinesia as the cause of persisting ST elevation.
9. Frequent APDs may be a pre-runner of Atrial Fibrillation in the future, and such upstream therapies like adequate control of BP with ACE Inhibitors or ARBs, Beta-blockers along with statins should be tried.
10. A Holter may be necessary to diagnose silent paroxysmal Atrial Fibrillation, which may warrant oral anticoagulation to prevent strokes if there are no contraindications.