

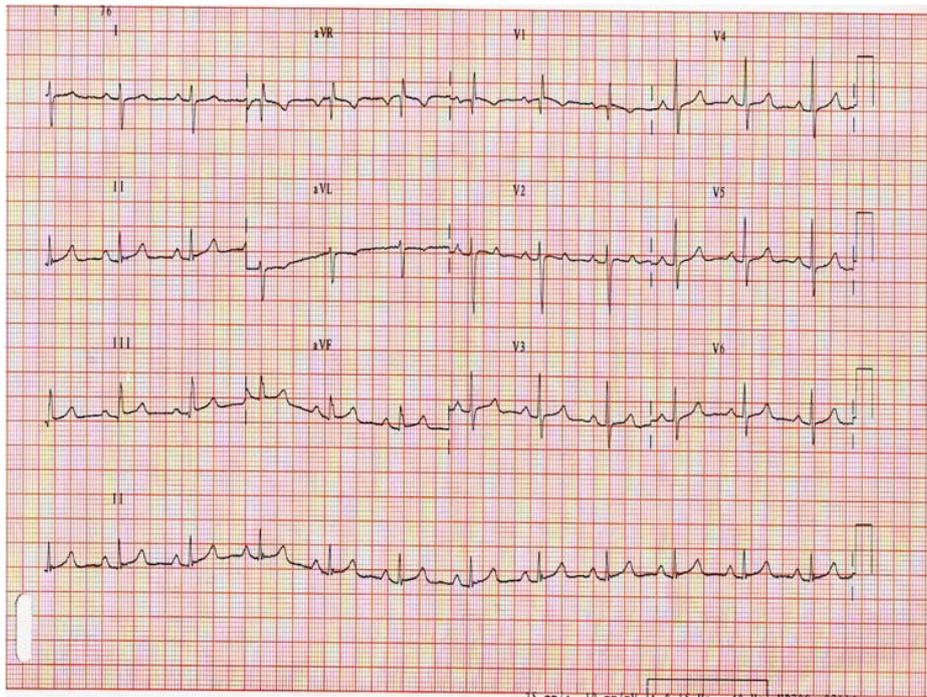
Student's Corner

Become a Sherlock Homes in ECG

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Series 1 :

ECG



“Thick, Thin, Thick”

(A Thin Fellow Between 2 Thick Fellows)

This is the ECG of 48-year-old male has heart disease since childhood.

1. What are the ECG signs?
2. Why is this clue?
3. What is practical implication?

ECG SIGNS :

The ECG shows sign of RVH and Right Axis Deviation (RAD). Since the patient has history of heart disease since childhood it is likely to be Adult Congenital heart disease like ASD, PS or Tetralogy of Fallot (TOF).

THE CLUE :

There is an important clue in this ECG, which indicates the diagnosis of TOF. The R wave in V1 is tall, and it suddenly drops in voltage in V2 and once again it picks up in lead V3. This is because in TOF, the RVH is peculiar. The right free wall hypertrophied, whereas the trabecular portion is thinned out. There is IVS hypertrophy. This is reflected in ECG as follows:

1. Tall R in V1 – RV free wall hypertrophy
2. Small R in V2 – Trabecular thinning
3. Tall R in V3 – IVS hypertrophy

Because of this, clue of thick (V1), Thin (V2), Thick (V3) is given.

THE PRACTICAL IMPLICATION :

The commonest cyanotic heart disease in adults is TOF. The peculiar ECG changes in an adult with central cyanosis makes the possibility of TOF as the diagnosis even without Echo.

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