

Question 11 (18 marks) 6 minutes

A 17 year old male presents after an episode of syncope while out running. He is currently asymptomatic.

On examination you hear a systolic murmur. His observations are as follows:

HR	60	/min
BP	130/80	mmHg
Temp	36.8	°C
GCS	15	

- i. Complete the following stating what happens to the systolic murmurs in the table with the described manoeuvres. (12 marks)

Manoeuvre	Lesion			
	Hypertrophic cardiomyopathy (3 marks)	Mitral valve prolapse (3 marks)	Aortic stenosis (3 marks)	Mitral regurgitation (3 marks)
Valsalva	Increased	Earlier click, increased	Decreased	No change
Squatting	Decreased	Later click, decreased	Increased	No change
Hand grip	Decreased	Earlier click, increased	No change or decreased	Increased

- ii. You suspect Hypertrophic cardiomyopathy. List three (3) features that may be present on the ECG of a patient with Hypertrophic cardiomyopathy. (3 marks)

1 **LVH**

2 **Left atrial hypertrophy (P mitrale)**

3 **Deep narrow Q waves in lateral and inferior leads**

4 **Conduction defects e.g. WPW**

5 **Arrhythmias e.g. AF, SVT, VT**

6 **Giant precordial T wave inversion in apical HOCM**

I accepted any 3 from this list.

The books / websites (“Life in the Fastlane”) do not mention left axis deviation. Some candidates listed this. This is not correct

ST and T wave changes are part of the LVH changes so I did not pay them if you also wrote LVH, unless you listed number 6 above

Question 11 continued

iii. In a patient with confirmed Hypertrophic Cardiomyopathy, list three (3) specific treatments that may prevent sudden death? (3 marks)

1 Beta blockers (or nondihydropyridine Calcium channel blockers e.g. Verapamil)

2 ICD insertion

3 Ventricular pacing

4 Alcohol septal ablation

5 Surgical myectomy

6 Cardiac transplantation

Please note that this question asks for a list of treatments. Some candidates listed not exercising. This is NOT a treatment. It is a preventive measure.

Again I accepted any 3 of the 6 items listed above.