Question 78
A 64-year-old man presents to hospital seven hours after onset of severe chest pain. His ECG shows 4-5 mm ST elevation in leads II, III and aVF, and complete heart block with a ventricular rate of 50/minute. His blood pressure is 115/60 mmHg which falls transiently to 90/50 mmHg with the administration of streptokinase, before returning to 120/55 mmHg.

Four hours later, he is reviewed in the coronary care unit. His heart rate is 50/minute and his blood pressure is 85/60 mmHg. His jugular venous pressure is 4 cm with cannon waves. A third sound is audible but there are no murmurs. Breath sounds are normal. The patient complains of mild chest pain which is relieved by sitting up. The ECG remains unchanged. Urine output has declined to 5 mL/h for the last two hours.

What is the most appropriate next step in management?

A. Insert a temporary pacing wire to increase the heart rate to about 80/minute.
B. Increase intravenous fluid administration.
C. Organise immediate rescue percutaneous transluminal coronary angioplasty
D. Commence an intravenous dobutamine infusion.
E. Insert a Swan-Ganz catheter for haemodynamic monitoring.

Answer: B

- The pattern of ECG changes indicate an inferior MI
- Inferior AMIs required fluid resuscitation to increase preload
- He is now hypotensive, has poor UO (reflecting poor CO), and his JVP is elevated (with cannon waves) but heart sounds are dual.
- The only thing the myocardium will respond to is increasing the IV fluid to stretch the myocardium and drive CO.
- There are two settings in which more volume support is required: RV infarct (need high filling Pa to maximize filling of LV) and the venodilatation and hypotension with inferior MI.