

**(Refer to page 327)****Answer: (ii) Pericarditis**

This ECG shows widespread prominent ST segment elevation in Leads I, II, aVL, V5 and V6. In addition, there are striking changes in the PR segment (**Panels**). In Lead II the PR segment is depressed – below the base line (short thick arrow) and in the aVR lead, the PR segment is above the baseline (short thick arrow). This combination of widespread ST elevation with PR depression is characteristic of pericarditis.

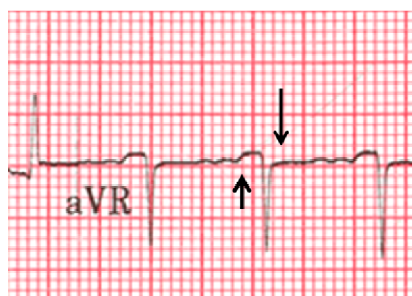
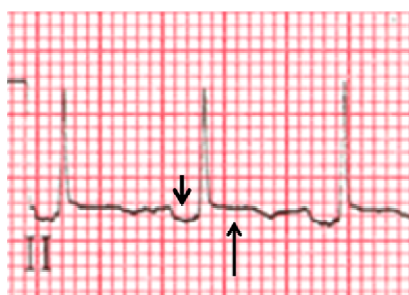
In pericarditis, there are ECG patterns for atrial and ventricular injuries. The atrial injury is directed towards the aVR lead, and so the PR segment is elevated in this lead. The ventricular injury pattern is directed infero-laterally towards leads L II, V5 and V6 and so the ST segment is elevated. This results in discordance of atrial and ventricular injury patterns and is called as PR–ST discordance. Hence in aVR, while the PR is elevated (upward short thick arrow) the ST segment is depressed (downward narrow arrow).

The opposite happens in Lead II: namely the PR is depressed and the ST segment is elevated.

In the ECG shown, there is PR segment elevation in aVR with PR segment depression in Lead II in the presence of widespread ST segment elevation gives the clue that this is due to pericarditis. This patient was found to have a pericardial rub on auscultation along with pneumonia of the left lower lobe with small pleural effusion.

These PR segment changes are transient and is very specific for pericarditis.

In this case, the patient was diagnosed to have acute pericarditis along with pneumonia affecting the left lower lobe. The pneumonia was the likeliest cause of the pericarditis. She was treated with Ibuprofen for the pericardial pain. In addition she was treated with intravenous antibiotics for seven days. Her chest pain subsided in less than two days.

**REFERENCES**

- 1: Lange RA, Hills David L. Acute Pericarditis. *N Engl J Med* 2004; 351:2195-202.
- 2: Spodick DH, Diagnostic electrocardiographic sequences in acute pericarditis. Significance of PR segment and PR vector changes. *Circulation* 1973; 48:575-80.