Evaluation of intermittent capture in a patient who has undergone an urgent temporary transvenous pacemaker lead insertion

O Erdogan, A Altun

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A 64 year old woman with a history of hypertension was admitted to our clinic because of recent onset dyspnoea and dizziness. A 12 lead surface electrocardiogram (ECG) showed complete atrioventricular block with an escape rate of 35 beats/min. A transvenous temporary pacemaker lead was immediately inserted through the right femoral vein. Capture threshold was within the acceptable range. During post-procedure observation in the coronary care unit it was realised that the temporary pacemaker was intermittently capturing. A 12 lead ECG was obtained and is shown in fig 1; the fluoroscopic view is shown in fig 2.

QUESTIONS

(1) Describe the ECG (fig 1).

Figure 1  Post-procedure paced ECG.

(2) What do you see in the fluoroscopic view (fig 2)?

Figure 2  Post-procedure right anterior oblique (RAO) and left anterior oblique (LAO) fluoroscopic views.
A 16 year old white girl was referred to a children’s spine clinic because of concerns about a mild scoliosis. On questioning, however, her main concern was a one year history of left sided mid-lumbar back pain. She would be woken up at night by her pain. The patient denied any history of trauma and had no history of systemic symptoms or any relevant past medical history. Her symptoms were such that she took regular ibuprofen tablets, which gave her symptomatic relief.

Physical examination revealed a mild right convex thoracolumbar scoliosis. Forward flexion of spine was painful. There was no distal neurological deficit. Systemic examination did not reveal any other abnormalities.

The results of the following blood tests were normal: full blood count, erythrocyte sedimentation rate, C-reactive protein, bone biochemistry profile, and rheumatoid profile.

A plain radiograph (fig 1), static bone scan (fig 2), and a computed tomogram (fig 3) show a skeletal abnormality, confirming the primary differential diagnosis.

QUESTIONS

(1) What abnormalities are seen on the radiological investigations?

(2) What is the likely diagnosis and how does it usually present?

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