

Mr B is an 80 year old with a background history of hypertension and type 2 diabetes. His medical therapy includes lisinopril and metformin. He has been admitted to hospital following an episode of transient loss of consciousness. This occurred while he was standing preparing his evening meal and was without any preceding symptoms. He noted the room was somewhat warm, though the environment was typical for him. He regained consciousness within 1 minute. While he was unconscious his relative called an ambulance and he had fully recovered by the time they arrived.

On examination his heart rate is 75 bpm, BP 150/90. He is euvolaemic and has no murmur. There are no focal neurological abnormalities. His ECG (Figure 1) and chest X-ray (Figure 2) are below. His capillary glucose was 6.5 mmol/L. His basic blood tests including electrolytes were within normal limits.



Figure 1: 12 lead ECG on admission to hospital.

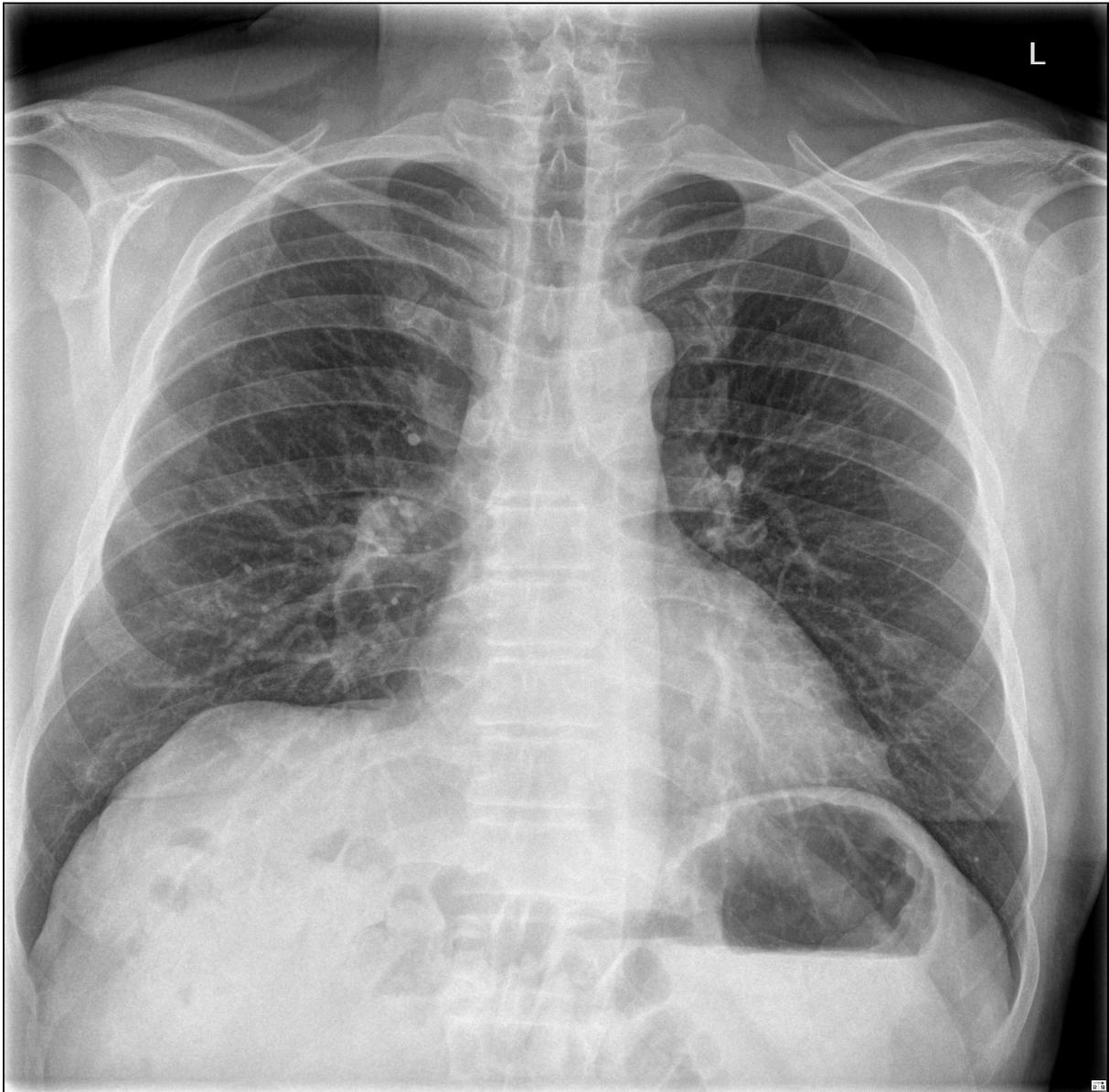


Figure 2: Chest x-ray on admission to hospital.

Mr B was admitted to the hospital for a period of assessment and observation. During this time, he remained clinically well. His heart rate and blood pressure remain satisfactory. His heart rhythm is monitored continuously, and no arrhythmias are documented. A trans-thoracic echocardiogram is performed, which shows him to have a structurally normal heart.

Your opinion has been sought regarding his further evaluation and management.

Comment

The clinical scenario of Mr B's transient loss of consciousness is consistent with a diagnosis of syncope, defined as a transient loss of consciousness with loss of postural tone. Based on the history, a transient arrhythmia is the most likely differential diagnosis and with the LBBB on 12-lead ECG and normal ventricular function bradyarrhythmia is more likely than tachyarrhythmia.

The European Society of Cardiology updated their guidelines on cardiac pacing in 2021 (1) and introduced a decision algorithm for patients with unexplained syncope who have bundle branch block (Figure 3). This includes a recommendation for cardiac device implant for those with syncope who have BBB who are elderly/frail and at risk of injury should they experience future syncope. Those with severe impairment of left ventricular function should be considered for ICD or CRTd in line with previous guidelines. For other patients' further evaluation is recommended, including an electrophysiology study and where a diagnosis remains elusive an implantable loop recorder.

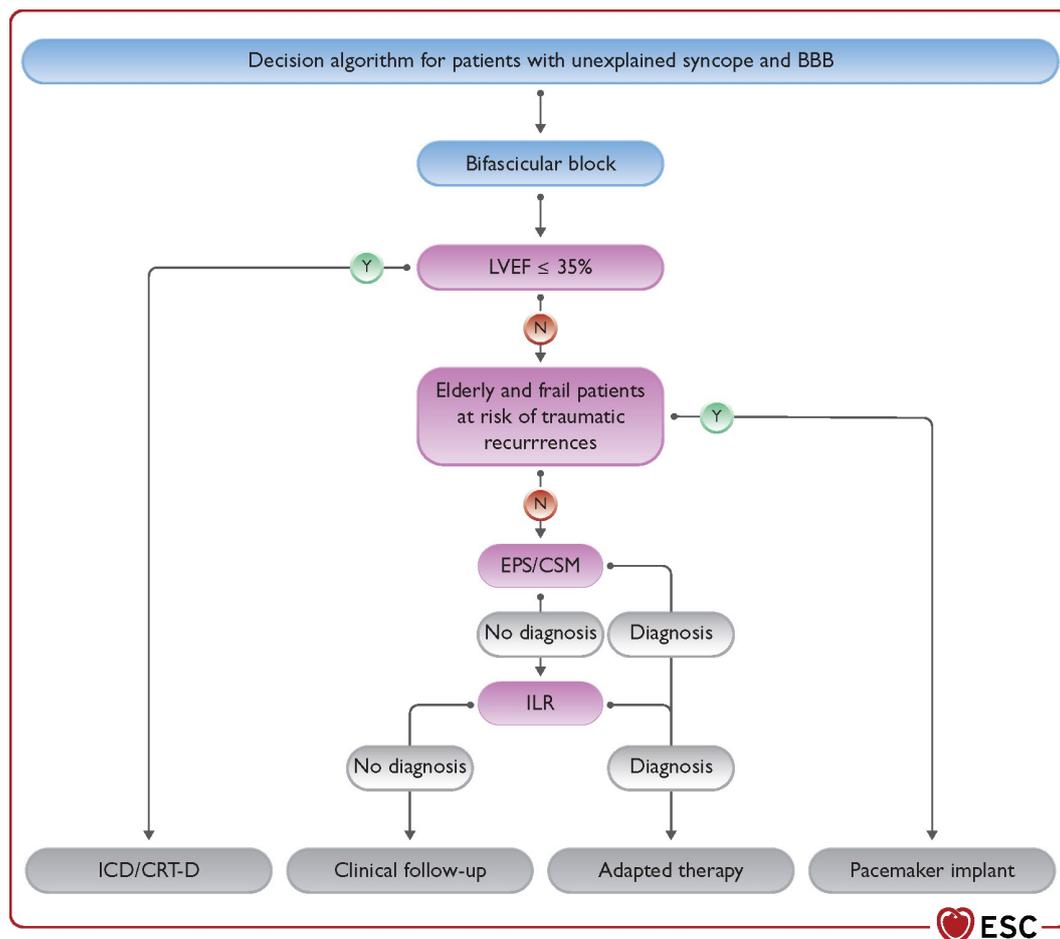


Figure 3: Decision algorithm for patients with unexplained syncope and bundle branch block.

In line with these guidelines, and given that bradyarrhythmia was clinically the most likely aetiology for Mr B's syncope he was offered pacemaker implantation.

References

1. Glikson M et al. 2021 ESC Guidelines on cardiac pacing and cardiac resynchronization therapy: Developed by the Task Force on cardiac pacing and cardiac resynchronization therapy of the European Society of Cardiology (ESC) With the special contribution of the European Heart Rhythm Association (EHRA). *European Heart Journal*, Volume 42, Issue 35, 14 September 2021, Pages 3427–3520. <https://doi.org/10.1093/eurheartj/ehab364>