

### JCHS-IQ-02-2022

## High Risk of Sudden Cardiac Death Managed by Cardiac Implantable Electronic Device

Huzairi Sani<sup>1,2,3</sup>, Ahmad Bakhtiar<sup>1,2</sup>, Muhammad Hanis<sup>1,2</sup>, Khairul Shafiq<sup>1,2</sup>

1 Cardiology Unit, Department of Internal Medicine, Faculty of Medicine, Universiti Teknologi MARA (UiTM), Sungai Buloh, Selangor, Malaysia  
2 Cardiac Vascular and Lung Research Institute (CaVaLRI), Pusat Perubatan Universiti Teknologi MARA (UiTM), Sungai Buloh, Selangor, Malaysia  
3 Integrative Pharmacogenomics Institute (iPROMISE), UiTM Puncak Alam Campus, Puncak Alam, Selangor, Malaysia

### Case Presentation

A 28-year-old lady with background medical history of type 2 diabetes mellitus since 2019 (HbA1c: 6.6%) presented with recurrent episodes of syncope associated with palpitations. Her father had passed away at 36 years of age as a result of sudden death and the brother had similar heart condition. She had no symptoms of heart failure. Clinically well and euthyroid with blood pressure of 132/76 mmHg, pulse rate 82 beats per minute and oxygen saturation of 98%. Cardiovascular and neurological examination were unremarkable. Serum electrolytes were within the normal range. Transthoracic echocardiogram revealed Left Ventricular Ejection Fraction of 60% and maximum left ventricle wall thickness of 22mm. Coronary angiogram revealed 30% disease at mid left anterior descending artery, mild disease at both left circumflex and right coronary artery.

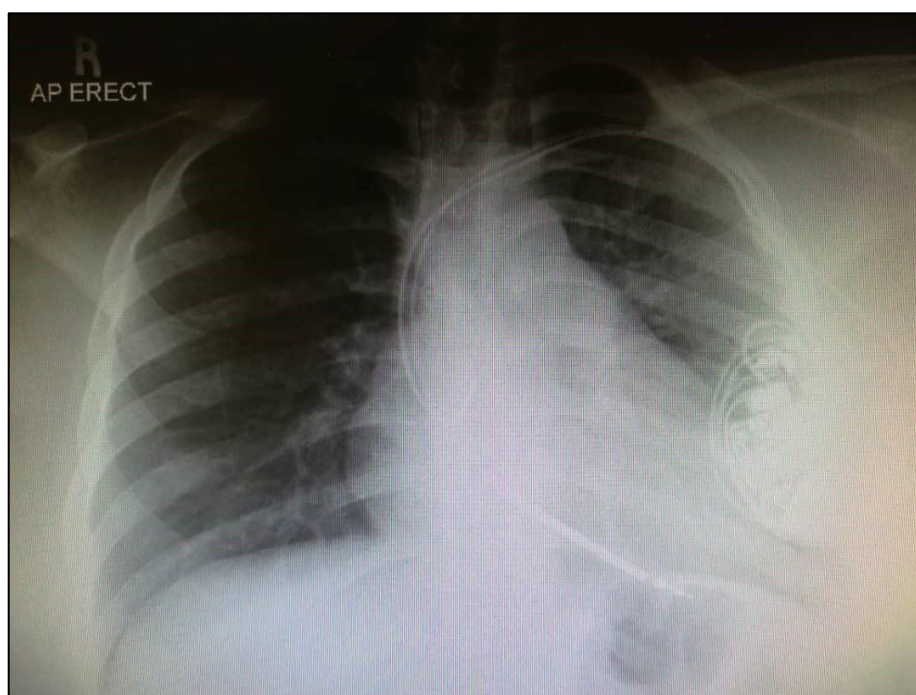


Figure 1 Cardiac device seen on chest X-ray

**Question:**

What is seen on this chest X-ray?

- A. Biventricular pacemaker
- B. Cardiac resynchronization therapy defibrillator (CRT-D)
- C. Dual chamber implantable cardioverter-defibrillator (ICD)
- D. Permanent pacemaker
- E. Temporary intravenous pacemaker