

CASE SUMMARY

A 48-year-old patient presented with H/O worsening breathlessness and orthopnoea with cough and whitish sputum for two weeks without chest pain or syncope or fever

Background history: ischemic heart disease, recurrent VT, LVSD, percutaneously placed CRT-D 2 months earlier, and CKD₃. They had improved with CRT-D therapy; diuretics were being down-titrated

A - patent and own

B - laboured breathing, RR 36/min, SPO₂ 94% on 10L O₂, bilateral crackles and systolic murmur on auscultation

C – warm center and cool peripheries, CRT 3sec, BP 104/68 mm Hg, HR 101/min

D - GCS E₄ V₅ M₆, BL pupils 3mm and reactive

E – temperature 36.6C, peripheral oedema

Point of care testing:

ECG showed paced rhythm, unchanged from last admission

Blood gas revealed T₁RF

Chest XR refer to Figure 1

Working Diagnosis: Decompensated heart failure ?CAP R/O COVID19/influenza

Plan:

Maintain SPO₂ > 94%

Send swabs for respiratory infection, FBC, U&E, CRP, blood cultures, troponin

Sepsis bundles

IV diuretic

Diagnostic investigation reports:

COVID-19 & respiratory viruses' swab – negative

No inflammatory makers

Normal range electrolytes

Unchanged U&E

Troponin negative

Soon after, respiratory failure worsened, however, examination remained unchanged. Consequent D-dimer was raised and CTPA was performed that revealed retracted lead of the CRTD (refer to the report above). Subsequent ECGs showed VT, lacked pacing spikes, and it was cardioverted chemically, following which the patient was admitted for LV lead re-implantation in acute coronary unit.

Figure 1: Chest X ray report: florid pulmonary oedema bilaterally and small bilateral pleural effusions. Appearances are most likely to represent heart failure/fluid overload. Concurrent infective changes is challenging to exclude

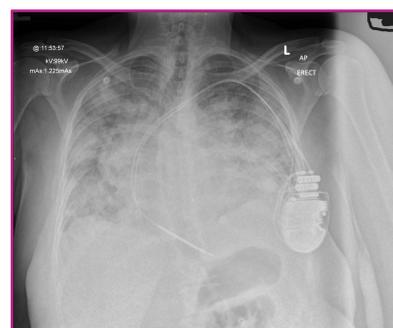


Figure 1

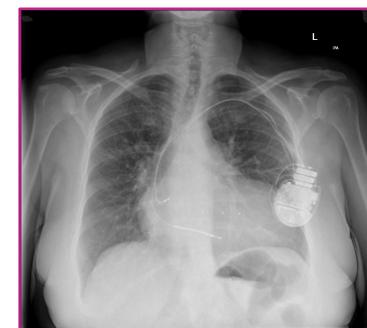


Figure 2

CTPA report: No pulmonary embolism. Features of heart failure as seen on recent radiograph. The left ventricle lead of the CRTD has retracted in comparison to post insertion radiograph (**Figure 2**) and is overlying left atrium rather than left ventricle likely to be contributing to the presentation of heart failure. Suggest cardiology review and pacing check.

KEY LEARNING POINTS

- In patients with severe refractory heart failure and intraventricular conduction disease, CRT (cardiac resynchronisation therapy) is an effective treatment
- If patients present with decompensated heart failure after an initial improvement from CRT, then failed LV sensing or pacing, as a result of a shift in the lead tip, should be considered
- LV lead dislodgement as the main cause of loss of LV stimulation reportedly ranges in 2% to 12% of patients



REFERENCE

<https://www.rcemlearning.co.uk/reference/cardiac-implantable-devices/#156836337399-8d47d14b-e801>



Poster QR Code