Delayed onset Post-cardiac Injury Syndrome presenting as bilateral pleural effusion following defibrillator insertion

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Under the supervision of Pr Moussa Riachy

- Dressler's Syndrome or Post-cardiac Injury Syndrome (PCIS) is a well-defined entity characterised by a secondary pleuro-pericarditis in a setting of myocardial or pericardial insult.

- Dressler's syndrome was originally described after acute myocardial infarction and its incidence seems to be declining, owing to modern reperfusion modalities.

- However, other causes for this syndrome are emerging.

Different causes for PCIS have been identified.

1- Post pericardiotomy +++

2- Post infarction syndrome +++

3- Post-traumatic pericarditis +

4- Iatrogenic causes including intracardiac interventions and pacemaker lead insertion ???

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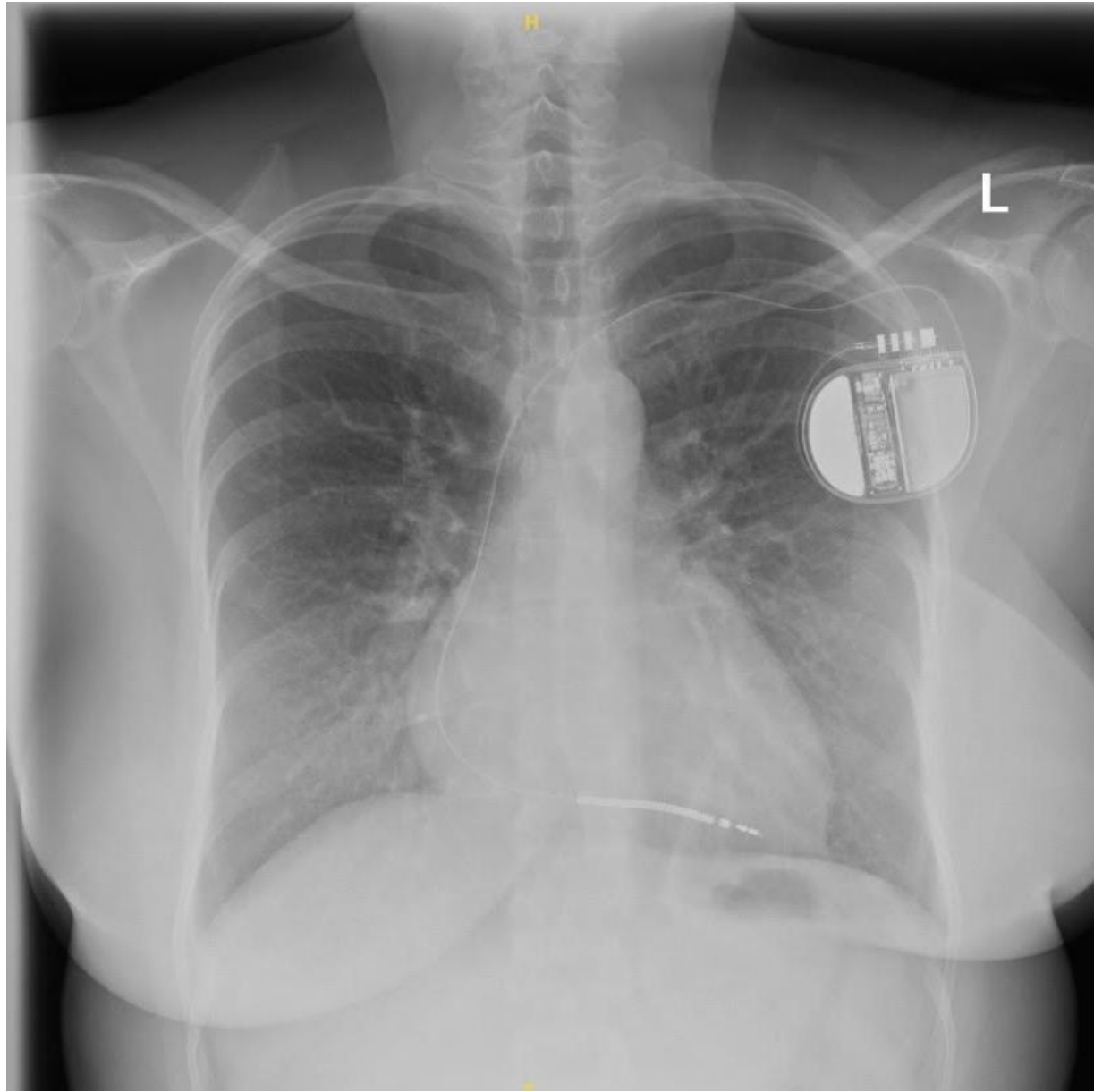
Case Presentation

Case Presentation

- A 45-year-old middle eastern female

- Dyslipidemia

- History of smoking (1 pack per day for 20 years)

- Congenital hypertrophic cardiomyopathy

- Familial history of sudden cardiac death at an early age

Case Presentation

- Single chamber ICD implanted due to her high-risk cardiomyopathy in March 2022
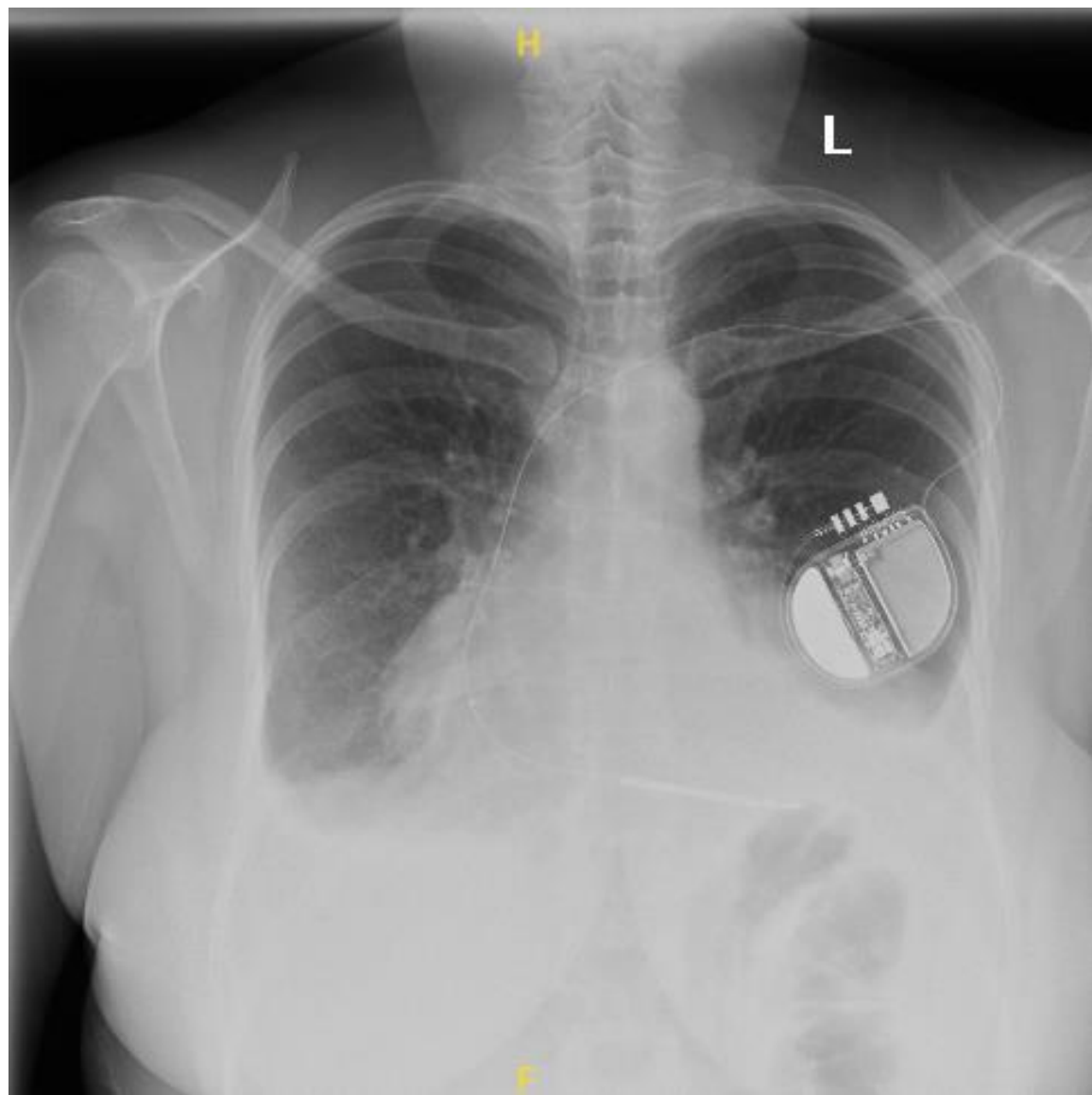
- Follow up

- Chest X-RAY

Case Presentation

- ED - December 2022 for chest pain - dyspnea NYHA III

- Subacute presentation

- Antibiotic course (Levofloxacin)

- She then presented to our hospital for evaluation.

Physical exam

- Afebrile but tachycardic and tachypneic.

- No fever, chills, cough, or sputum production.

- Cardiac ultrasound

Laboratory workup

- WBC 11.8 x 10^9 /L

- Hg of 10.9 g/dl

- ESR of 31

- CRP 65 → 230

- LDH 69

- Protein 192

Laboratory workup

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→ **Pleural tap**

	Left Side
pH	7.64
LDH (U/L)	290
Protein (g/L)	44
Glucose (mmol/L)	5
GR	1 400 000
GB	2400
PNN	48%
Lymph	15%
Mononuclear	20%
Macrophage	17%

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LDH (U/L)	290
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Macrophage	17%

→ **Ratio 1.5**

→ **Ratio 0.63**

Exudate

Day 2

- Clinical worsening
- Dyspnea
- Oxygen supplementation

Day 2
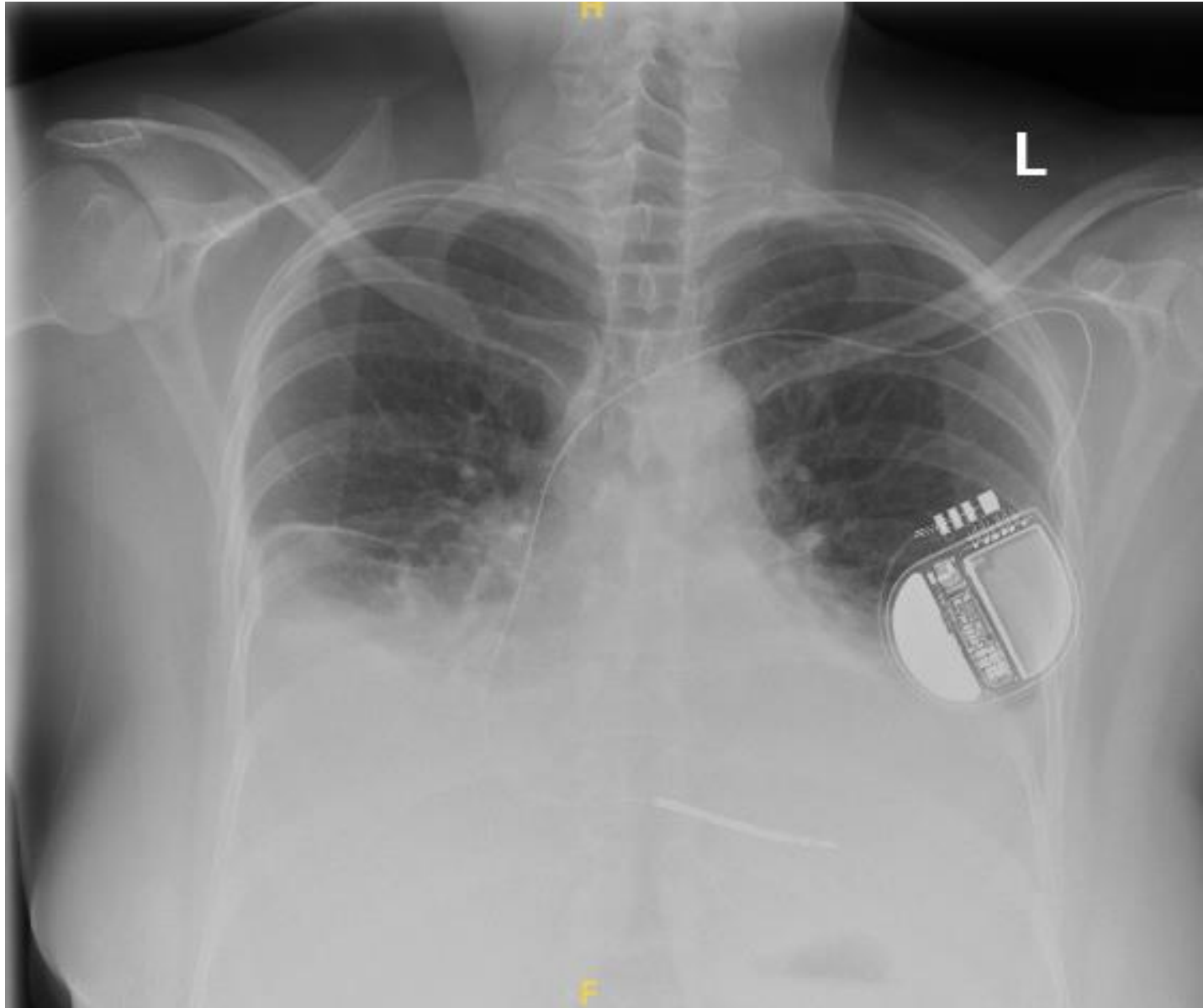
	Left Side	Right Side
pH	7.64	7.67
LDH (U/L)	290	228
Protein (g/L)	44	42
Glucose (mmol/L)	5	6
GR	1 400 000	2000
GB	2400	5000
PNN	48%	46%
Lymphocyte	15%	13%
Mononuclear	20%	10%
Macrophage	17%	31%

Laboratory workup

- Pleural fluid microbiology, including bacterial, fungal, and acid-fast bacilli cultures: Negative.

- Auto-immune panel : Negative

- PPD: Negative

- Pathology : Hematic and inflammatory liquid with immunohistochemistry positive for calretinin and negative for BerEP4 confirming the mesothelial origin of the cells.

- No malignant cells were observed.

- **Delayed onset Post-cardiac Injury Syndrome**

- She was treated with NSAIDs (Naproxen) and discharged on colchicine.

- Gradual improvement.

- On follow up patient was asymptomatic with full disappearance of any pleural fluid.

Delayed onset Post-cardiac Injury Syndrome
presenting as bilateral pleural effusion following defibrillator insertion

- Four published cases of post pacemaker PCIS.

Pacemaker-Associated Post-cardiac Injury Syndrome Presenting with Tamponade and Recurrent Pleural Effusion

Young Ju Lee[1], Mahmood Mubasher[1] ⓘD, Abir Zainal[1], Tausif Syed[1] ⓘD, Mouhand F.H. Mohamed[2] ⓘD, Matthew Ferrantino[1] and Ryan Hoefen[1]

[1]Unity Hospital, Rochester Regional Health, Rochester, New York, USA. [2]Internal Medicine Department, Hamad Medical Corporation, Doha, Qatar.

CASE REPORT

The return of a disappearing entity: Dressler's syndrome after transvenous pacemaker implantation

António Tralhão, Diogo Cavaco, Marisa Trabulo, António M Ferreira

Post-cardiac injury syndrome: an atypical case following percutaneous coronary intervention

Silvia Paiardi [a],[1], Francesco Cannata [b],[*],[1], Michele Ciccarelli [c], Antonio Voza [d]

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[d] Emergency Department, Humanitas Research Hospital, Via Manzoni 56, 20089 Rozzano, Italy

Large Unilateral Pleural Effusion with Pacemaker-associated Post-cardiac Injury Syndrome

Sundeep Kumar [1] , Abed Madanieh [1] , Hiren Patel [1] , Ruthvik Srinivasa Murthy [1] , Jose M. Goyos [2] , Mark R. Milunski [3]

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- Four published cases of post pacemaker PCIS.

- One case of exclusive pleural involvement.

- One case of delayed presentation.

- The first ever reported case of post pacemaker PCIS presenting as a strict pulmonary presentation with bilateral involvement and delayed onset.

Why this case ?

Similarities vs Differences

Why this case ?

Similarities vs Differences

1- Delayed onset

2- Strict pleural presentation

3- Bilateral pleural involvement

1- This case challenges the current understanding of PCIS and highlights the need to consider it as a possible etiology for pleural effusion.

2- It also supports an autoimmune etiology for PCIS and calls for further investigation into its pathophysiology.

THANK YOU