Poster

Between the Heart and the Lung: Pyopneumothorax Presenting as Acute Coronary Syndrome

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Chest pain is one of the most frequent complaints in emergency services and can be potentially life-threatening. Rapid evaluation and treatment are crucial to reduce the risk of death and complications, making a systematic approach essential for high diagnostic accuracy. We report the case of a 70-year-old Black female with class II obesity, admitted to the emergency department with sudden-onset burning precordial pain radiating to the left neck, shoulder, and back, exacerbated by exertion and relieved by rest, preceded by nausea, vomiting, diaphoresis, and dry cough. Initial electrocardiogram showed sinus rhythm, heart rate 100 bpm, normal axis, and 0.5 mm ST-segment elevation in leads DI and aVL. Troponin was negative (0.035 ng/dL), and D-dimer was elevated (1.59 ng/dL). Based on the clinical presentation and ECG changes, the initial diagnosis was acute coronary syndrome (ACS), and dual antiplatelet therapy, therapeutic-dose low molecular weight heparin, and analgesia were initiated. Lack of clinical improvement, combined with worsening respiratory insufficiency requiring oxygen therapy, prompted further investigation. Chest radiography revealed homogeneous opacity throughout the left lung field, suggestive of pleural effusion. Computed tomography demonstrated a tension hydropneumothorax with contralateral mediastinal shift and a soft tissue density extending from the hilum to the apex, compatible with a fibrotic area enclosed by air. A minimally invasive lower-left pleurotomy was performed, draining 600 mL of purulent fluid and air, with samples collected for culture. The patient remained hospitalized under pulmonology care, diagnosed with pyopneumothorax of probable polymicrobial origin, and was discharged after 30 days with clinical improvement. This case emphasizes the importance of a systematic and comprehensive approach to chest pain in the emergency setting. Despite a clinical and electrocardiographic presentation suggestive of ACS, lack of therapeutic response and unfavorable clinical evolution prompted further investigation, revealing a tension pyopneumothorax. The report underscores that differential diagnoses must always be considered, even in seemingly typical presentations, as early recognition of atypical cases can be critical to patient prognosis.

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