Tension gastrothorax mimicking acute coronary syndrome and causing cardiac arrest

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A 75-year-old man complaining of chest pain, nausea, and dyspnoea was admitted to our Coronary Care Unit under the diagnosis of acute coronary syndrome. His medical history included hypertension, atrial fibrillation, and a hiatal hernia. The patient was tachypneic and tachycardic. Electrocardiogram registered atrial fibrillation with ST-segment depression (Panel A) and troponin I was slightly elevated. The chest X-ray showed cardiomegaly (Panel B). He suffered a rapid progression of the respiratory failure followed by cardiopulmonary arrest, recovering after advanced resuscitation but with persistent hypotension. The transthoracic echocardiogram evidenced a non-dilated left ventricle, with normal contractility, absence of pericardial fluid and normal right cavities.

A chest CT scan was performed (Panels C and D), showing the totality of the stomach herniated through the diaphragm into the thoracic cavity causing cardiac displacement to the anterior thoracic wall and compression of the left lobar bronchus (Panels C and D, white arrow). A nasogastric tube was inserted (Panels C and D, dotted arrow), but no drainage was obtained. The patient underwent surgery to solve the volvulus and an oesophagogastropexy was performed, recovering completely afterwards.

Tension gastrothorax is an extremely rare vital emergency causing compression of mediastinal structures similar to tension pneumothorax, so decompressive treatment should be urgently established. The low incidence and, in our case, the lack of a clear air–fluid interface, can delay the diagnosis of this potentially fatal disease.

RV, right ventricle; RA, right atrium; LV, left ventricle; LA, left atrium; Ao, aorta; PA, pulmonary artery; Sto, stomach.

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