

Clinical vignette

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An unusual case of punctiform chest pain

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Case presentation

Punctiform thoracic pain modified by respiration and digital compression is normally atypical pain due to angina and generally requires no further diagnostic investigation. In this article, we present the case of a young patient of 44, a non-EU citizen, with no available cardiological history and who came to the emergency department complaining of pain in the thorax, with atypical characteristics. No other medical details were available on account of the difficulty the patient had in communicating with medical staff for linguistic reasons. The electrocardiogram showed regular sinus rhythm at a normal rate, a right branch block, and repolarization within normal limits. Cardiac enzyme assay indicated a slight increase in troponin (0.07 ng/mL), whereas chest X-ray revealed the presence of a foreign body in the form of a needle at the level of the cardiac shadow (Panel A). The patient then underwent cardiac CT-scan (GE 64 × 0.625) which indicated the presence of a 'needle' running through the whole thickness of the anterior wall of the left ventricle to the anterior leaflet of the mitral valve (Panels B and C). Furthermore, there was fibrous thickening of the anterior leaflet of the mitral valve due to the presence of the foreign body (Panel D).

The patient later on declared that he was wounded by an industrial mattress needle during a fight. The foreign body was removed by surgery, and after 30 days, the patient's general condition was satisfactory.

Panel A. Chest X-ray: lateral incidence, showing the presence of a foreign body superimposed on the cardiac shadow (red circle).

Panel B. CT-volume rendering reconstruction of the heart: the entry site of the foreign body was very close to the proximal left anterior descending artery (arrow).

Panel C. Oblique cut-plane of CT-volume rendering reconstruction: this view allows the precise identification of the foreign body trajectory passing through the left ventricular anterior wall into the left ventricular cavity very close to the anterior mitral leaflet.

Panel D. Echocardiographic three-chamber apical view. The anterior mitral leaflet appears thickened and fibrous in its distal segment as a traumatic reaction to the tip of the needle.

