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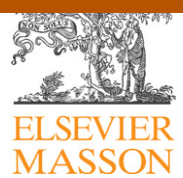

IMAGE

A foreign body in the heart

Corps étranger intracardiaque

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Foreign bodies in the heart may confront a clinician as a result of trauma or gun-shot injury, or may be secondary to the iatrogenic introduction of wires, catheters etc., or embolism to the heart. The foreign body may be a bullet, a pellet, shrapnel, an icepick, a pencil or a needle.

A 28-year-old man presented with fever for 1 month. He had anaemia and clubbing. There was neutrophilic leucocytosis and red blood cells in the urine. Other biochemical variables were within normal limits, except elevated concentrations of alanine aminotransferase and aspartate aminotransferase. Echocardiography revealed vegetation in the tricuspid valve and mild tricuspid regurgitation (peak gradient, 20 mmHg). There was a thick, straight, needle-like structure across the ventricular septum. Cardiac magnetic resonance imaging confirmed it as a needle with surrounding fibrosis. The patient was an intravenous drug abuser. Serological tests for human immunodeficiency virus, hepatitis B virus and hepatitis C virus were negative. Blood culture showed *Escherichia coli* growth. There may have been an accidental penetration into the vascular system that then migrated into the right heart.

Gugleielmo et al. reported 12 cases of foreign bodies in the heart from 1955—1989 [1]. They observed three cases of a needle localized in the heart, possibly as a result of accidental penetration into the vascular system. Diagnosis was made by chest X-ray in the presence of recurrent fever. Needles were found in the cardiac muscle and the pericardial space.

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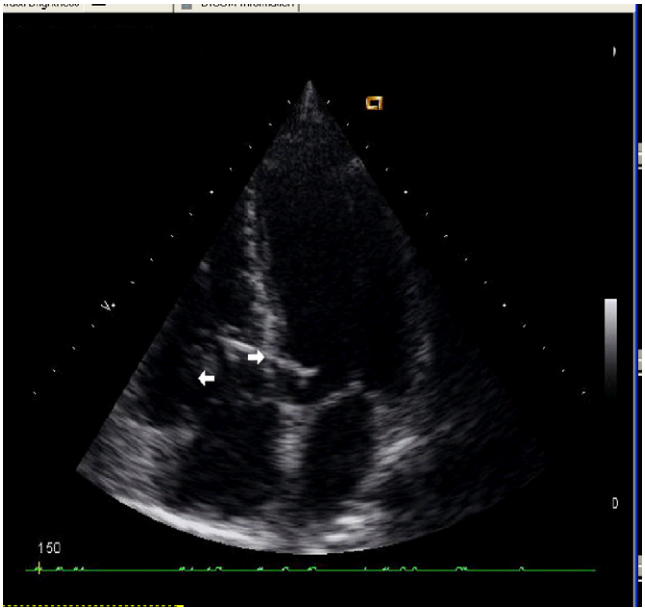

Figure 1. Transthoracic echocardiography showing needle (left arrow) and vegetation (right arrow).

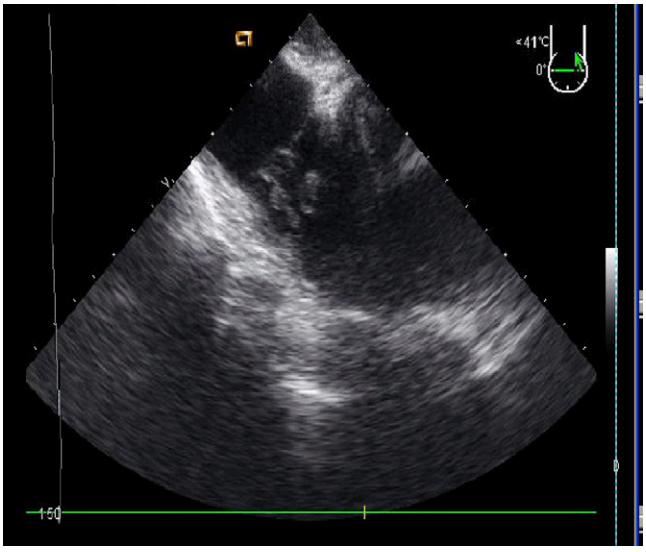

Figure 2. Transesophageal echocardiography showing vegetation in tricuspid valve.

Delayed complications of foreign bodies in the heart are: infective endocarditis; thrombosis; systemic or pulmonary embolism; perforation and tamponade; pericarditis; recurrent pericardial effusion; conduction disturbances; and cardiac neurosis. A penetrating cardiac injury usually causes cardiovascular compromise by exsanguinating haemorrhage or cardiac tamponade. Iatrogenic complications may result from breakage of a catheter tip, coronary guidewire or metal stylet. The best way to remove a foreign body is by left lateral thoracotomy without cardiopulmonary bypass. Median sternotomy with cardiopulmonary bypass may be required in

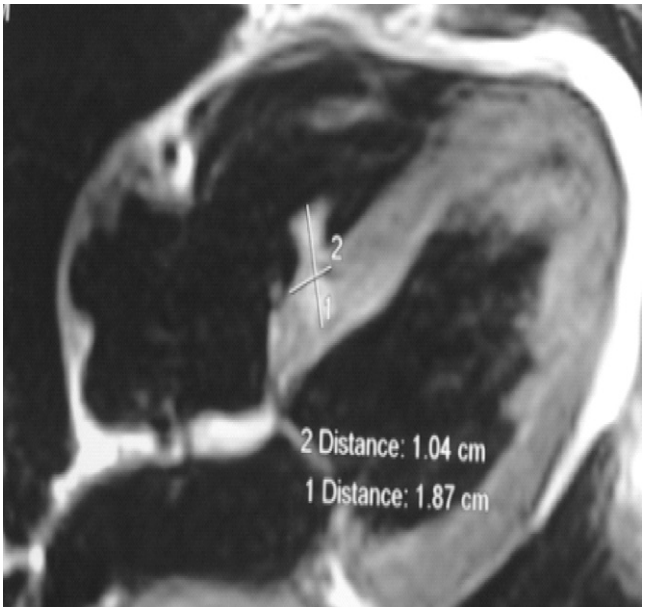

Figure 3. Magnetic resonance imaging revealing thickened needle.

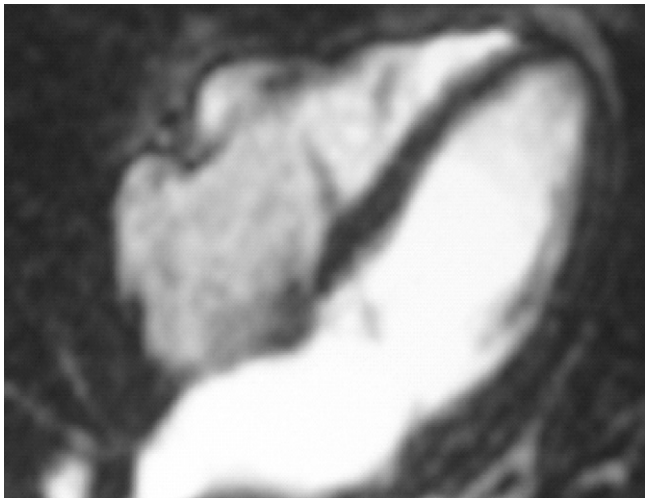

Figure 4. Magnetic resonance imaging showing needle.

difficult cases. If a foreign body is small and smooth without any risk of contamination, it may be left alone (Figs. 1—4).

Disclosure of interest

The authors declare that they have no conflicts of interest concerning this article.

Reference

[1] Actis Dato GM, Aidala E, Zattera GF. Foreign bodies in the heart: surgical or medical therapy? Ann Thorac Surg 1999;68:291—2.