Asymptomatic intracardiac migration of a sharp foreign body

Jean-Paul Rinaldi, Decebal Gabriel Latcu, Vincent Dor, Nadir Saoudia

Cardiologie, centre hospitalier Princesse Grace, Monaco
Centre cardio-thoracique, Monaco

Received 11 March 2010; accepted 26 May 2010

A 41-year-old woman was referred to our echocardiography department after intramediastinal migration of a known to be well-tolerated, sharp foreign body, seen on a chest X-ray (Panels A and B). According to the patient, the foreign body had penetrated accidentally three months earlier by traumatic effraction due to misuse of a staple gun. Transthoracic echocardiography revealed a transfixial linear echodense image with strong shadowing through the right lateral free wall and the interventricular septum (Panel C; Video 1). As migration was giving rise to risk of mitral leaflet injury and perforation of the left atrium, open heart surgery was decided upon. Intraoperatively, complete intracardiac migration was confirmed, only the entrance site being visible at the surface of the heart (Panel D). The foreign body was removed successfully (Panels E and F). There was no postoperative complication.
Asymptomatic intracardiac migration of foreign bodies has been described and may not be rare. The findings of this case emphasize the importance of systematic follow-up in such patients. The high risk of additional migration of this sharp mediastinal foreign body, assisted further by respiratory and cardiac movements, strongly supports early preventive surgery in such cases.

**Conflict of interest statement**

None.

**Appendix A. Supplementary data**

Supplementary data associated with this article can be found, in the online version, at [doi:10.1016/j.acvd.2010.03.012](http://doi.org/10.1016/j.acvd.2010.03.012).

**Figure 1.** Panel A: initial chest X-ray three months earlier (lateral view) showing two needle-shaped foreign bodies projected on the heart's opacity (arrows). Panel B: admission chest X-ray (lateral view) showing migration of one of the foreign bodies (big arrow). Panel C: transthoracic echocardiography—apical four-chamber view, showing a transfixial echodense linear image from the right ventricle free wall towards the interventricular septum. Panel D: intraoperative view of the right ventricular surface; the entry site of the foreign body in the heart is clearly visible. Panel E: intraoperative view of the extraction, under cardiopulmonary bypass, of the intracardiac sharp foreign body. Panel F: the foreign bodies visualized initially on X-ray after extraction (only one was intracardiac, the second being localized in the anterior mediastinum).