Self-inflicted intracardiac sewing needle

Mi Hyoung Moon, Keon Hyun Jo, Hyun Song and Hwan Wook Kim*

Department of Thoracic and Cardiovascular Surgery, Seoul St. Mary’s Hospital, The Catholic University of Korea, Seoul, Republic of Korea

* Corresponding author. 505 Banpo-dong, Seocho-gu, Seoul 137-701, Republic of Korea. Tel: +82-2-22582858; fax: +82-2-5948644; e-mail: kimhwanwook@catholic.ac.kr (H.W. Kim).

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A 59-year-old woman with a history of major depressive disorder was brought to the emergency department after an attempt to inflict self-injury. An intracardiac foreign body was revealed by radiological imaging studies (Fig. 1) and retrieved successfully by a surgical approach (Fig. 2).

Figure 1: On examination, vital signs were stable. In the lower chest over the xyphoid process area, there was a mark of a needle prick without palpation of a foreign body (A). A chest radiograph revealed a linear metallic object within the cardiac silhouette (B: arrow). A computed tomographic scan showed the needle lying across the interventricular septum (C). Because the needle seemed to be embedded into the cardiac chambers with a rapid migration through the subcutaneous tissues, surgical removal was chosen instead of percutaneous removal, in order to prevent ventricular damage, cardiac tamponade, thrombus formation and infective endocarditis.
A standard sternotomy was done, and there was a small haematoma over the lower sternal area. There was a mild pericardial effusion and a focal haematoma was found over the right ventricular anteroinferior surface, close to the left descending coronary artery, which could correspond to the entrance site of the needle (A: arrow). After commencement of cardiopulmonary bypass, a 5 cm needle was found through a right atrial approach. The needle penetrated the right ventricle and the interventricular septum, and headed into the left ventricle. In addition, the right ventricular myocardium completely buried the eye of the needle with local trabecular muscle erosion (B and C: the extracted sewing needle). The patient’s course was uncomplicated, and she was transferred to a psychiatric unit on the 5th hospital day.