Forty-Year-Old Intrathoracic Gossypiboma After Cardiac Valve Surgery

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A 59-year-old asymptomatic man, who had undergone cardiac valve surgery 40 years earlier, demonstrated a paracardiac mass on routine chest x-ray (Figure 1). Subsequently, a chest computed tomography scan was performed, which showed a 14.0×9.5 cm heterogeneous lesion, with lobulated contours, along the inferior aspect of the left and right ventricles (Figure 2). It was possible to identify areas of low density as well as high-density areas. Peripheral calcification was also present. There was mild peripheral enhancement after iodinated intravenous contrast injection. It was not possible to exclude cardiac invasion because this lesion had extensive contact with the cardiac ventricles.

Cardiac magnetic resonance imaging was performed to examine the relation of this lesion to the cardiac chambers. The imaging revealed that the lesion was located below the left ventricle with a distinct cleavage plane with this chamber. On the other hand, the right ventricle had broad contact with this lesion. The lesion was heterogeneous, with fluid and solid areas (Figure 3 and online-only Data Supplement Movies I and II). Differential diagnoses included gossypiboma, calcified hematoma, and malignant tumor.

At surgery, a mass with adhesions to the right ventricular wall was found in the pleural space. En bloc resection was performed followed by repair of the right ventricle, which was injured during dissection. Gross examination showed a predominantly cystic mass, in which 1 piece of retained gauze was found (Figure 4). The condition of the left ventricle and lung adjacent to the lesion were unremarkable.

Gossypiboma (also called textiloma) is a term used to describe a mass in the body that is composed of a cotton matrix surrounded by a foreign-body reaction. It can have severe medical consequences, such as infection or abscess formation, and medicolegal consequences involving liability of the surgeon. The radiologist is often the first medical investigator confronted with the problem of retained surgical material, and its low incidence, variety of symptoms, and nonspecific radiologic findings can make it difficult to formulate a correct preoperative diagnosis (especially if a radiopaque marker is not present).1 Two frequent sites of intrathoracic gossypiboma are the pleural and pericardial cavities. Computed tomographic features of gossypibomas include a spongiform appearance with gas bubbles, a low-

Figure 1. A, Posteroanterior chest radiograph showing an ill-defined opacity at the left pericardic region. B, This is better identified in the lateral projection (white arrows).

Figure 2. Chest computed tomography before (A and B) and after (C and D) intravenous iodinated contrast injection, showing a heterogeneous lesion with peripheral calcifications and areas of high and low attenuation in close contact with the right and left ventricles.
density mass with a thin enhancing capsule, and calcifications deposited along the network architecture of a surgical sponge.\textsuperscript{2,3} The features of the signal in magnetic resonance were matched with a predominantly cystic mass, as already described.\textsuperscript{4} It is important to remember that gossypibomas left within the pleural space can show no gas lucencies because of resorption of the air by the pleura.\textsuperscript{1}

In the present case, a central aspect was the importance of magnetic resonance imaging to define absence of clear invasion of the left ventricle by the mass, making the diagnosis of tumor less likely and allowing better preoperative planning.

**Figure 3.** Cardiac magnetic resonance in the (A) vertical long-axis and (B) short-axis planes, using steady-state free precession sequences, demonstrates that the lesion has solid and fluid areas and is located below the left and right ventricles, with a distinct cleavage plane with the former chamber (white arrow) and in broad contact with the latter (black arrow).

**Figure 4.** Surgical specimen of the resected mass (A) with a piece of retained gauze, which is best seen in greater detail (B).

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**Disclosures**

None.

**References**

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