A retained foreign body granuloma mimicking a left ventricular psuedoanuerysm

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A B S T R A C T

INTRODUCTION: Gossypiboma, also referred to as a textiloma, gauzoma or muslinoma describe a mass in the body composed of a central cotton core surrounded by a foreign body reaction. It has an estimated incidence of 1/1000–1/10000 surgeries, occurring in the abdomen (56%), pelvis (18%) and least commonly the thorax (11%) and represents an unfortunate event for both the patient and the operating surgeon with severe liability implications.

PRESENTATION OF CASE: We report a case of a 49-year-old male with Marfan Syndrome who was admitted to the cardioiology department with a four day history of shortness of breath and associated dull, non-radiating chest pain. Past history included a previous Bentall procedure for a type-A aortic dissection and coronary artery bypass grafting involving a saphenous vein graft to the right coronary artery.

A computed tomography (CT) scan showed a round, heterogeneous mass measuring 14 × 9 cm with lobulated contours, situated adjacent to the left ventricle along the left posterior region of the aorta. The mass was resected and further dissection revealed a plastic band harboured from the core of the mass.

DISCUSSION: The majority of cases of intrathoracic gossypiboma present as intractable cough or an incidental finding on radiological evaluation. Dyspnoea alone is relatively underreported as a presenting symptom of this condition

CONCLUSION: This case highlights the important clinical history features for diagnosing this surgical error, including persistent respiratory symptoms and a history of cardio-thoracic surgery. It also emphasizes the need for implementing definite strategies to prevent the occurrence of gossypiboma in surgical practice.

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1. Case report

A 49-year-old male with Marfan’s Syndrome was admitted to the cardioiology department with a four day history of shortness of breath with associated dull, non-radiating chest pain. The symptoms were brought on by mild exertion, limiting mobility to a few metres, classifying them as New York Heart Association (NYHA) Class II. He was otherwise hemodynamically stable. Significant past history included a previous Bentall procedure for a type-A aortic dissection and coronary artery bypass grafting involving a saphenous vein graft to the right coronary artery eight years ago.

Postoperatively he suffered an adverse reaction to heparin with subsequent thrombosis of the right popliteal vein. There were no significant findings on examination.

Resting electrocardiogram was unremarkable. A plain chest radiograph revealed a paracardiac mass in the left lateral projection. Initial differential diagnoses included pseudoaneurysm or haematoma in relation to the left main stem anastomosis involved as part of the Bentall procedure. A computed tomography (CT) scan with iodinated contrast dye was performed for evaluation of the aortic root in relation to the origin and the boundaries of the mass. This showed a round, heterogeneous mass measuring 14 × 9 cm with lobulated contours, situated adjacent to the left ventricle along the left posterior region of the aorta. Within the mass were radiological appearances consistent with the presence of a foreign body. No calcification, gas bubbles or contrast enhancement were demonstrated. Echocardiography showed a left ventricular ejection fraction of 65%, with no left ventricular dilation. All other

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chambers of the heart were within the normal dimensions, however a distorted shape of the left ventricle was noted secondary to extrinsic compression.

The patient underwent surgical intervention through a midline sternotomy using cardiopulmonary bypass. The mass was found to be adherent to the free wall of the left ventricle, extending nearly twice the length of the right ventricle measuring 14 × 9 cm (Fig. 1).

The mass exeresis was preceded by lifting the apex of the heart, which revealed fragments of dark tissue indicating a widespread fibrinous reaction. Further dissection revealed a plastic band, about 3 cm in width harboured from the core of the mass (Figs. 2 and 3). The left ventricular wall was then closed with the use of surgical glue and haemostasis was successfully achieved with no complications in the postoperative course. Histopathological analysis of the mass revealed chronic granulomatous inflammatory changes with evidence of histiocytosis and giant cell multinucleate aggregates.

The findings confirmed the diagnosis of a gossypiboma, also referred to as a textiloma, gauzoma or muslinoma. This term describes a mass in the body composed of a central cotton core surrounded by a foreign body reaction. It has an estimated incidence of 1/1000–1/10000 surgeries, occurring in the abdomen (56%), pelvis (18%) and least commonly the thorax (11%) [1]. The occurrence of this mass remains an unfortunate event for both the patient and the operating surgeon with severe liability implications.

The most common thoracic cavity sites are the pleural or paracardiac space, with a small number of cases presenting as intrapulmonary masses. The classical presentation of this condition involves fever, intractable cough, haemoptysis or weight loss. Timing of presentation varies greatly from acute post-operative onset to late onset of six to eight years following a previous thoracic procedure [2]. The majority of cases of intrathoracic gossypiboma present as intractable cough or an incidental finding on radiologi-

**Fig. 1.** Computed tomography image in the coronal plane demonstrating an homogenous left ventricular defect with a distinct border (arrow).

**Fig. 2.** A 3D reconstruction of the left ventricular abnormality demonstrating an aneurysmal appearance (red arrow).

**Fig. 3.** A 5 cm diameter mass attached to the infero-lateral surface of the left ventricle demonstrating a clear cleavage plane between the epicardium and the mass (blue arrow).
A retained gauze specimen is carefully manipulated by the blue cord and is being removed via a median sternotomy incision.

tory of a surgical procedure should be examined thoroughly and gossypibomas should be considered in the differential diagnosis [4].

This case highlights the important clinical history features for diagnosing this surgical error, including persistent respiratory symptoms and a history of cardio-thoracic surgery. It also emphasizes on the need for implementing definite strategies to prevent the occurrence of gossypiboma in surgical practice.

Conflicts of interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

Written consent

Written consent signed by the patient is available if required by the Editor.

Ethical approval

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