

## Letters to the Editor

### Silicone Thorax: Another Complication of Breast Prosthesis Rupture



#### *Silicona en el tórax: otra complicación de la ruptura de implantes mamarios*

Dear Editor,

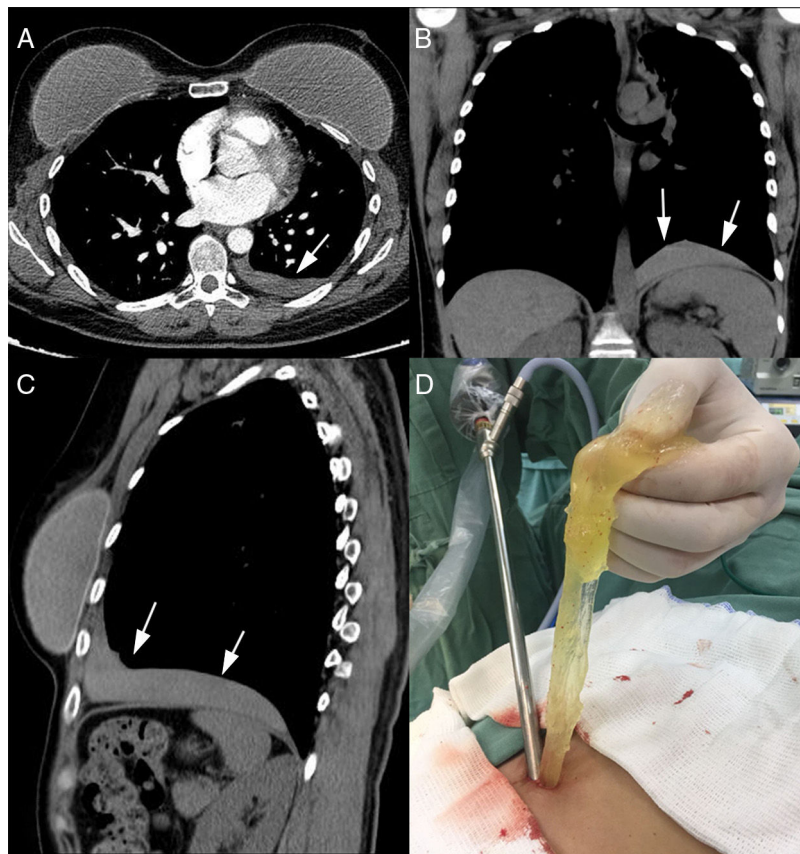
We read with great interest the scientific letter by Muñoz González et al.,<sup>1</sup> reporting the case of a 47-year-old woman who presented with cough and hemoptysis, and a cavitary lesion in the right lung. Surgical resection showed a foreign body reaction caused by silicone. She had a history of rupture of a breast prosthesis. The final diagnosis was a secondary reaction caused by migration of silicone from the ruptured prosthesis.

We would like to report another infrequent thoracic complication of breast prosthesis rupture: pleural silicone collection. A

51-year-old woman was admitted with abdominal pain caused by cholelithiasis. A preoperative chest X-ray showed a left pleural effusion. She was asymptomatic from a respiratory point of view. Thoracocentesis was performed, but was unsuccessful. Chest computed tomography demonstrated an elongated opacity at the base of the left hemithorax, just above the diaphragm, in the pleural cavity (Fig. 1A-C).

The patient had sustained blunt chest trauma in a motor vehicle accident 2 years previously, and had undergone drainage of the left pleural cavity. After the trauma, she noted a progressive reduction in the size of her left breast implant. Rupture was diagnosed and the prosthesis was replaced.

We therefore elected to perform a left videotoracoscopy. Exploration of the chest cavity revealed a large collection of free silicone gel in the pleural space. The silicone was evacuated manually and with suction (Fig. 1D). Clinically, the patient had an uneventful postoperative course. After 1 year, she remains asymptomatic.



**Fig. 1.** Axial (A), coronal (B), and sagittal (C) reformatted CT images show an elongated opacity at the base of the left hemithorax (arrows), just above the diaphragm, in the pleural cavity. (D) Left videotoracoscopy with removal of free silicone from the pleural cavity.

Rupture of silicone breast implants is usually iatrogenic or due to trauma.<sup>2</sup> A patient with breast implants who has sustained blunt chest injury can present a diagnostic and therapeutic challenge.

Intrathoracic migration of breast implants is a documented complication of augmentation mammoplasty.<sup>3</sup> The prosthesis may migrate intact into the pleural cavity, usually through a defect in the chest wall caused by previous surgery.<sup>3,4</sup> Rupture of the prosthesis also may occur without any immediate sign. Over time, the patient may notice a change in the size or shape of the breast.<sup>2</sup>

In our patient, the implant ruptured at the time of the automobile accident. Once the implant envelope had been violated, the silicone gel escaped into the local tissues, and it probably was squeezed into the pleural space at the site of entry of the pleural drain placed at the time of thoracic trauma, favored by the negative pressure of the pleural cavity.

## References

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## Vena Cava Filter Complications



### Complicaciones del uso de filtros de la vena cava

Dear Editor:

We read with great interest the original article by de Gregorio et al.,<sup>1</sup> who analyzed success in vena cava filter (VCF) retrieval and factors associated with retrieval failure. They also commented on complications associated with VCF placement and removal, especially those of a local nature (tilting of the inferior vena cava axis, venous wall penetration, migration, and local thrombosis). We would like to highlight another important complication related to VCF use that is of interest to pulmonologists: filter embolization.

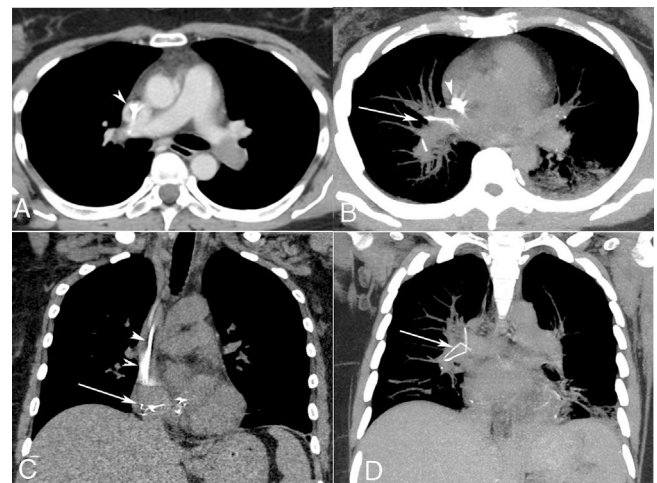
A 47-year-old woman presented to the emergency department with acute shortness of breath and chest pain. She had a past history of recurrent deep venous thrombosis, despite anticoagulation therapy. A VCF had been inserted in the infrarenal inferior vena cava 9 months previously. Computed tomography of the chest identified a thrombus in the left pulmonary artery with pulmonary opacities in the left lower lobe, and multiple metallic fragments at the level of the right pulmonary artery and right atrium (Fig. 1). The diagnosis of pulmonary infarction and embolization of a broken VCF was made. Given the patient's relatively young age and the possibility of future complications, the patient decided to have the fragments surgically removed. The patient recovered well and was discharged 2 weeks after surgery.

VCF complications can occur early, during placement, or later, after positioning. Immediate complications of VCF placement include puncture site complications and mechanical failures, such as delivery system malfunction, incomplete or asymmetric deployment (opening), malpositioning, and tilting. Fatalities caused by these complications are rare.<sup>2,3</sup>

Late complications of VCF use may be of local origin, including inferior vena cava thrombosis, penetration of the vessel wall and injury to nearby organs, or distant, including structural failure with migration of all or part of the VCF to the right side of the heart and/or pulmonary arteries, recurrence of thrombosis and pulmonary embolism.<sup>2,3</sup> Distant complications are of special interest to pulmonologists.

Filter fracture occurs when the filter structure fails, leading to fragmentation and potential embolization of the fragment. Filter embolization is defined as movement of the filter after deployment to a distant anatomic site completely out of the target zone. The most common site of embolization is the right atrium, where the fragment can cause complications such as perforation of the right atrial wall, cardiac tamponade, and myocardial infarction. Another common site is the pulmonary vasculature.<sup>3,4</sup>

The proper management of patients with intracardiac or intrapulmonary VCF migration remains speculative. Serious consideration should be given to filter removal whenever possible, regardless of the presence or absence of symptoms. Surgery should be the first option considered. Open thoracotomy has the advantage of allowing the operator to directly visualize the filter and have



**Fig. 1.** Axial (A) contrast-enhanced chest computed tomography image showing a filling defect (thrombus) on the left pulmonary artery. Axial (B) and coronal (C and D) reformatted images with maximum intensity projection show multiple metallic fragments (from the fractured filter) at the level of the right cardiac cavities and right pulmonary artery (arrows). Note also non-homogeneous opacities in the left lower lobe (pulmonary infarction) and a deep venous catheter in the superior vena cava (arrowheads).