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Case Report

Iatrogenic Posterior Mediastinal Hematoma Treated by Video-assisted Thoracoscopic Surgery (VATS)

Pablo A. Ordóñez Lozano*, Beatriz Díaz Sanz, Javier García Tirado

Department of Thoracic Surgery, Miguel Servet University Hospital, Zaragoza, Spain

A 52-year-old patient was admitted on a scheduled basis for left radical mastectomy due to infiltrating ductal carcinoma and for placement of a subcutaneous venous reservoir (SVR) on the same day, accessing through the right jugular vein after failed puncture of the ipsilateral subclavian vein.

On the first postoperative day, the patient reported pain in the right hemithorax, a chest X-ray (CXR) was performed, where mediastinal widening and right pneumothorax were observed, which was managed with pleural drainage, without incident. Subsequently, she presented tachycardia and a 1 g/dL decrease in hemoglobin was observed. They requested a computed axial tomography (CT) with intravenous contrast that showed an extensive retroesophageal mediastinal hematoma (MH) from the cervical level to the esophageal hiatus (Fig. 1), without pericardial or pleural effusion. She presents with clinical worsening, presenting mucocutaneous pallor and decreased state of consciousness. Given the clinical situation and the CT findings, it was decided to perform urgent surgical intervention using right video-assisted thoracoscopic surgery (VATS) for revision and decompression of the hematoma, under general anesthesia and selective bronchial intubation. A nasogastric tube is placed to outline and identify the esophagus during surgery. In the video-thoracoscopic examination, a significant hematoma was observed in the posterior mediastinum from the apex to the base of the hemithorax. The posterior mediastinum is opened with an ultrasonic scalpel, retroesophageal dissection, and abundant clots are evacuated. No point or area of active bleeding is observed. The patient is extubated to the Intensive Care Unit (ICU) where she remains for 48 h.

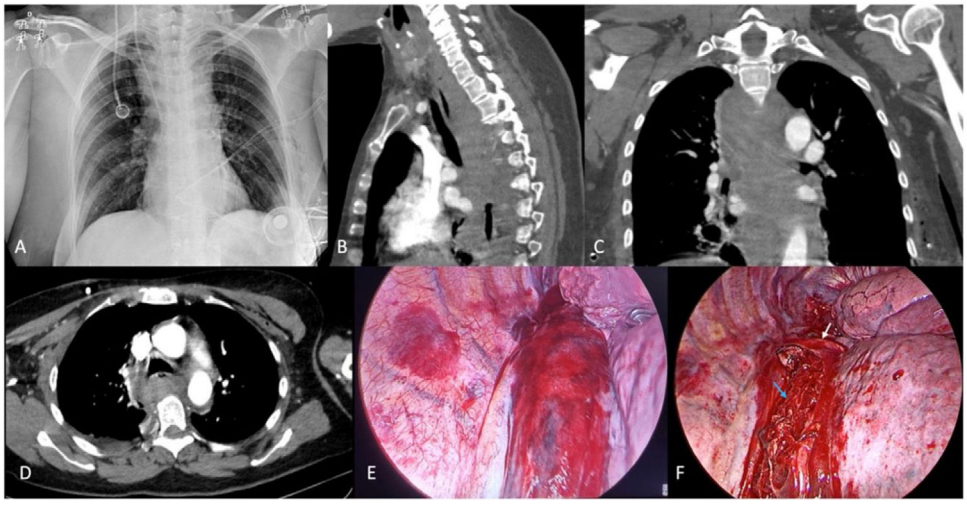

Fig. 1. (A) Mediastinal widening visible on chest X-ray; (B) mediastinal hematoma (MH) visible in the sagittal section of the CT; (C) MH visible in the coronal section of the CT; (D) MH visible in the axial section of the CT at the level of T6; (E) video-thoracoscopic view of the MH; (F) video-thoracoscopic view after drainage of the MH. White arrow: azygos vein. Blue arrow: esophagus.

* Corresponding author.
E-mail address: paordonnezl@hotmail.com (P.A. Ordóñez Lozano).

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During her hospital stay, she does not require vasoactive drugs or transfusion of blood products. She had an adequate postoperative evolution, and she was discharged from the hospital 4 days after surgery.

During outpatient follow-up, she did not report pain, dyspnea, or dysphagia. Radiological control is performed with CXR one month after the surgical intervention and chest CT without contrast at 9 months where complete resolution of MH is observed, without sequelae.

MH can be classified as spontaneous or acquired, and the latter as iatrogenic[1,2] as in our case after the placement of an SVR, or post-traumatic (non-iatrogenic). The diagnosis is confirmed by performing a CT scan, especially with intravenous contrast. Sometimes, it is visible on the CXR, as in this case, and on the transthoracic or transesophageal echocardiogram.

Treatment depends on the underlying cause, severity, location, and local effect of the hematoma itself. It can be conservative in small hematomas, or with endovascular techniques (through embolization or stent placement) depending on the source of bleeding, or less frequently through surgical intervention to control active bleeding or for its evacuation in large hematomas that can cause significant morbidity due to local compression.

Despite the advantages demonstrated by VATS in general, this approach has been rarely described as an option for the treatment on MH,[3–5] but in the absence of acute, massive bleeding it can be an option in centers accounting for extensive experience in minimally invasive thoracic surgery.

Conflict of Interest

The authors declare that they have no conflict of interest.

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