

Utilizing A Mechanical Aspiration Device to Debulk Intracardiac Mass

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Case

Patient is a 63-year-old male with a history of uncontrolled atrial fibrillation who was admitted to the hospital for atrial fibrillation and arrhythmia induced cardiomyopathy secondary to prolonged tachycardia. Despite aggressive management with various rate control and rhythm control medications the patient’s rate remained above 150bpm.

Decision-making

Transesophageal echocardiogram (TEE) was performed in anticipation of cardioversion. TEE revealed 3 large masses in the right atrial cavity: 3.7 cm (L) x 3.4cm (W), 3.3cm (L) x 3.0cm (W) and 2.2cm (L) x 1.4cm (W). CT angiogram was obtained to assess clot burden and patient was found to have pulmonary emboli. Catheter directed thrombolysis of the pulmonary emboli was not an option due to intra cardiac mass in the right atrium. Shared decision making was made to perform aspiration thrombectomy.

Under fluoroscopic and TEE guidance, the device was used to engage the large right atrial masses, which were fairly anchored superiorly in the right atrium near the ostium of the superior vena cava. Partially successful removal of very large right atrial mass was achieved (Figure 1). The procedure was aborted for concern of distal embolization. Pathology report confirmed the diagnosis of thrombi. Ultimately, the patient underwent surgical thrombectomy of a large organized and calcified right atrial clot and also pulmonary thrombectomy of the left middle and left lower lobes.

Images

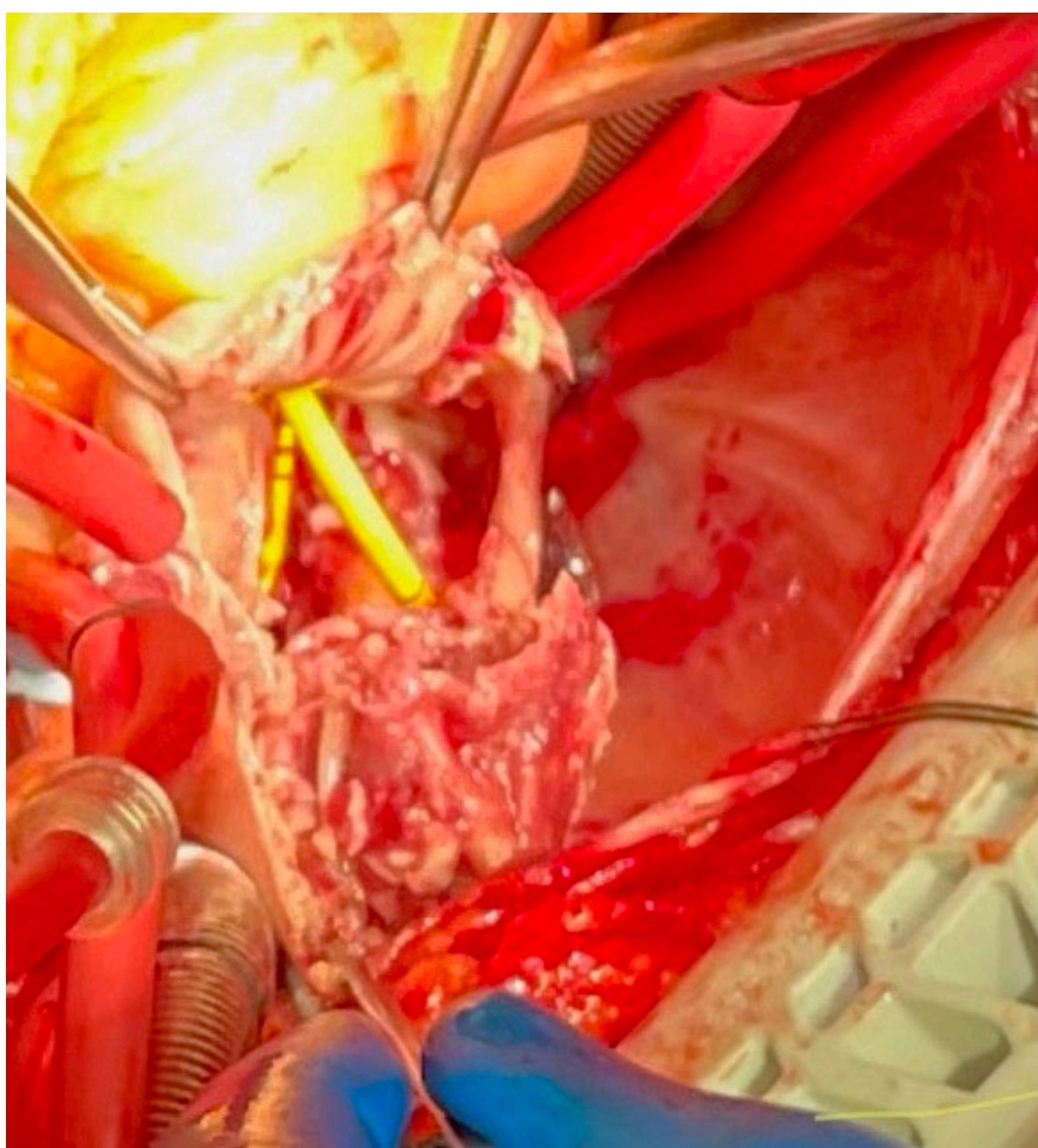


Figure 1: Image of the mass within the right atrium during thrombectomy



Figure 2: Image of the mass after removal from right atrium



Figure 3: Image of pulmonary vein thrombi

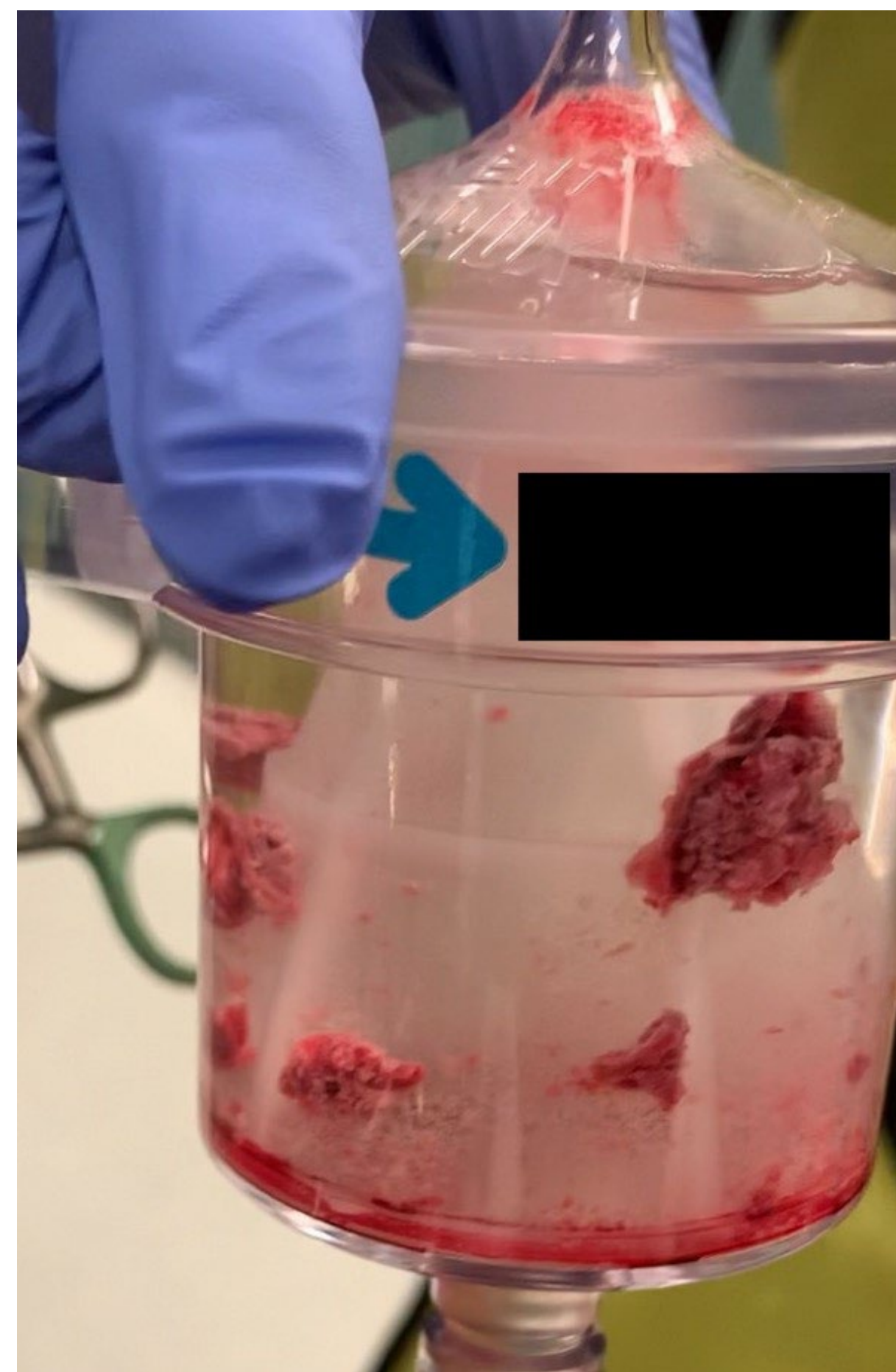


Figure 4: Image of mass removed utilizing mechanical aspiration device

Discussion

This case presents a unique utilization of mechanical aspiration devices to debulk intracardiac mass. In our case, debulking was attempted; however, the clot was well organized and calcific as described in the thrombectomy operative report. The procedure was aborted prematurely due to concern of distal embolization. Debulking of organizing thrombi utilizing mechanical aspiration device may be an option depending on factors such as chronicity of the clot, size, and extent. Further studies are required to identify patients who may be suitable for such procedures.

Disclosures

No financial disclosures