Spontaneous Left Atrial Hematoma Mimicking an Acute Aortic Syndrome

The Utility of High-Resolution Computed Tomography

Victor Bautista-Hernandez, MD, PhD; Carlos Velasco, MD; Laura Fernandez, MD; Maria J. Garcia-Monje, MD; Miguel Solla, MD; Beatriz Bouzas, MD; Salvador Fojon, MD; Jose J. Cuenca, MD

A 69-year-old man with no history of chest trauma was admitted to our institution complaining of blunt and severe central chest pain of cataclysmic onset radiating to the back. His medical history was remarkable only for a chronic atrial fibrillation treated with warfarin and amiodarone. On arrival, his ECG showed atrial fibrillation at 120 bpm with no signs of myocardial ischemia. Laboratory examination was uneventful except for an international normalized ratio of 7.

With the presumptive diagnosis of acute aortic syndrome, a thoracoabdominal high-resolution contrast-enhanced computed tomography scan was performed that showed a large mass at the level of the left atrium (LA) and a moderate pericardial effusion. Linear attenuation coefficients of the LA mass and pericardial fluid were suggestive of acute clot and blood (60 and 50 Hounsfield units, respectively). No signs of malignancy, pulmonary embolism, or aortic disease were found. During evaluation, our patient’s clinical condition deteriorated rapidly with signs and symptoms of cardiogenic shock; thus, emergent intubation and inotropic support were established. Preoperative and intraoperative transesophageal echocardiogram demonstrated a 2 x 3-cm LA tumor bulging into the lumen and involving the left pulmonary veins and the mitral valve but with no apparent compromise.

With the diagnosis of LA hematoma, anticoagulation was reversed and a 10-mm Hegar dilator passed easily through the left pulmonary vein or mitral valve dysfunction, we decided to go on pump and cross-clamp the aorta. The pulmonary veins and mitral valve were inspected through a left atriotomy. A bulky mass was apparent under the endocardium of the LA occupying a large area of the LA lumen. However, the leaflets did not prolapse; therefore, we decided not to open the endocardium and drain the hematoma. Our patient had an uneventful recovery and was discharged home on postoperative day 7. Three months after surgery, a follow-up echocardiogram depicted resolution of the LA hematoma.

Discussion

LA hematoma is a very rare entity that has been reported after either interventional or surgical procedures. Spontaneous occurrence is even more infrequent, with only 3 previous cases reported in the literature. Clinical presentation is usually not acute and is determined by compression of the adjacent structures (especially the mitral valve and pulmonary veins) or the presence of a hemopericardium. Diagnosis is challenging and usually performed by echocardiography and cardiac magnetic resonance imaging. Although conservative treatment has been reported, cardiac surgery is the most common approach to this condition. In our case, unique presentation as an acute aortic syndrome prompted us to perform a high-resolution contrast-enhanced computed tomography scan, which was useful for depicting the anatomic features of mass and its relationship with the adjacent structures. Therefore, other conditions involved in the differential diagnosis such as myxoma or pulmonary embolism were ruled out. Furthermore, measurement of the linear
attenuation coefficient strongly suggested LA hematoma. Surgical exploration solved the hemopericardium, clarified the nature of the mass, and allowed careful exploration of the hematoma and its mass effect on the surrounding structures.

Conclusions
LA hematoma is a very rare condition that may present as an acute aortic syndrome. High-resolution contrast-enhanced computed tomography scan is useful to depict the anatomic features of the mass and to assist with the differential diagnosis.
diagnosis. Surgery may clarify the nature of the tumor and solve its complications and therefore is the preferred approach to this life-threatening condition.

**Disclosures**

None.

**References**


Spontaneous Left Atrial Hematoma Mimicking an Acute Aortic Syndrome: The Utility of High-Resolution Computed Tomography
Victor Bautista-Hernandez, Carlos Velasco, Laura Fernandez, Maria J. Garcia-Monje, Miguel Solla, Beatriz Bouzas, Salvador Fojon and Jose J. Cuenca

_Circulation_. 2012;125:1710-1712
doi: 10.1161/CIRCULATIONAHA.111.059519
_Circulation_ is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2012 American Heart Association, Inc. All rights reserved.
Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://circ.ahajournals.org/content/125/13/1710

Data Supplement (unedited) at:
http://circ.ahajournals.org/content/suppl/2012/04/03/125.13.1710.DC1

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in _Circulation_ can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to _Circulation_ is online at:
http://circ.ahajournals.org/subscriptions/