Blood Cyst of the Mitral Valve
Echocardiographic and Magnetic Resonance Imaging Diagnosis

Tomás Francisco Cianciulli, MD*; Javier Fabián Ventrici, MD; María Pía Marturano, MD; María Cristina Saccheri, MD; María Jorgelina Medus, MD; Marcela Fabiana Redruello, MD

A 12-year-old, apparently healthy woman was referred to the echocardiography laboratory as part of evaluation of school physical control. Physical examination was unremarkable. Two-dimensional echocardiography showed a large (14×15×18 mm), nonechogenic, rounded, thin-walled cystic mass attached to the atrial surface of the anterior mitral valve leaflet (Figure [A] and [B]; Movie I in the Data Supplement). Apical 4-chamber view showed normal ventricular size and function (Movie II in the Data Supplement), without left ventricular inflow tract obstruction. Color and spectral Doppler imaging demonstrated minimal mitral valve regurgitation, without turbulence in the left ventricular outflow tract. Transesophageal echocardiography was not performed because of adequate acoustic windows of transthoracic echocardiography. Cardiac MRI clearly depicted the mass and its relationship with the anterior mitral leaflet (Figure [C]; Movie III in the Data Supplement). On spin echo T1 images, the mass showed a homogeneous signal isointense compared with myocardium (Figure [D]) and hyperintense on T2 (Figure [E]), and does not show uptake of gadolinium at the delayed phase, suggestive of cystic nature of the mass (Figure [F]). After 2 years of follow-up, there was no change seen by echocardiography. This case report confirms the fundamental role of echocardiography for the evaluation of intracardiac masses because it supplies adequate information about size and attachment. Additional information about the nature of the lesion and its content is given by MRI. There is no consensus for the treatment of patients with blood cysts. Conservative approach in asymptomatic patients with a small cyst, as in our case, and echocardiographic follow-up are suggested, whereas surgical treatment should be considered if symptoms occur or if the cyst produces any cardiac dysfunction.1,2

Disclosures
None.

References

KEY WORDS: blood cyst ▪ echocardiography ▪ magnetic resonance imaging ▪ mitral valve

© 2015 American Heart Association, Inc.
Circ Cardiovasc Imaging is available at http://circimaging.ahajournals.org

Received October 1, 2014; accepted November 10, 2014.
From the Department of Cardiology, Hospital of the Government of the City of Buenos Aires “Dr. Cosme Argerich” (T.F.C., M.C.S.) and Cardiovascular MR Unit, TCba Cardiology Department (M.J.M., M.F.R.), Ciudad Autónoma de Buenos Aires, Buenos Aires, Argentina; and Department of Cardiology, Sanatorio Pasteur, San Fernando del Valle de Catamarca, Catamarca, Argentina (J.F.V., M.P.M.).
*Dr Cianciulli is a researcher of the Ministry of Health, Government of the City of Buenos Aires.
Correspondence to Tomás F. Cianciulli, MD, Hospital of the Government of the City of Buenos Aires “Dr. Cosme Argerich”, Piedad y Margall 750 (C1155AHB), Capital Federal, Buenos Aires, Argentina. E-mail tcianciulli@gmail.com
(Circ Cardiovasc Imaging. 2015;8:e002729. DOI: 10.1161/CIRCIMAGING.114.002729.)
Figure. Two-dimensional echocardiography in parasternal long-axis view (A) and apical 4-chamber view (B) shows the blood cyst attached to anterior mitral valve. Cardiac MRI depicted the mass and its relationship with the anterior mitral leaflet (C). On spin echo shows the mass isointense on T1 compared with myocardium (D) and hyperintense on T2 (E), without uptake of gadolinium at the delayed phase (F). Ao indicates aorta; LA, left atrium; LV, left ventricle; RA, right atrium; and RV, right ventricle.
Blood Cyst of the Mitral Valve: Echocardiographic and Magnetic Resonance Imaging Diagnosis
Tomás Francisco Cianciulli, Javier Fabián Ventrici, María Pía Marturano, María Cristina Saccheri, María Jorgelina Medus and Marcela Fabiana Redruello

_Circ Cardiovasc Imaging_. 2015;8:
doi: 10.1161/CIRCIMAGING.114.002729
_Circulation: Cardiovascular Imaging_ is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2015 American Heart Association, Inc. All rights reserved.
Print ISSN: 1941-9651. Online ISSN: 1942-0080

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://circimaging.ahajournals.org/content/8/2/e002729

Data Supplement (unedited) at:
http://circimaging.ahajournals.org/content/suppl/2015/01/28/CIRCIMAGING.114.002729.DC1

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in _Circulation: Cardiovascular Imaging_ 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: Cardiovascular Imaging_ is online at:
http://circimaging.ahajournals.org/subscriptions/
VIDEO LEGENDS

Video 1: Two dimensional echocardiography in parasternal long-axis view shows the blood cyst attached to anterior mitral valve.

Video 2: Two dimensional echocardiography in apical four chamber view shows the blood cyst attached to anterior mitral valve.

Video 3: Cardiac MRI depicted the blood cyst and its relationship with the anterior mitral leaflet.