Journal Homepage: - www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI: 10.21474/IJAR01/15166
DOI URL: http://dx.doi.org/10.21474/IJAR01/15166

RESEARCH ARTICLE

LEFT VENTRICULAR HEMANGIOMA: A RARE CASE AND BRIEF REVIEW OF THE LITERATURE.

Djibril Ahmed, Mohamed Benasser, Lamyaa Bakamel, Latifa Oukerraj and Mohammed Cherti
Cardiology "B" Department, Ibn Sina Hospital, Rabat, Morocco.

Manuscript Info

Manuscript History
Received: 06 June 2022
Final Accepted: 10 July 2022
Published: August 2022

Key words:-
Hemangioma, Benign Tumor, Left Ventricle, Echocardiography, Resection

Abstract

Cardiac hemangiomas are very rare benign cardiac tumors. They can presented at any age and clinical presentation varies according to location and size. We reported the case of patient with left ventricular hemangioma,discovered during routine echocardiographyfor atypical chest pain. Surgical resection was successfully performed and histology confirmed cardiac cavernoushemangioma.

Introduction:-

Cardiac hemangiomas are extremely rare benign vascular tumors of the heart (1).They can present in any age, and their clinical presentation varies according to location, sizeand extension of the tumor. Diagnosis is usually made with echocardiography and treatment of choice is simple complete excision(2,4).we report a case of left ventricular hemangioma ,discovered incidentally by echocardiography for atypical chest pain and removed surgically with favorable outcomes .

Case report:

A 59 -year-old man, with history of hypertension and chronic active smoking, consulting for atypical chest pain without other symptoms. His physical examination was normal.

The electrocardiogram (ECG) showed sinus rhythm at 75 beats/min and left ventricular hypertrophy with strain pattern. Echocardiography revealed amobile and heterogenousspheric mass of 1.5x1.5mm, with a stalk arising from the anteroseptal wall of the left ventricular(figure1), which had a concentric remodeling with a good systolic function EF(ejection fraction) at 58%.The computed tomography scan (CT)did not show another progressive lesions.The biological assessment was normal including tumor markers.

The patient received operation of cardiac tumor resection.

Macroscopically, the mass was a smooth oval nodule 1,5 X 1 X 0.8 cm with 0.1cm pedicle(figure3).Postoperative histopathological examination confirmed a cavernous hemangioma(figure4,5)**.**The patient had an uneventful post-operative course and he recovered quickly.

Discussion:-

The general incidence of primary tumors was estimated at 0.0017% from a large series of autopsies.Cardiac hemangiomas are very rare benign vascular tumoursrepresenting less than 3% of all primary cardiac tumors (4).They may be classified as: 1) cavernous hemangioma (multiple, dilated, thin-walled vessels); 2) capillary

Corresponding Author:- Djibril Ahmed
Address**:-** Cardiology "B" Department, Ibn Sina Hospital, Rabat, Morocco.

hemangioma (small vessels resembling capillaries); and 3) arteriovenoushemangioma or cirsoid aneurysm (dysplastic malformation of arteries and veins)Often, some combination of these features was seen in the same patient (5).

The disease can occured at any age with no significant difference in prevalence of men and women, and with no obvious family history(8). Most cardiac hemangiomas are asymptomatic and discovered incidentally on echocardiography, computed tomography (CT), cardiac magnetic resonance image (MRI), or at autopsy. Clinical presentation when symptomatic varies according to location, size, and mobility of the tumor. They can presented as arrhythmias, atypical angina, pericardial effusion, tamponade, congestive heart failure, outflow tract obstruction, embolic events, or can cause sudden cardiac death (1,3,6). Anatomically, they may raise in any part of the heart, but they were more commonly found in the lateral wall of the left ventricle (21%), the anterior wall of the right ventricle (21%), and the interventricular septum (17%) (9).

Most reported hemangiomaweresmall,subendocardial ,bluish nodules and ranging from 2.0 to 3,5 cm in diameter .The lesions were sessile or polypoid and usually single ,but sometimes were multiple (10).Imageological examination was essential in the screening of cardiac hemangioma and the diagnosis before operation. Echocardiography can accurately displayed the location, size of the tumor, clarify its relationship with the myocardium, valves and hemodynamic effects, and assess the tumor mobility, which provide critical information for diagnosis and decision for surgical plan(8).The computed tomography scans (CT) and magnetic resonance imaging findings of cardiac hemangiomas hadbeen useful to confirm the findings and to evaluate extracardiac extension and myocardia (1).

Grebenc et al found that cardiac hemangiomas had a heterogeneous density on unenhanced CT, and, in most cases, intensely enhance on CT performed after intravenous contrast administration(7).Angiography may also help establish the diagnosis of a hemangioma by showing the characteristic tumor blush(1,11).

The natural history of these tumors was unpredictable,they may regress, cease growing, or continue to proliferate (2).

For this reason, surgical intervention was indicated to confirm diagnosis and to excise the mass when technically feasible. Follow-up was recommended to identify any recurrence, even though the rate of recurrence is unknown (5,11).

Conclusion:-

We report a cardiac hemangiomaat the left ventricle with non-specific cardiac symptoms.The tumor was identified by transthoracic echocardiography and CT scan.However,final diagnosis was made only after surgical resection and histological examination.The patient had a favorable outcome without any evidence of echocardiographic recurrence.

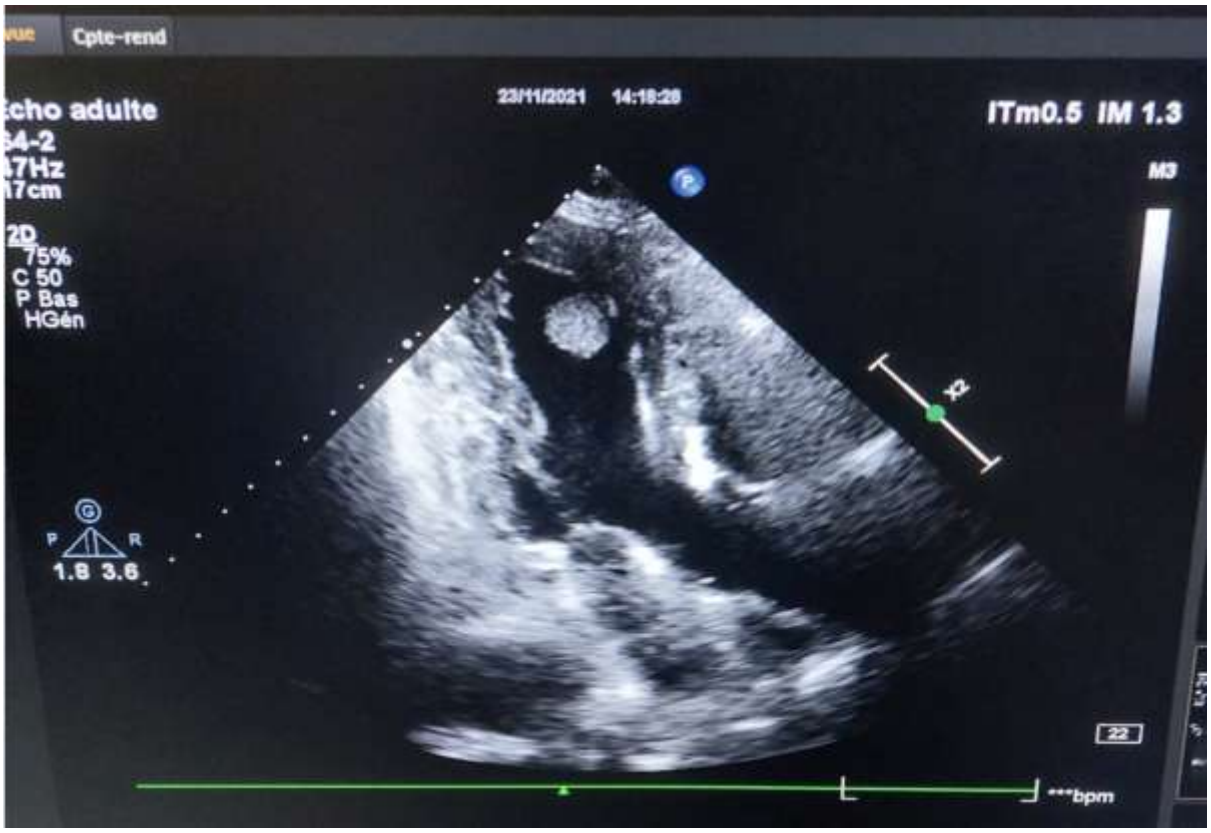

Figure 1:- Transthorcic echocardiography showed a mobile tumor attached to the anteroseptal wall of the ventricle(LV).

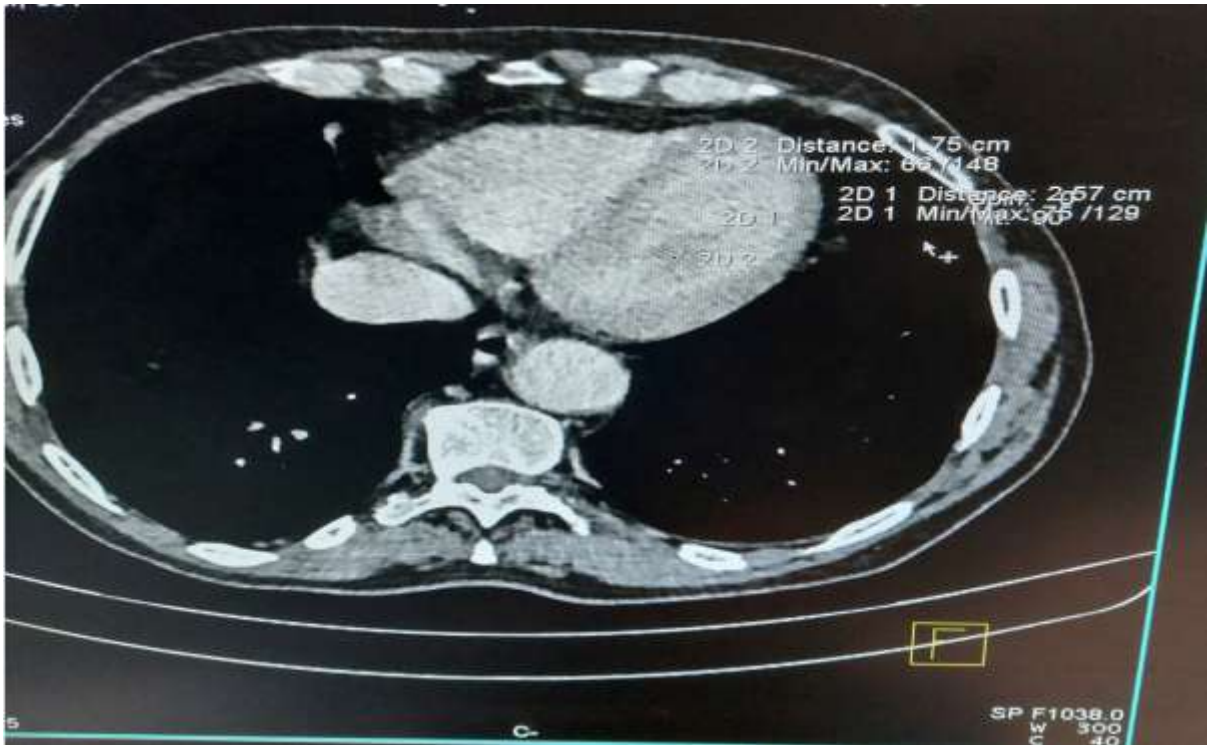

Figure 2:- Multidetector computed tomography showed a 1,75cm *2,57 cm tumor in the left ventricle.

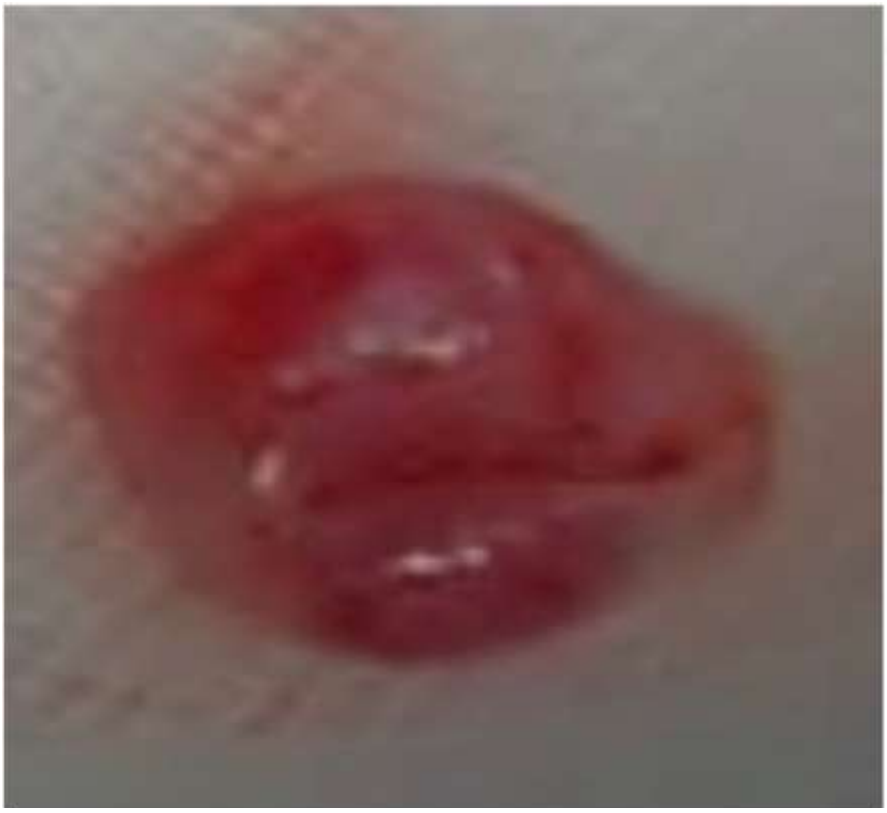

Figure 3:- Macroscopy image of the excised mass of the left ventricular.

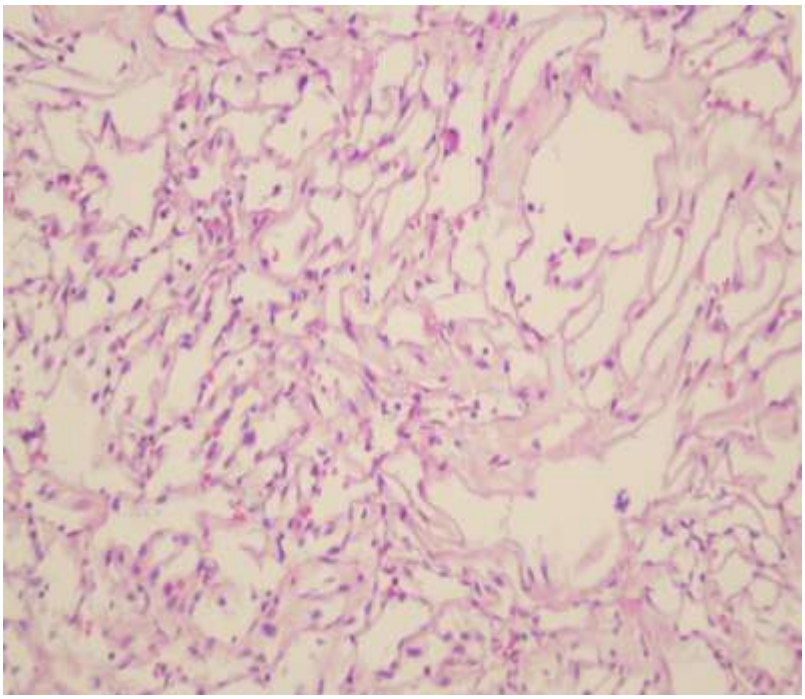

Figure 4:- Photomicrograph of hemangioma: Vascular proliferation made of numerous dilates bordered by a regular endothelium(HES ,G*40).

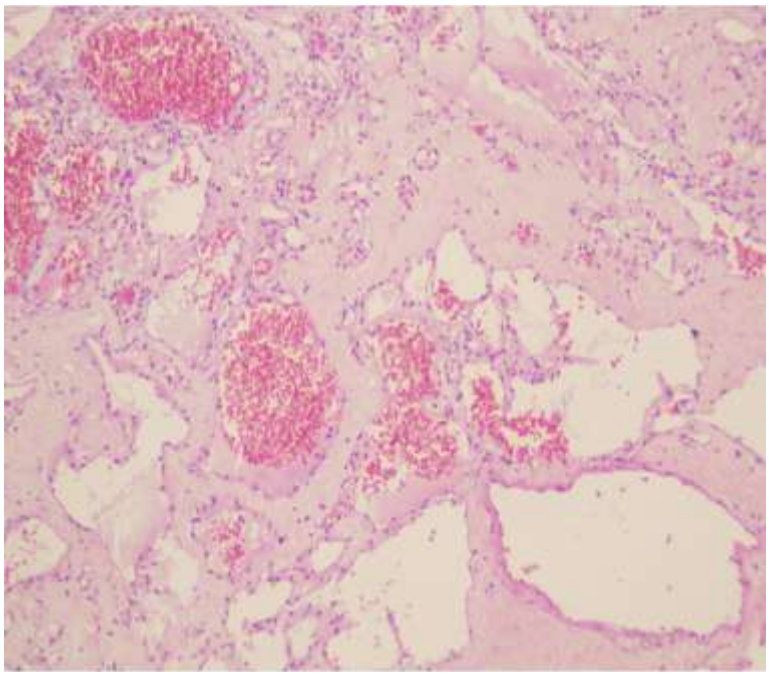

Figure 5:- Histological image showingAnastomosing lacunae containing a few red blood cells separated by fibrous septa bordered by endothelial cells (HES, G*10).

References:-

1 .RonyAtoui, MD, AnjanaYeldandi, MD, Patrick McCarthy.An Unusual Case of a Large Cavernous HemangiomaInvading the Left Ventricular Apex . Ann ThoracSurg 2011;91:602–3 .

2 .Tse TS, Tsui KL, Ling LC, Chui WH, Choi MC, Li SK, Chiu CS. Necrotic cardiac haemangioma masquerading as sepsis with disseminated intravascular coagulation. Hong Kong Med J 2005; 11:308–310.

3. Straus R and Merliss R. Primary tumors of the heart. Arch Pathol Lab Med 1945; 39: 74–78.

4. Serri K, Schraub P, Lafitte S, Roudaut R. Cardiac hemangioma presenting as atypical chest pain. Eur J Echocardiogr 2007; 8:17–18.

5. Abad C, de Varona S, Limeres MA, Morales J, Marrero J. Resection of a left atrial hemangioma. Report of a case and overview of the literature on resected cardiac hemangiomas. Tex Heart Inst J 2008; 35:69–72.

6.Pasquino S, Balucani C, di Bella I, Alberti A, da Col U, Caso V, et al. Cardiac hemangioma of the right atrium: a possible cause of cerebellar stroke. Cerebrovasc Dis 2007; 24:154–155.

7.Oshima H, Hara M, Kono T, Shibamoto Y, Mishima A, Akita S. Cardiac hemangioma of the left atrial appendage: CT and MR findings. J Thorac Imaging 2003; 18:204–206.

8. Yanqiu Wang,[a]Shuang Liu,[a] Jun Yang. Cardiac hemangioma caused ventricular arrhythmia: A rare case and literature review .Journal of Electrocardiology 2017 .1-4.

9.Thomas Strecker, MD,[1] Axel Schmid, MD,[2] Thorsten Zielezinski, MD,[1] Johannes Rösch ,[1] Abbas Agaimy . LeftVentricularHemangioma. The Heart Surgery Forum #2010-1113 .

10.Joseph,Chao,MD,Cesar et al .Cardiac Hemangioma .SOTHERN MEDICAL JOURNAL vol 83. 41 -47.

11.Teresa M. Pérez-Sanz, MD, Enrique Fulquet et al .A Case Report of a Round Cystic Tumor in the Left Ventricular Outflow Tract . Journal of the American Society of Echocardiography November 2006 1402.e9 - 1402.e11.