



The Special Echo Case

Michel Romanens, Cardiology Consultant, Cantonal Hospital and RDC Olten

83 year old female subject with
an incident echocardiographic finding



The Special Echo Case



History

83 year old female patient
Hospitalized for congestive heart failure

Key findings

Dyspnea, nocturnal angina

171 cm, 81 kg

atrial fibrillation

tachycardia (120 bpm)

ECG: normal repolarization

high BP (160/105 mm Hg)

CHF (pro BNP 1860 ng/l)

INR 1.35 (Quick 59%)

Medication: Verapamil ret. 120 mg 1-0-1, Nifedipin 20 mg 0-0-1, Sintrom



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Initial therapy

Torasemid 10 mg 1-0-0

Metoprolol 25 mg 1-0-0

Candesartan 8 mg 1-0-0

Sintrom 4 mg according to INR (3.0)

Initial course

Uneventful

BNP 1310 ng/l

Echocardiography



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Echocardiography

IVS 14 mm	LVPW 12 mm	LVDD 49 mm
LVEF 45%	diffuse hypokinesia	LA 54 mm

Concentric left ventricular hypertrophy with mild reduction of left ventricular ejection fraction and diffuse hypokinesia

large left atrium

mild pulmonary hypertension

and



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Echocardiography

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large left atrium

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Echocardiography



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Echocardiography



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Echocardiography



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Q 1

The tumor is a

- a) thrombus
- b) myxoma
- c) fibroma
- d) metastasis
- e) fibroelastoma



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Q 2

Next step is

- a) TEE
- b) Surgery
- c) Simple Anticoagulation
- d) CMR



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Originally referral for CMR

LVEF 29% LVEDV 191 ml LV Mass 202 g

Hypermobile mass in the region of the posterior papillary muscle



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Originally referral for CMR

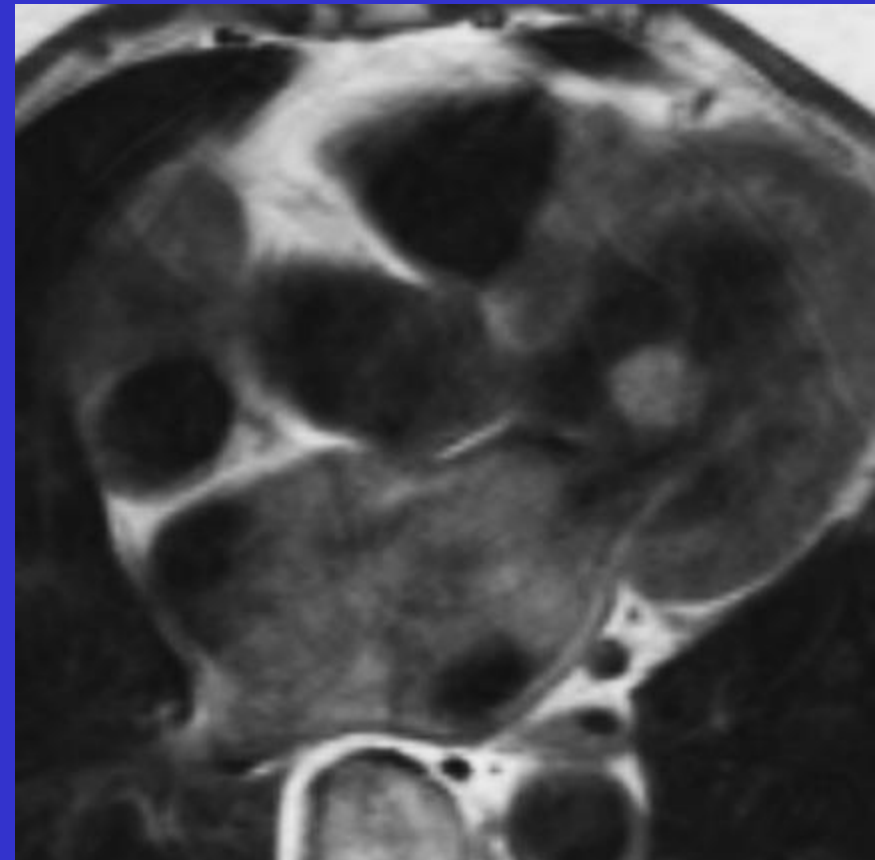
LVEF 29% LVEDV 191 ml LV Mass 202 g

Hypermobile mass in the region of the posterior papillary muscle



T1 weighted transverse

slightly hyperintense mass



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Originally referral for CMR

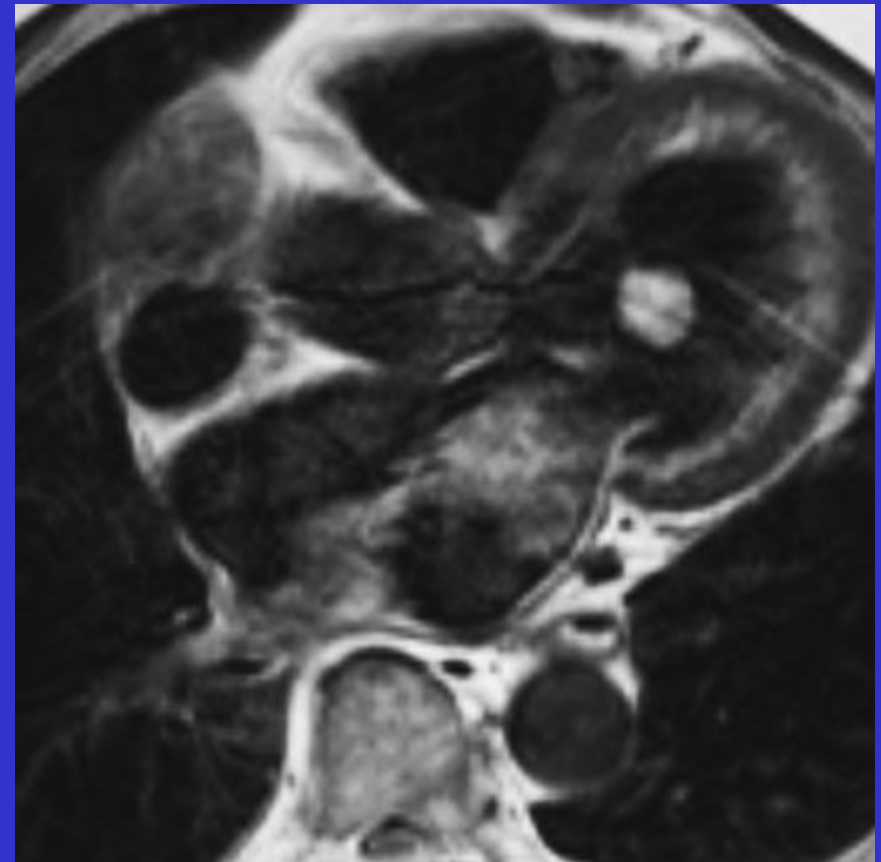
LVEF 29% LVEDV 191 ml LV Mass 202 g

Hypermobile mass in the region of the posterior papillary muscle



T2 weighted transverse

hyperintense mass



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Originally referral for CMR

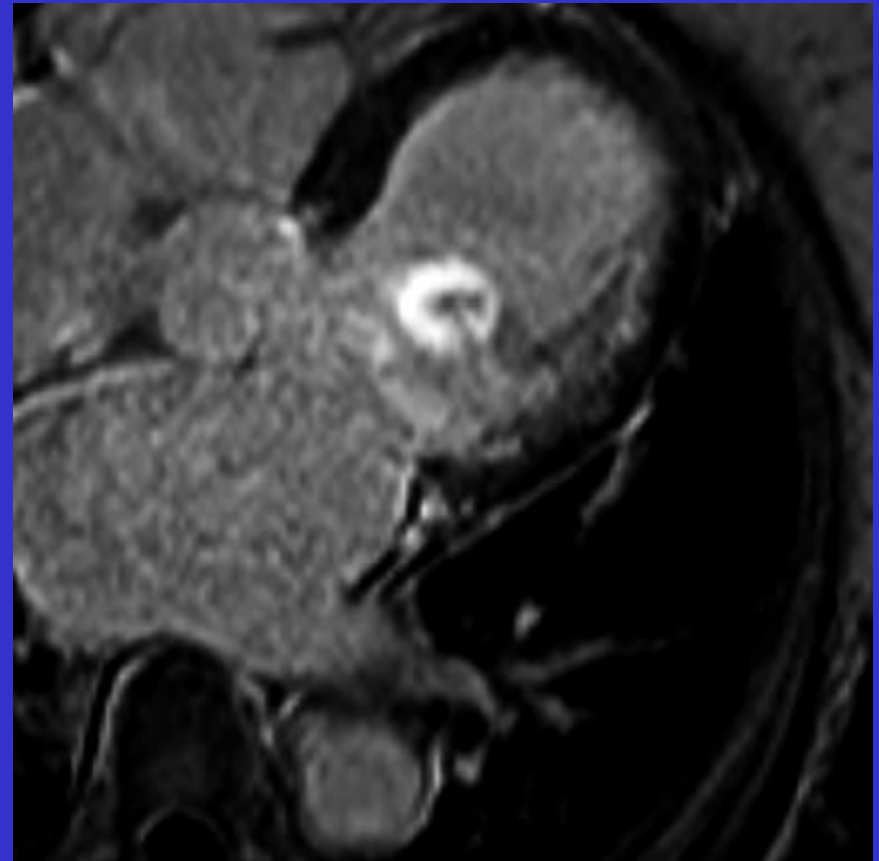
LVEF 29% LVEDV 191 ml LV Mass 202 g

Hypermobile mass in the region of the posterior papillary muscle



Delayed Imaging transverse
Post Gadolinium

“Fibrous” tumor (with additional
thrombus ?)



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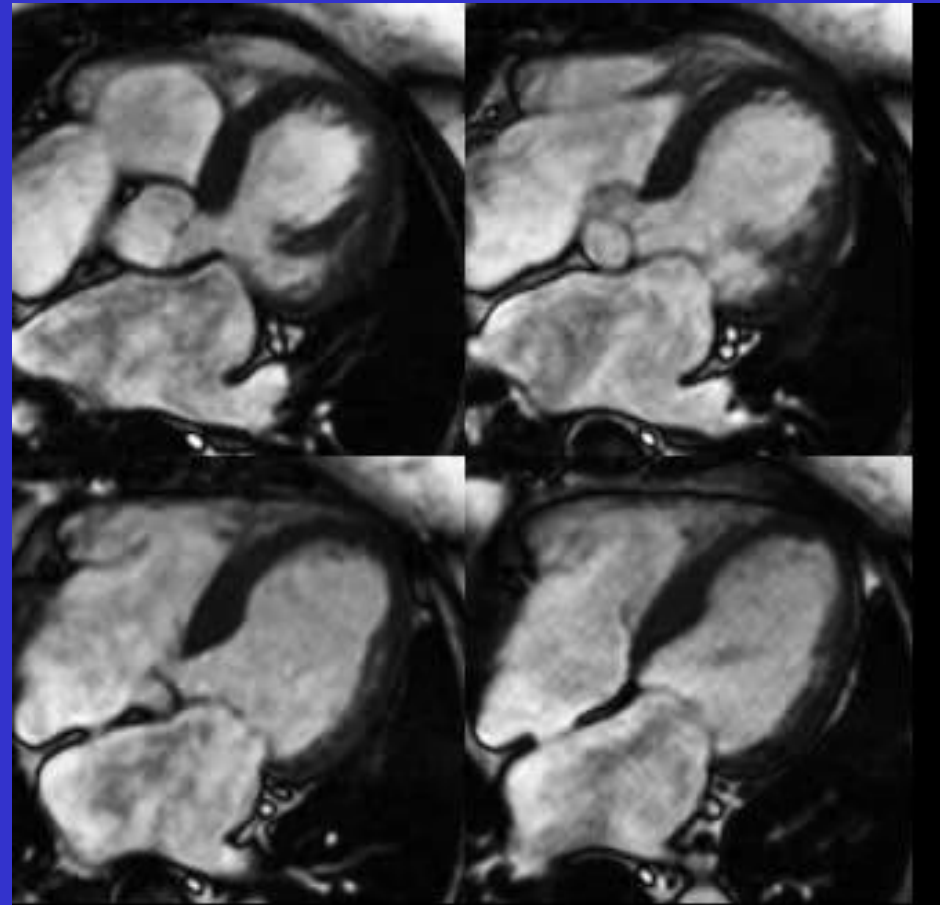
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LVEF 29% LVEDV 191 ml LV Mass 202 g

Hypermobile mass in the region of the posterior papillary muscle



Cine MRI



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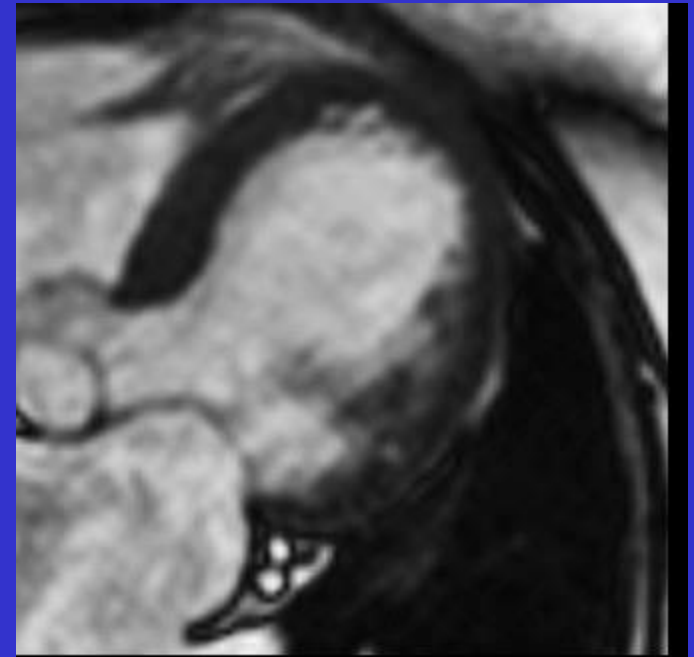
Originally referral for CMR

LVEF 29% LVEDV 191 ml LV Mass 202 g

Hypermobile mass in the region of the posterior papillary muscle



Cine MRI



“Final” diagnosis: atypical fibroelastoma of the left ventricle
with origin from posterolateral papillary muscle chordae ?



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16 weeks later:

INR 3.0

No cerebral ischemic attacks

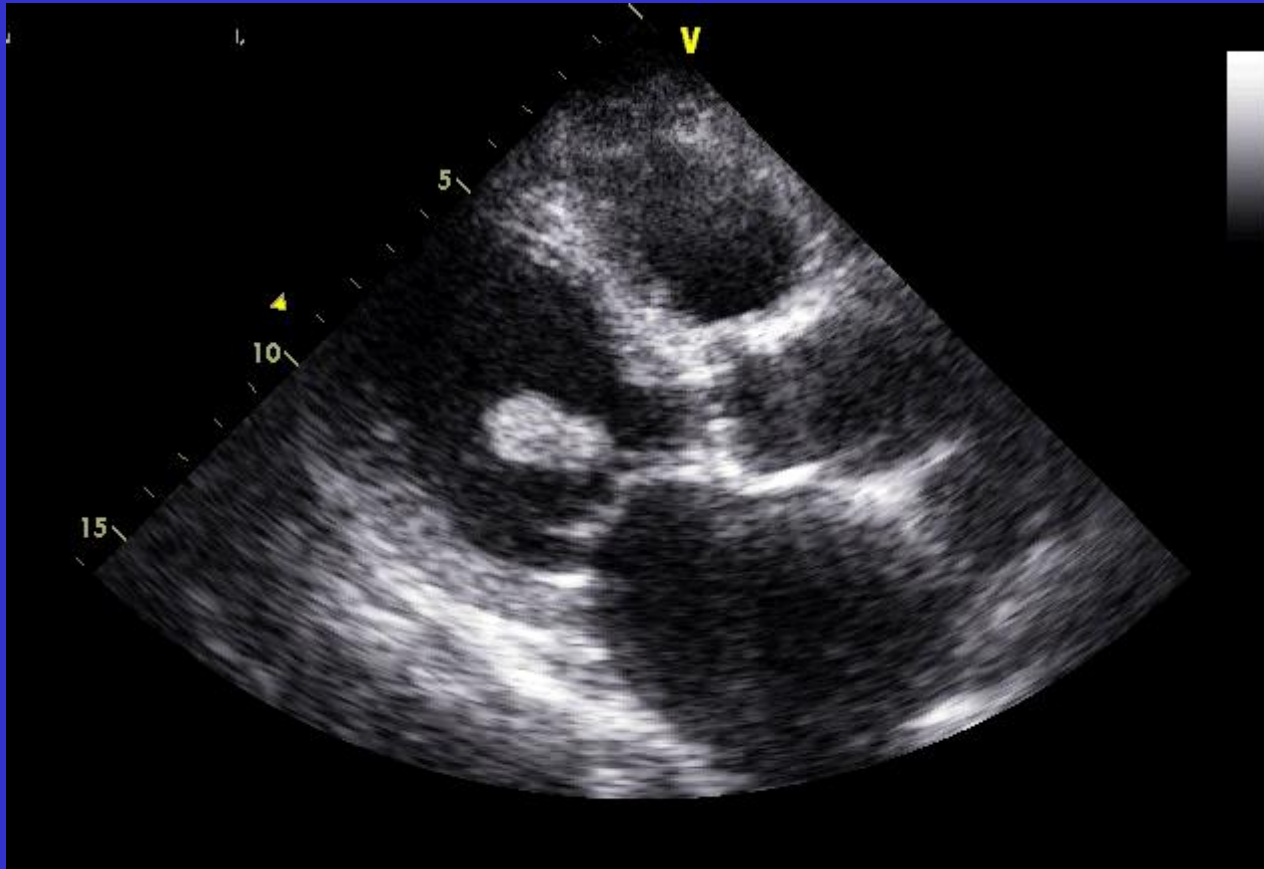
Persistent atrial fibrillation



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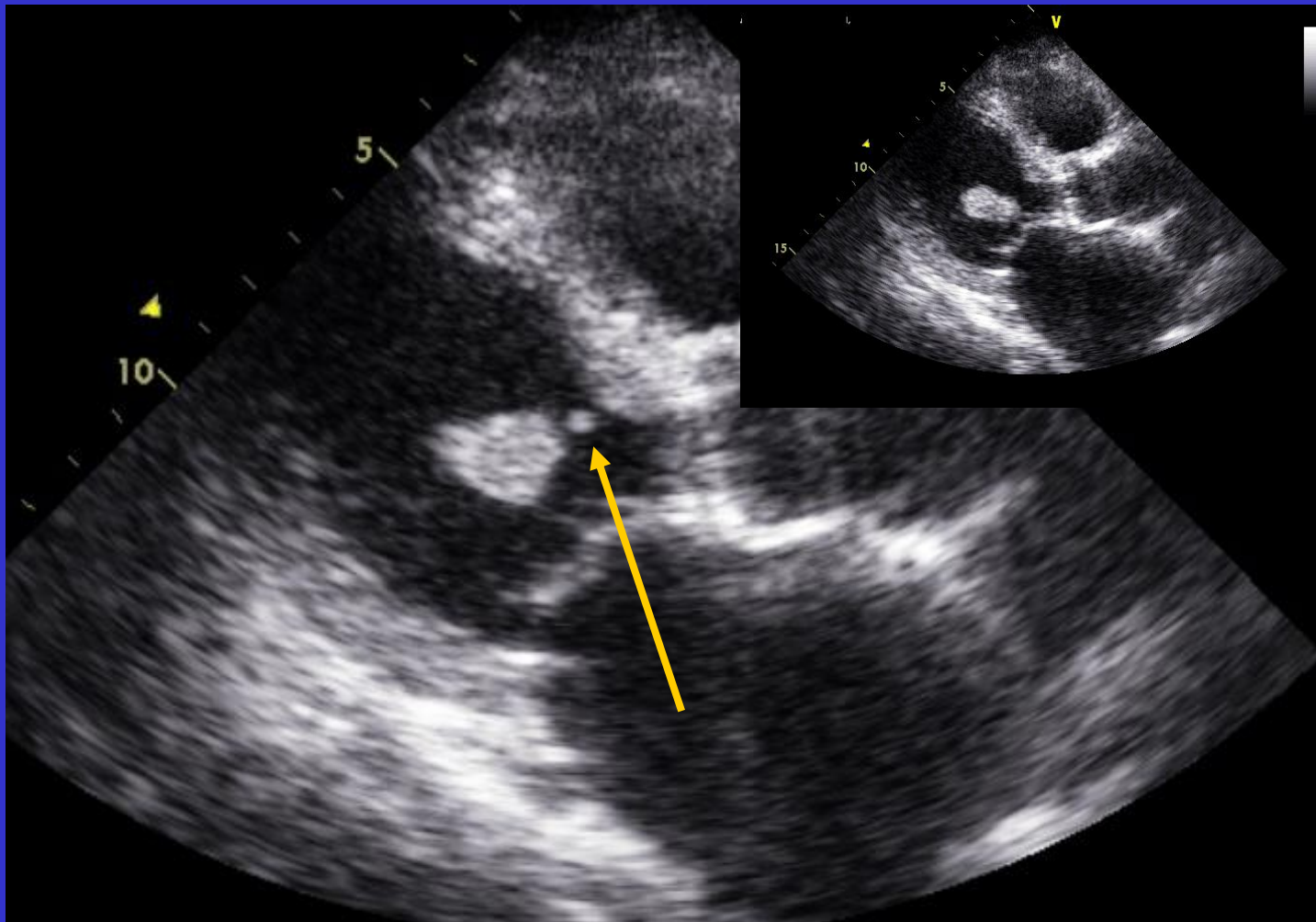
Echocardiography in the old people's home with VIVID-I



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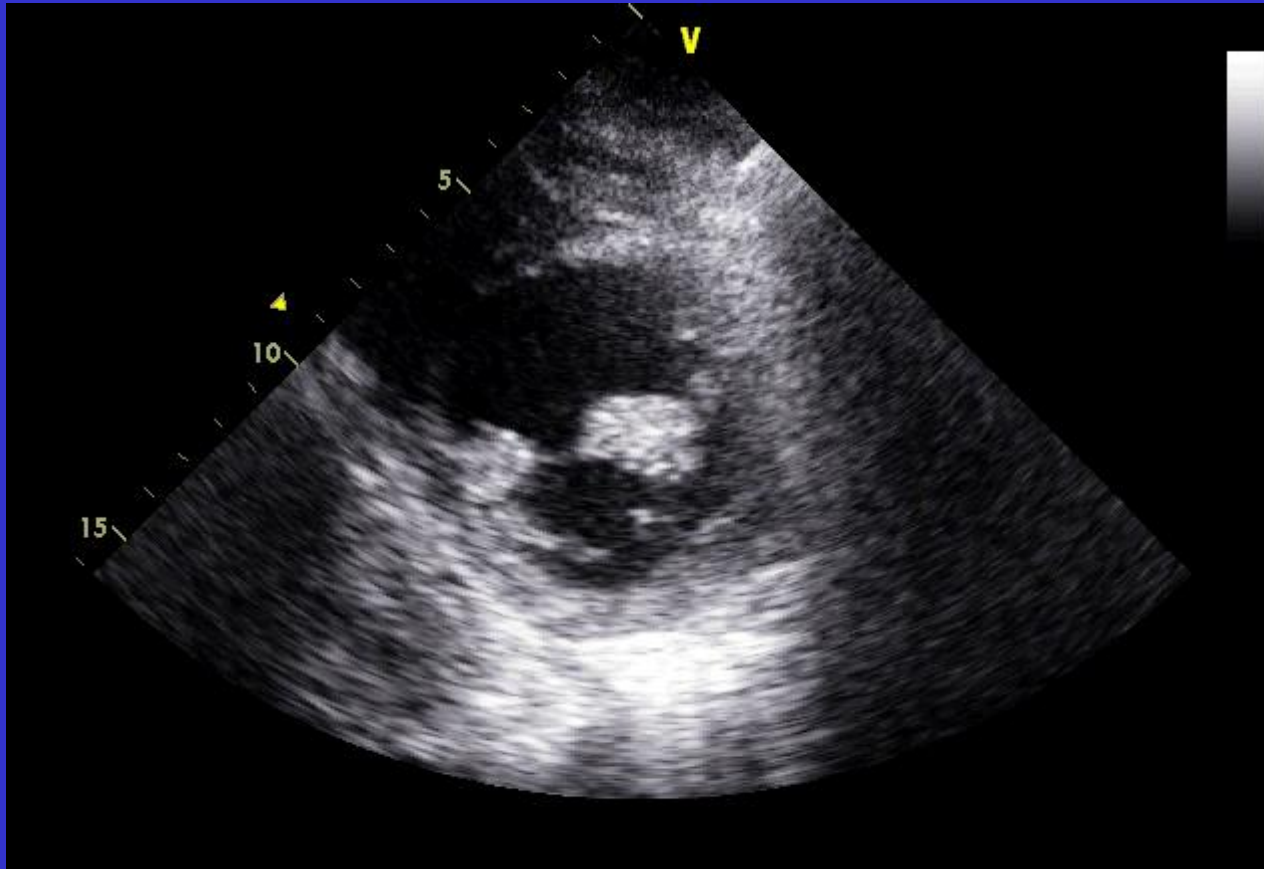
Echocardiography in the old people's home with VIVID-I



The Special Echo Case



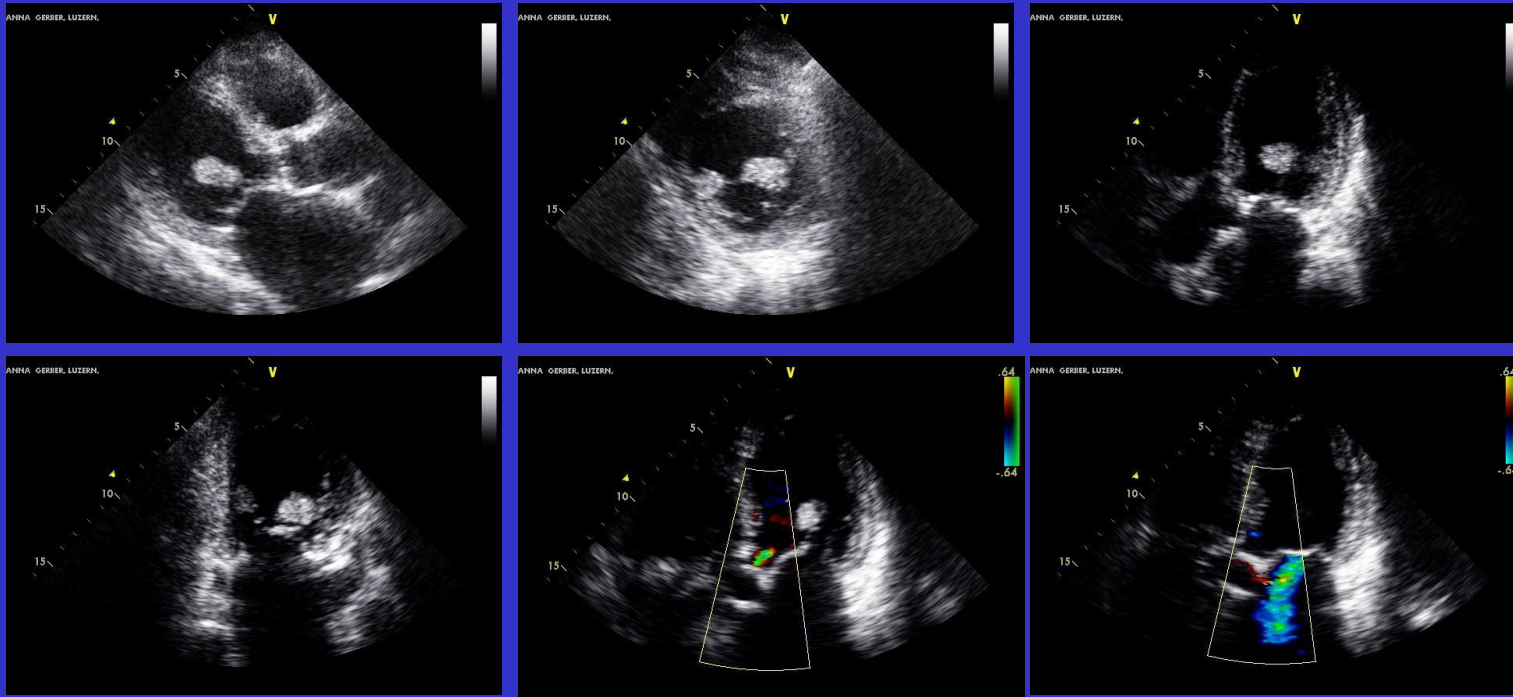
Echocardiography in the old people's home with VIVID-I



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Echocardiography in the old people's home with VIVID-I



Q 1

The tumor is a

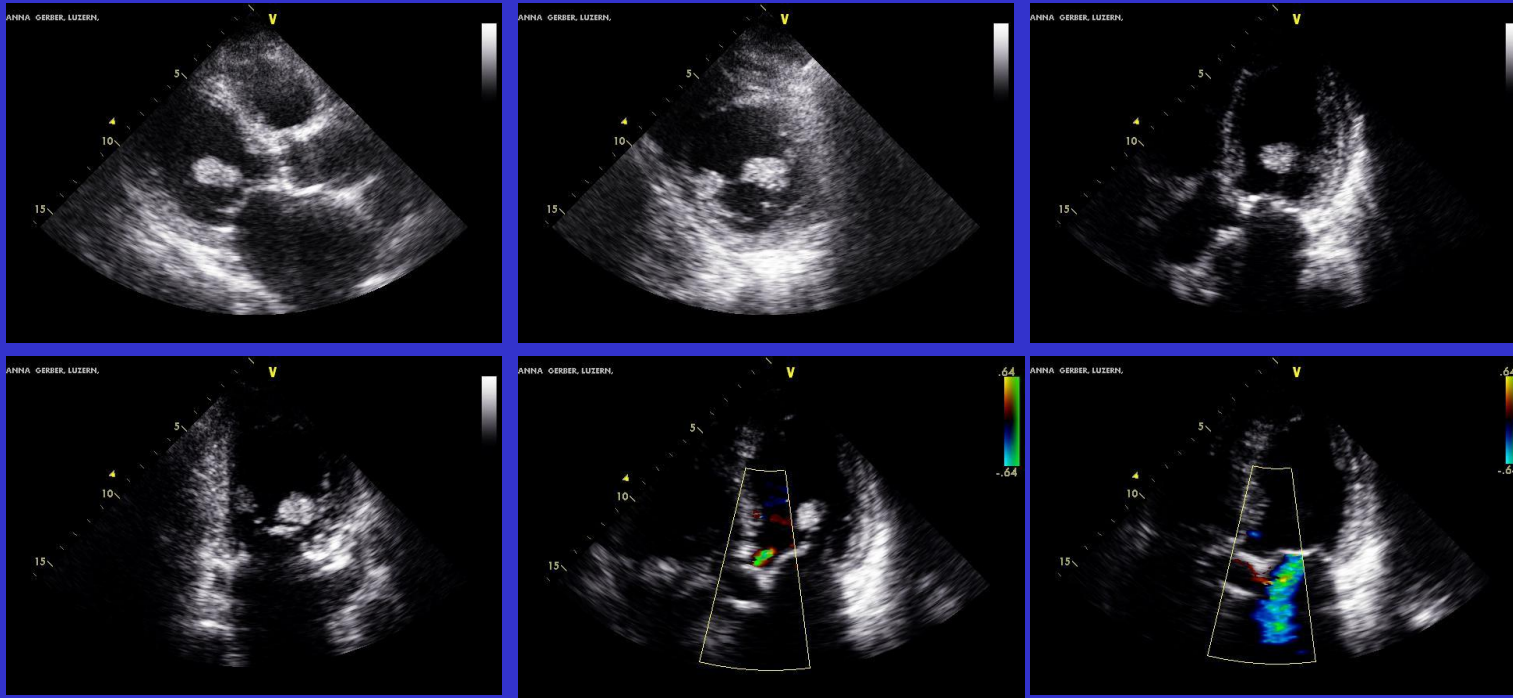
- a) thrombus
- b) myxoma
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Echocardiography in the old people's home with VIVID-I



Q 2

Next step is

- a) TEE
- b) Surgery
- c) Simple Anticoagulation



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How to proceed now ?

The lady is fine
She had no cerebrovascular incidents
She wishes not to operate
Her risk for embolization is high
Her MD prefers not to operate

But he and I await your thoughtful
recommendations



Video



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Fibroelastoma of the left ventricle ?

Usually small, frond-like tumor that characteristically develops on an aortic or mitral leaflet

Core of dense connective tissue that resembles chordae tendinae

Produces embolism by fragmentation or thrombus formation

Affected valve can often be repaired at surgery

Incidental tumors found on the aortic or mitral valves during other surgery should probably be removed



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Fibroma of the left ventricle ?

Large, bulky tumors that occur exclusively in the ventricles or ventricular septum

Characteristic whorled appearance from fibroblasts, collagen, and elastic fibers

Usually present in childhood

Results are good, although few patients available for followup

CMR:

T1 isointense to muscle

T2 hypointense¹, hyperintense reported²

¹Burke AP, Rosado-de-Christenson M, Templeton PA, Virmani R. Cardiac fibroma: clinicopathologic correlates and surgical treatment. J Thorac Cardiovasc Surg 1994; 108:862–870.

¹Parmley LF, Salley RK, Williams JP, Head GB III. The clinical spectrum of cardiac fibroma with diagnostic and surgical considerations: noninvasive imaging enhances management. Ann Thorac Surg 1988; 45:455–465.



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