Screening echocardiography in inherited cardiomyopathies

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In order not to overlap with the previous excellent speakers, I will start with a dilemma…

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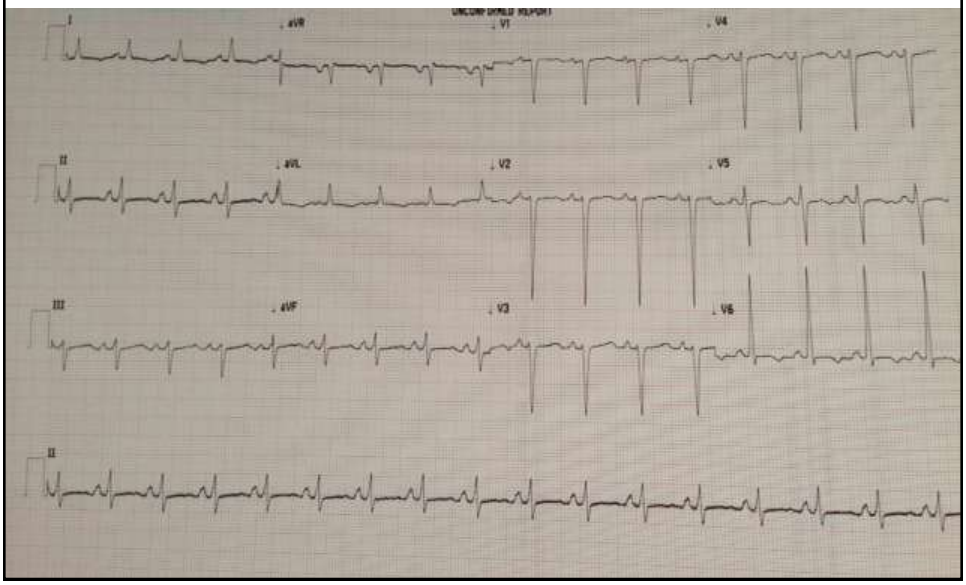
25 yrs old professional footballer is coming for annual screening…

You as the cardiologist…

Vs the professional footballer …

ECG - asymptomatic



What would be your next step?

1. I would perform stress test
2. I would do a bedside echocardiogram
3. I would let him play football
4. I wouldn't let him play football

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What happened?

- The patient was diagnosed with dilated cardiomyopathy
- He was intolerant to b-blockers
- MDT decided in favour of urgent cardiac transplant

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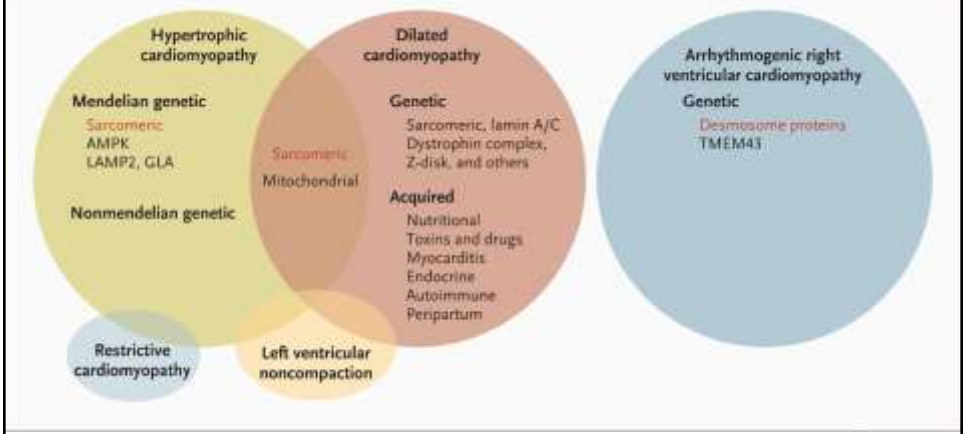
Be aware of …the inherited cardiomyopathies



N Engl J Med 2011; 364:1643-1656

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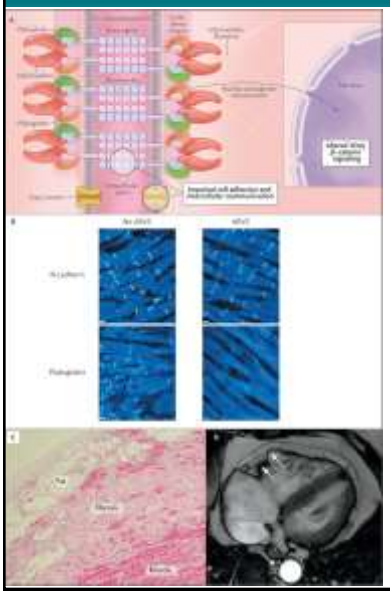


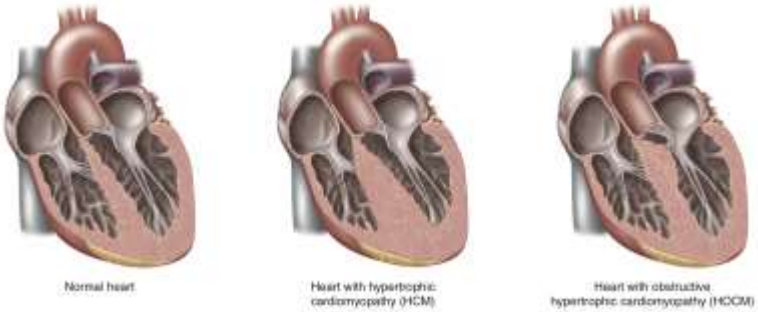
ORIGINAL ARTICLE

A New Diagnostic Test for Arrhythmogenic Right Ventricular Cardiomyopathy

N Engl J Med 2011; 364:1643-1656

Hypertrophic cardiomyopathy

- Present in 1/500 individuals
- Most common cause of sudden cardiac death (> 33% of cases)
- Usually asymptomatic with abnormal ECG



Normal heart

Heart with hypertrophic cardiomyopathy (HCM)

Heart with obstructive hypertrophic cardiomyopathy (HCOM)

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Screening Hx for cardiac disease

- Hx of discomfort or chest pain on exertion
- Unexplained syncope or near syncope (especially on exertion)
- Excessive SOB on exertion
- Prior heart murmur
- Increased blood pressure
- Premature death (< 50 yrs old) in 1 relative due to heart condition
- Premature (< 50 yrs old) disability in close relative due to cardiac condition
- Family Hx of HCM, DCM, long QT syndrome, Marfan syndrome, arrhythmia etc

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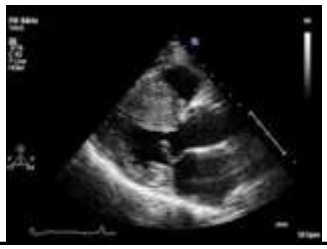
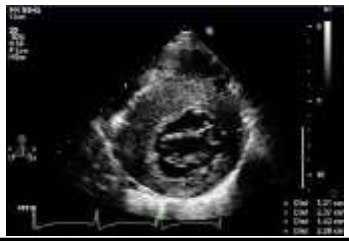
Other diseases mimicking HOCM…





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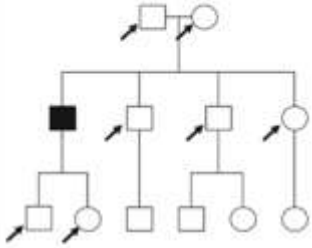
Hypertrophic cardiomyopathy

Recommended Clinical Screening of Family Members:
Physical Examination, Echocardiography, and Electrocardiogram

<12 years old	Optional Unless: Severe family history of early HCM-related death, early development of LV hypertrophy, or other adverse complications Competitive athlete in intense training Suspected symptoms
12-21 years old	Repeat evaluation every 12-18 months
>21 years old	Repeat evaluation approximately every 5 years, or in response to symptoms.
If genetic results available:	**Genotype (+)** family members: serial clinical evaluation, as above **Genotype (-)** family members: reassurance; no need for further testing



The proband is indicated by the solid square, indicating a male with a diagnosis of HCM.

Clinical evaluation is recommended for 1st degree relatives, indicated by the arrows.

Circulation: Genomic and Precision Medicine. 2013;6:118-131

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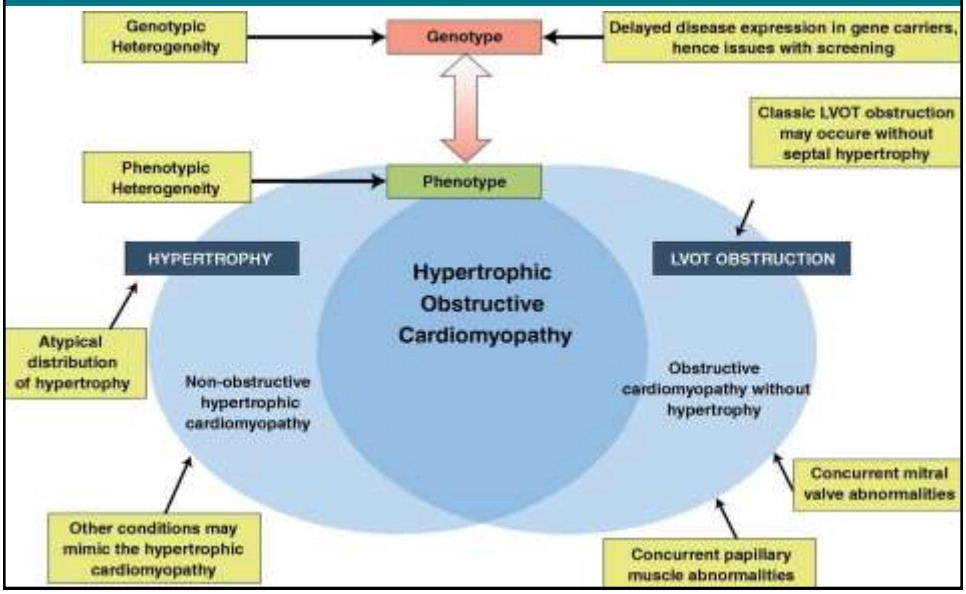
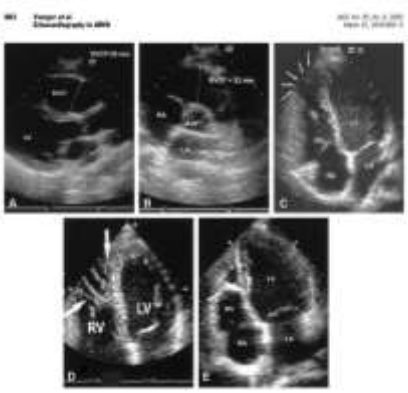
Cardiac Magnetic Resonance in Hypertrophic Cardiomyopathy

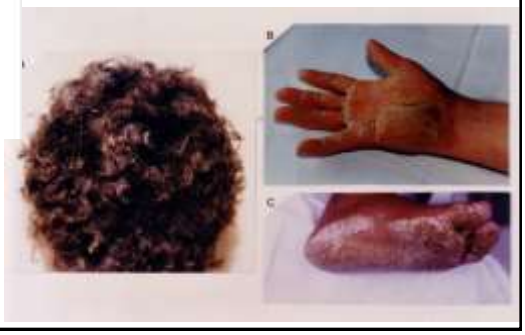
Andrew C.Y. To, Ashwat Dhillon and Milind Y. Desai



ARVC



Echocardiographic Findings in Patients Meeting Task Force Criteria for Arrhythmogenic Right Ventricular Dysplasia
J Am Coll Cardiol 2005;45:860–5

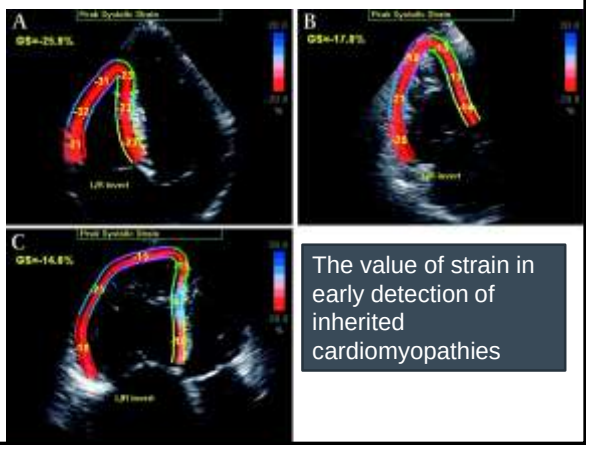


Approach to family screening in arrhythmogenic right ventricular dysplasia/cardiomyopathy

- Male
- Age
- Symptoms
- FHx
- ECG abnormality
- Holter
- Imaging

Instead of take home messages , I would like to focus on two issues…

The importance of handheld echocardiography in schools and as a screening tool in areas which don't have access to tertiary healthcare



The value of strain in early detection of inherited cardiomyopathies

Thank you

HIT
EACVI's Heart Imagers of Tomorrow

Submit your clinical case for ESC congress 2018 in Munich

- If you are under 35 years old
- Deadline for case proposal: 1st March 2018
- Qualify for Best Case Award
- www.escardio.org