Hypertrophic cardiomyopathy and ischemic heart disease
A case presentation

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The story begins….

- 59 year old male with HCM presents in OPC for routine F/U
- DM2, hyperlipidemic
- Medication: aspirin, metoprolol (100 mg TID), atorvastatin.
- 1994: HCM diagnosed (atypical chest pain under b-blockers)
- 2011: non-ST MI – DES in LAD (good result but no relief)
- 2014: orthostatic hypotension with presyncopal episodes
- New echo interrogation plus coronary angiogram (later on further case presentation…)
- Family history: father died suddenly at 65 (possible cardiac death)
- Unemployed (no insurance!), no children
Some more data

- 24 hours Holter monitoring: normal with no arrhythmias
2011 PCI
1st echocardiographic study
June 2014
LA: 37 mm
Intracavitary peak gradient 53 mmHg!!

Vel: 364 cm/s
PG: 53 mmHg
Peak Systolic Strain

HR (Avg.) = 74 bpm
Time SD = 11.5 ms

AP3 L. Strain = -15.1 %
AP4 L. Strain = -18.0 %
AP2 L. Strain = -18.7 %
Global L. Strain = -17.3 %
CMR
July 2014
Late gadolinium enhancement
Optimization of the medication

- Metoprolol 100 mg x 3
- Significant improvement (asymptomatic!)
2\textsuperscript{nd} echocardiographic study
July 2014
Peak gradient 29 mmHg!!
Exercise treadmill test under optimized b-blocker therapy (August 2014)

- 8 min duration
- Test was terminated due to mild chest discomfort along with, ST segment depression (3 mm) and a failure to increase blood pressure (≈130/80 during test)
- Initially, medical approach but relapse of angina
- Finally (1/2016) new coronary angiogram
Peak gradient 16 mmHg!!
Updated clinical condition and conclusions

- Great clinical improvement with only minor shortness of breath on exertion
- Speckle tracking information further explains the mechanistic explanation of further midventricular gradient deterioration
- Coronary artery disease is not always a harmful process!