

Structural heart disease Push and pull..

12th June 2018
Jim Newton

Case 1

- 42 year old male
- Slightly overweight
- No past medical history
- On and off smoker
- Works with father in antique bookshop

Clinical story

- Lifting heavy box of books into boot of car
- Sudden onset chest pain
- Sharp, central, severe
- Sweaty
- Then increasingly breathless
- Ambulance called
- Admitted to A&E in pulmonary oedema
- Sinus tachycardia on ECG

What could be going on?

Progress

- CT aorta – no dissection
- Widespread pulmonary oedema
- Transferred to CCU
- Intubated

Emergency TOE



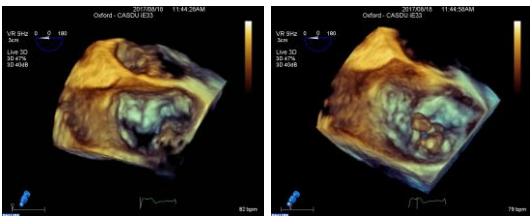
Emergency TOE



Emergency TOE



Emergency TOE



Coronary angio

- Normal coronaries
- Troponin 0.08

Images for case report?

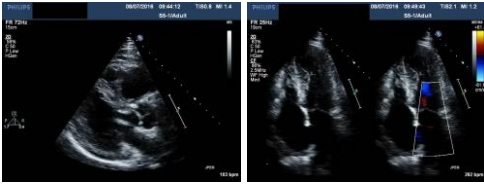
Images for case report?

Images in Cardiovascular Medicine

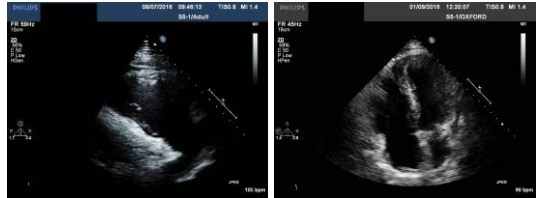
Spontaneous Rupture of a Papillary Muscle

Chi Young Shim, MD, PhD; Young Jin Kim, MD, PhD; Jang-Won Son, MD; Hyuk-Jae Chang, MD, PhD;
Geu-Ru Hong, MD, PhD; Jong-Won Ha, MD, PhD; Nam-Sik Chung, MD, PhD

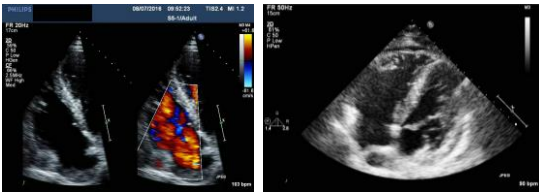
Another unusual variant



Another unusual variant



Another unusual variant



Imaging for case report?

Valve repair for tricuspid papillary muscle rupture late after percutaneous coronary intervention

Shinji Kanemitsu, Shunsuke Sakamoto, Naoki Yamamoto, Hideto Shimpo

European Journal of Cardio-Thoracic Surgery, ezy175,

<https://doi.org/10.1093/ejcts/ezy175>

Published: 03 May 2018 Article history

Imaging for case report?

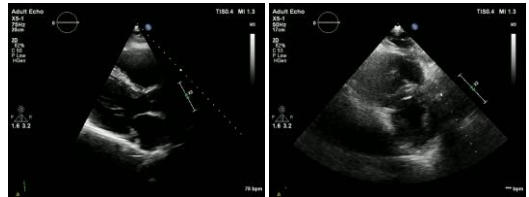
Case 2

- 52 year old male
- Very active – works as firefighter instructor
- CABG 7 years ago for three vessel coronary disease
- Amateur weight lifter
- Health fanatic...

Admitted from echo clinic

- Referred by GP
- Increasing dyspnoea on exertion
- Can't keep up with trainees
- Can only deadlift 150Kg
- No pain
- Otherwise completely well

Transthoracic echo



Transthoracic echo

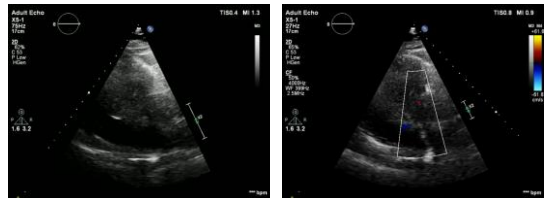


What have we missed?

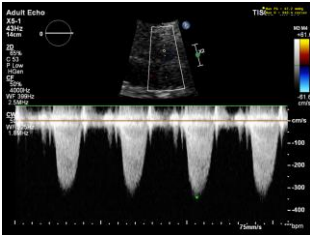
Subcostal view



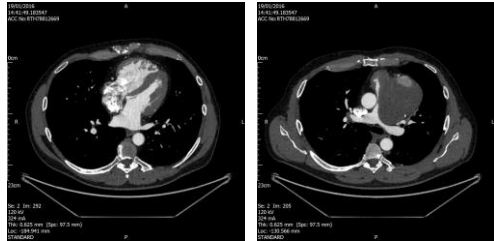
Subcostal RV outflow view



Subcostal RVOT CW Doppler



CT imaging



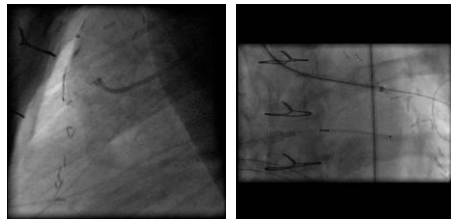
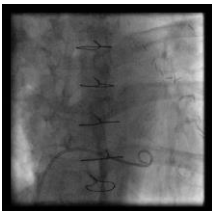
Diagnosis

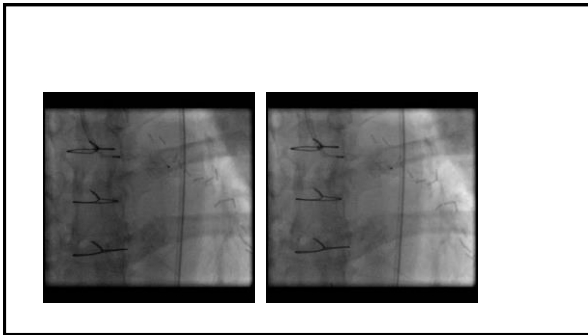
- Massive vein graft aneurysm
- Compressing pulmonary artery
- Severe RV outflow obstruction

What would you do?

1. Anticoagulate
2. Re-do surgery
3. Stent the pulmonary artery
4. Other

What we did

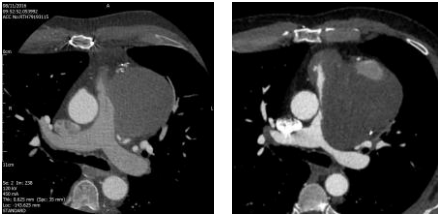




CT 6 weeks later



CT 6 weeks later



Take home messages

- Papillary muscles can pull apart without ischaemia..
- Vein grafts can push on other structures...