

**Mrs CY**

**Age 77**

# History

- **2000**:Age 60: MVR 27mm St Jude Valve (severe MR)
- **2015**:Age 75: Paravalvular mitral leak, haemolytic anaemia, tricuspid incompetence. **27mm Porcine valve** and 29mm Duran ring tricuspid annuloplasty
- Surgeons notes: St Jude in pristine condition. Small dehiscence at 5-6 o'clock which could have been easily repaired with 2 pledgets
- **Patient had requested** beforehand to explant St Jude and replace with porcine

## First consultation (second opinion, self sought)

- March **2017**: Age 77 : 2 years post MVR
- While walking in Umhlanga Rocks felt dyspnoeic, went pale and almost fainted, took a while to recover, no palpitations
- Second episode the following day on the same walk
- Subsequently diminished exercise tolerance, can't cope with slopes and stairs
- Diagnosis: severely stenosed MV, referred for redo MVR

# STS for Mrs CY

- Risk of Mortality: 4.883%
- Morbidity or Mortality: 24.815%
- Long Length of Stay: 11.169%
- Short Length of Stay: 16.256%
- Permanent Stroke: 1.858%
- Prolonged Ventilation: 14.415%
- Deep Sternal Wound Infection: 0.173%
- Renal Failure: 3.775%
- Reoperation: 10.006%

# Findings

- SR 56/minute. BP 158/75. No evidence of congestion. 2/4 MDM. 2/6 AESM.
- ECG: RBBB, SR, PR 160ms, QRS 150ms
- ECHO: EF 69-73%, Aortic gradient 23/13, AVA 1,6cm<sup>2</sup>, PAP 65 mmHg
- Mitral valve- septal leaflet thickened with diminished motion, increased colour flow in diastole, gradient 32/14, MVA 0,9cm<sup>2</sup>

# Questions that arise

- Referral for 3<sup>rd</sup> operation, and if so place a bioprosthetic or mechanical?
- Referral for percutaneous aortic valve in mitral valve procedure?
- None of the above and continue with medical therapy: on no diuretic currently
- Anything else?

# My decision (patient refused warfarin because of prior experience)

- Rivaroxaban 20 mg daily

# Sorin V Pislaru

- **The stentless design** is thought to be less thrombogenic, but there are so few, because these are still very new, that we cannot really comment. No stentless valves thrombosed in our series, so we are waiting to see
- **I want to emphasize the misconception about when BPVT occurs**
- **We noticed in our series that the peak incidence was the second year** after implantation, and the longest in our published series was about **7 years** after implantation.
- Just a few months ago, we identified a **patient 10 years** after implantation with a confirmed BPVT, successfully treated with warfarin.

# Sorin V Pislaru

- So what we suggested was to consider the **possibility whenever the gradient is more than 50% above the baseline value** or above the published reference value (if you do not have the postimplant data) and you have **thickened leaflets**.
- In our series, nine out of 12 patients with thrombosed aortic valves had been diagnosed by TEE, but in **three out of 12 we were not able to identify it**, even if there was confirmation at pathology of the thrombus being present.
- So it is **quite a challenge**. We do not know how well **CT** fares, so CT is another possibility to look at this.
- Other modalities are unlikely to play a role in the diagnosis

*Eur J Cardiothorac Surg* 2014; DOI:10.1093/ejcts/ezu201.

# Sorin V Pislaru

- 13 of 15 patients treated with **warfarin** resolved
- We suggested that **vitamin-K antagonists should be considered for first-line therapy**
- If the patient has hemodynamic instability, a large thrombus burden, or a mobile thrombus that you are afraid may embolize, then obviously you need to consider surgery or thrombolytics

# What about DOACS for anticoagulation? Do these agents have any role?

- **This is a complete unknown**
- I would discourage anybody from treating with novel anticoagulants until we have some sort of evidence that they work.
- The mechanical valves and novel anticoagulants was a disaster story.

# Repeat visit 02/06/2017

- Symptomatically much better
- Back to her job, managing a family supermarket
- Audible short MDM
- Mitral valve: Gradients 18/5,65; MVA 2 cm<sup>2</sup>
- PAP 40 mmHg

# Bioprosthetic mitral valve thrombosis

**Table 4: ACC/AHA Recommendations for Antithrombotic Therapy in Patients With Bioprosthetic Heart Valves<sup>13</sup>**

VKA Therapy with target INR of 2.5 (range 2.0 to 3.0):
<ul style="list-style-type: none"><li>• For the first 3 months after bioprosthetic aortic valve replacement (<i>Class IIb recommendation; Level of evidence B</i>)</li></ul>
<ul style="list-style-type: none"><li>• For the first 3 months after bioprosthetic mitral valve replacement (<i>Class IIa recommendation; Level of evidence C</i>)</li></ul>
Antiplatelet Therapy
<ul style="list-style-type: none"><li>• After bioprosthetic aortic or mitral valve replacement at a dose of 75 to 100 mg/day (<i>Class IIa recommendation; Level of evidence: B</i>)</li></ul>

