The Path Less Travelled

Nishant Jain MD

Special thanks to Dr. Hussam Suradi, Dr. Weili Zheng & Dr. Laith Derbas

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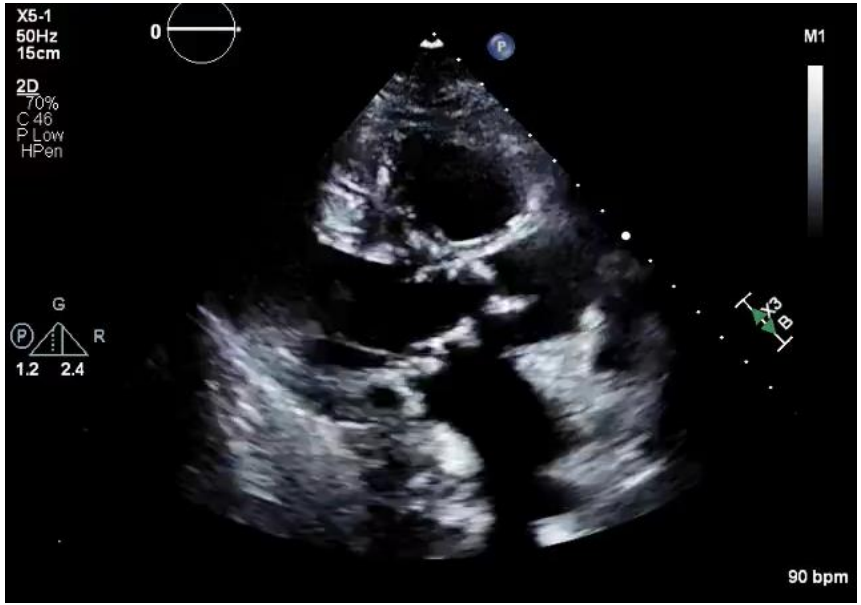
Disclosure of Relevant Financial Relationships

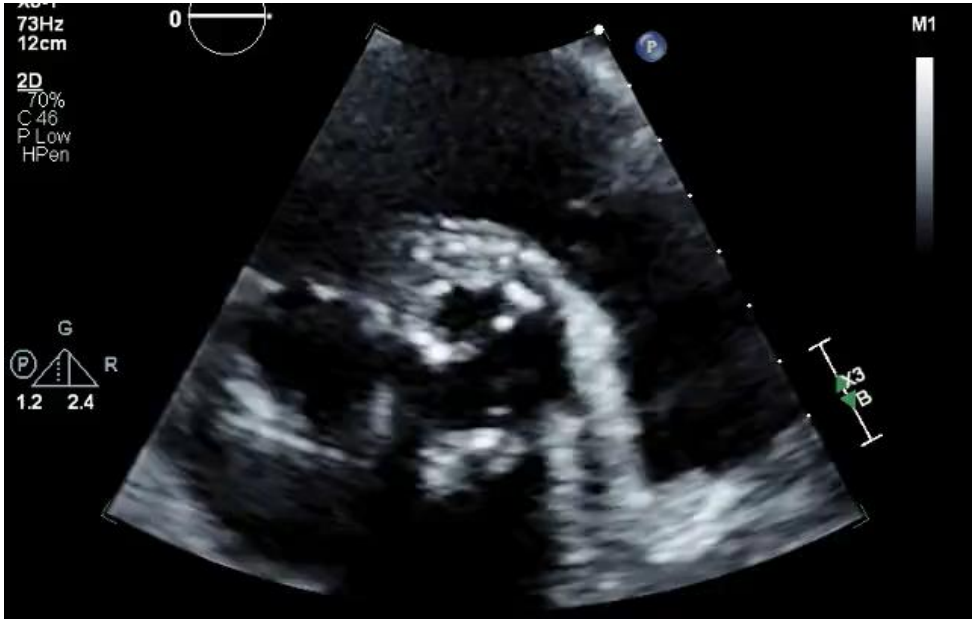
I, Nishant Jain DO NOT have any financial relationships to disclose.

Patient History

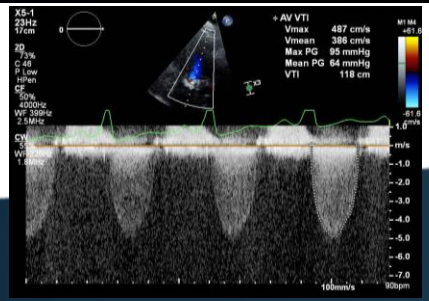
- 75 F with a bicuspid aortic valve s/p TAVR in 2008 (21mm Edwards Magna), scleroderma with systemic sclerosis c/b pulmonary hypertension, CLL (well controlled), CHB s/p DC PPM who presents to Rush University for second opinion after failed attempt at another quaternary center.
- Unable to cross the prosthetic valve (21mm Edwards Magna)
  - Multiple catheters: JR4, JR5, AL1, AL 0.75, Jacky, Hockey Stick
  - Multiple wires: straight-tip wire, Glidewire, Grandslam coronary wire

TTE from 3 months prior

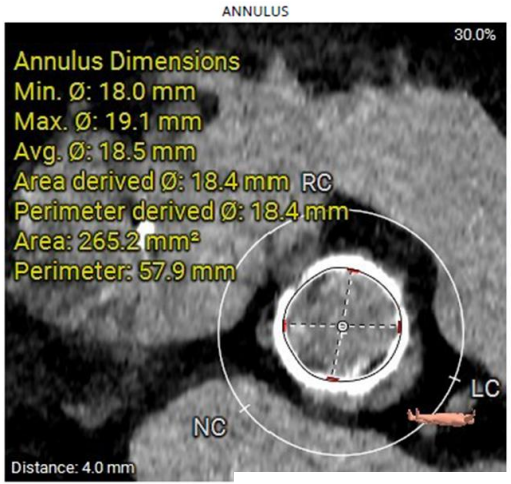


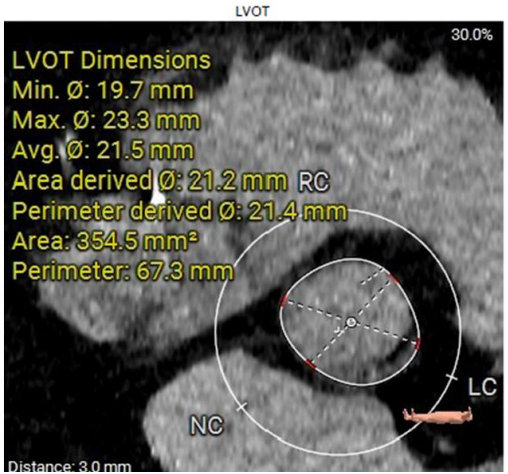


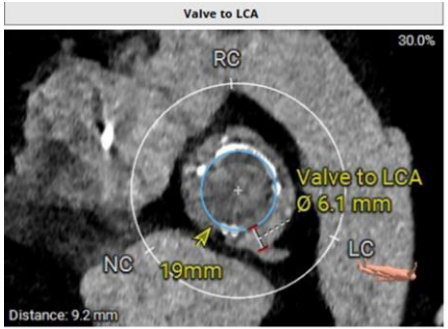
Very Severe/Critical AS (mgrad 60, DVI 0.12, SV 29ml) LVEF 55%

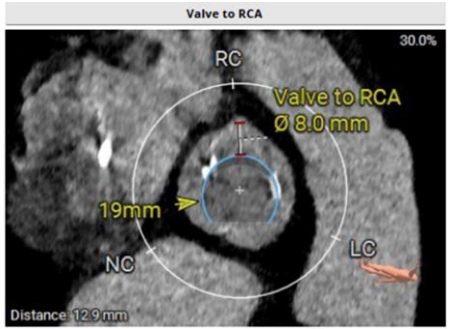


CT from 3 months prior

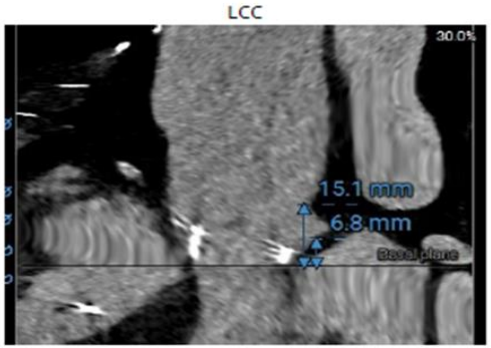


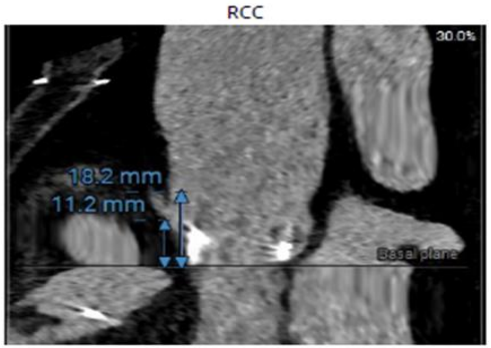


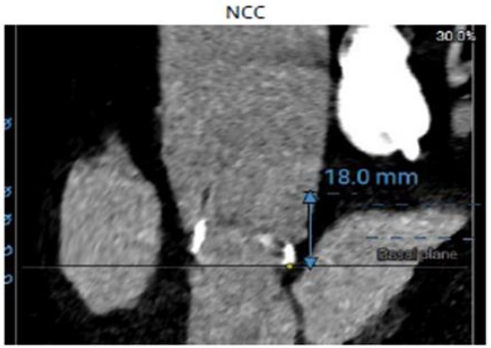




SINUS HEIGHT



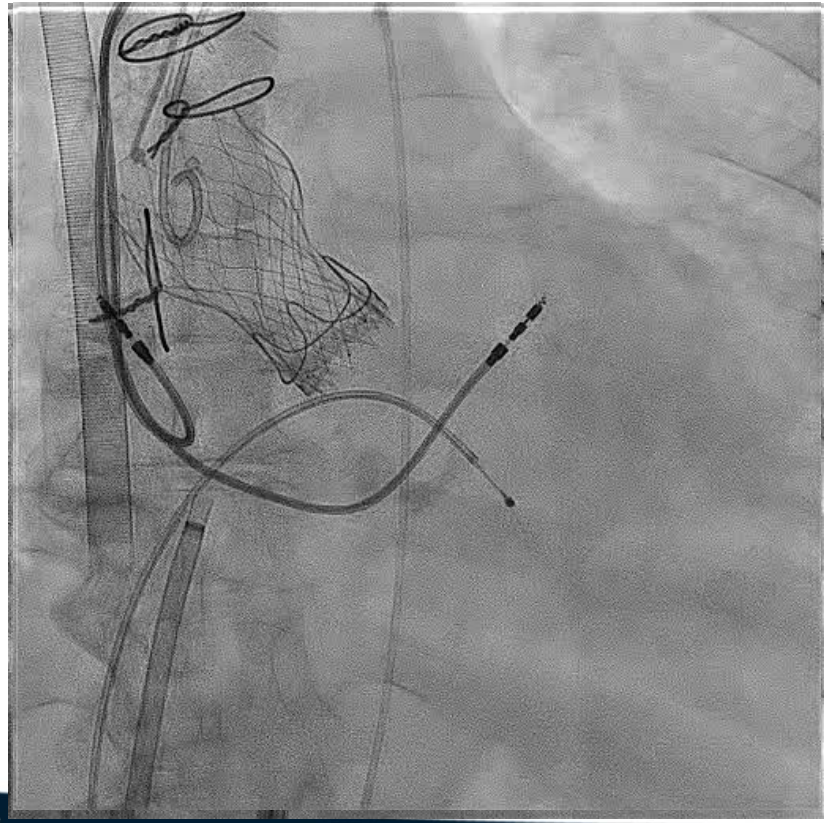


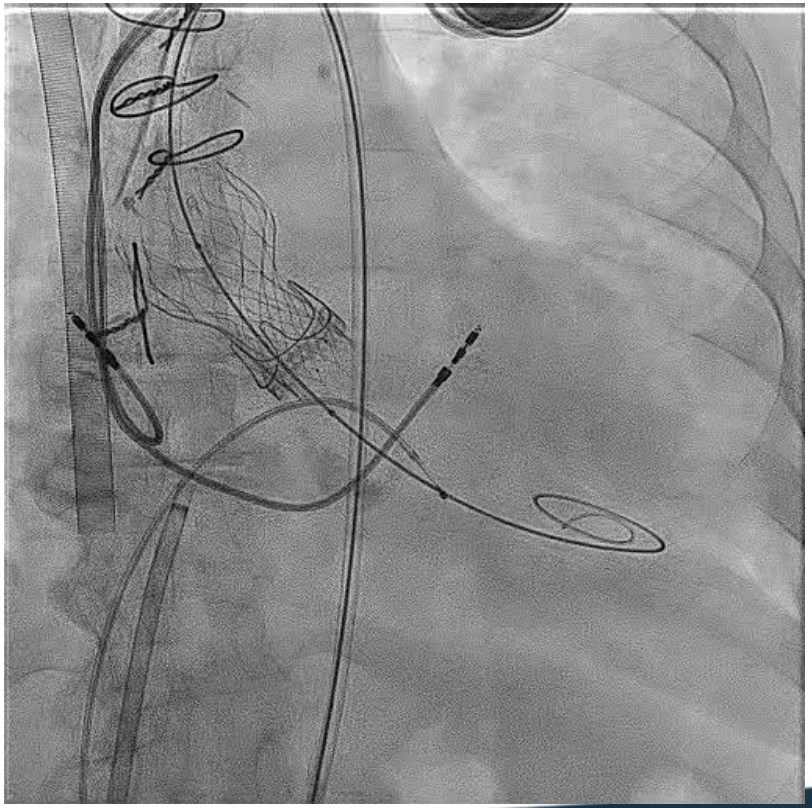


Clinic -> Hospital presentation

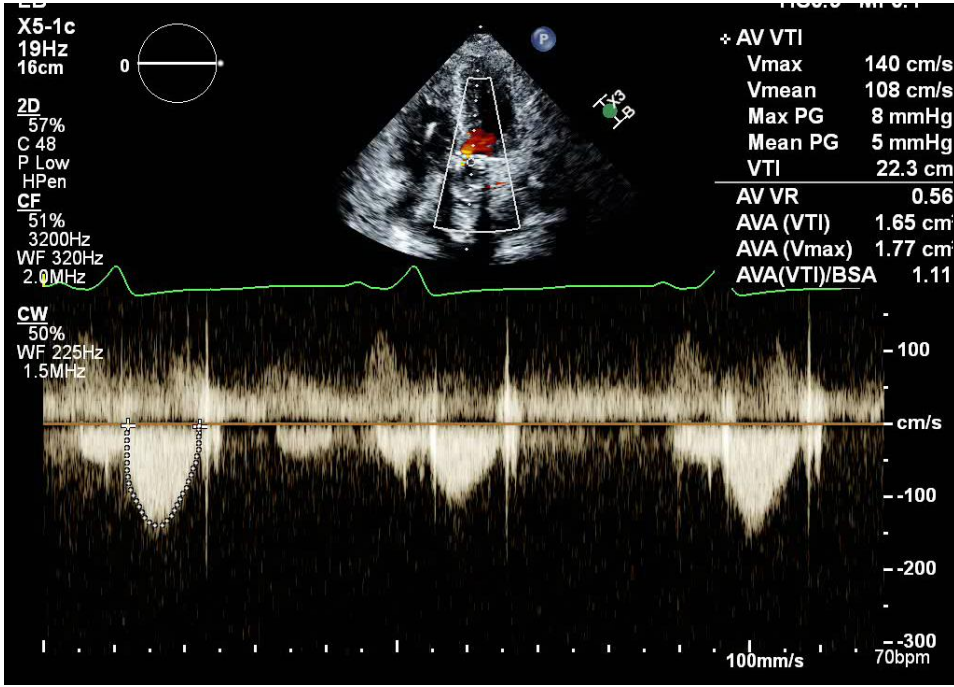
- Presents to clinic in a wheelchair in distress and direct admitted to CCU.
  - Initial labs: lactate 6.7 ->17.0, BNP 4.4K
  - Placed on levo, epi and vasopressin and urgently taken to hybrid OR
  - Patient arrests enroute to hybrid OR!
  - Plan:
    - Step 1: peripheral VA ECMO [Outflow L CFA (17Fr) | Inflow R IJ (23 Fr)]
    - Step 2: brief attempt at retrograde crossing -> antegrade-retrograde TAVR (23mm self expanding) with ICE guidance

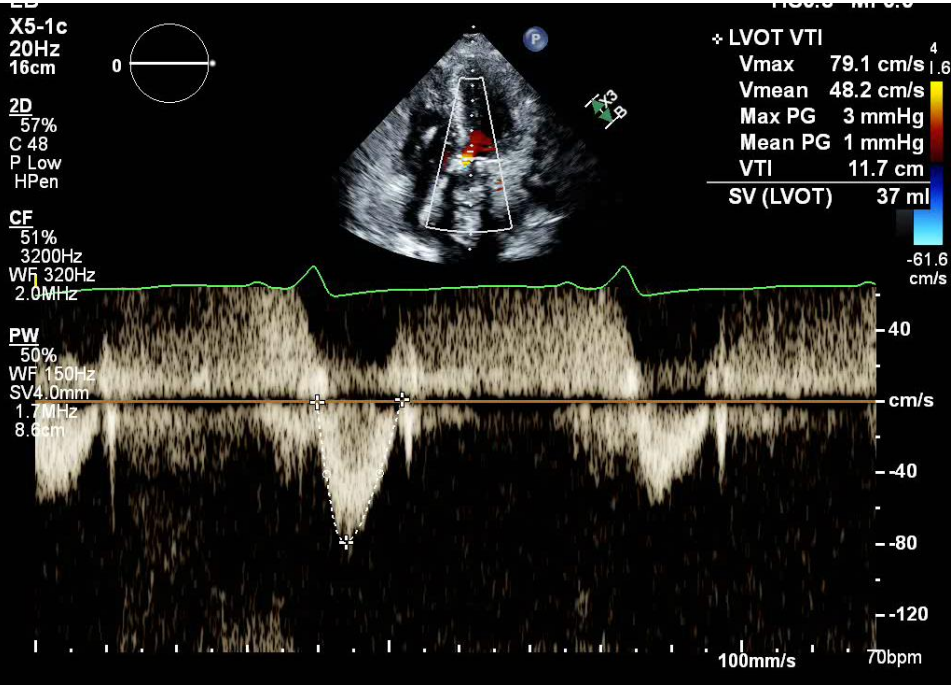
Procedure





Post Procedure





LVEF 50%, RV dilated and markedly reduced, functioning bioprosthetic valve with mild perivalvular regurgitation. Vmax 1.4cm/s | VTI ratio 0.50 | AVA 1.65cm2 | SV 37ml

Conclusion & Take-Home Points

- Patient was able to wean off all pressors and support 48 hours after procedure. Unfortunately, POD 4 patient suffered from a GI and brain bleed and was placed on hospice care.
- Antegrade-Retrograde approach is technically feasible approach to uncrossable aortic valves.
- **TAVR Early! Three months had passed since we were able to get patient into our system. Unfortunately, once seen in our system and despite expedited admission we were unable to achieve the desired outcome.**