

- Title

## Double Trouble

- History and Physical

A 42 years gentleman with underlying CRHD severe MR, Hypertension, Bronchial Asthma and history of AVNRT underwent RFA on June 2010.

He presented again with worsening dyspnea

BP:118/79

HR: 60

CVS: Soft S1, pan-systolic murmur of MR

- Imaging

TEE : EF 63% with no RWMA, LVIDd of 5.5cm

Thickened and prolapsed mitral valve with partial flail of PMVL and ruptured P2 scallop chord. Severe MR, with anteriorly jet; MR EROA is 0.52cm<sup>2</sup> and regurgitant volume is 75ml, PAP of 30/9.

- Indication for Intervention

Symptomatic Severe MR refused MV surgery.

- Intervention

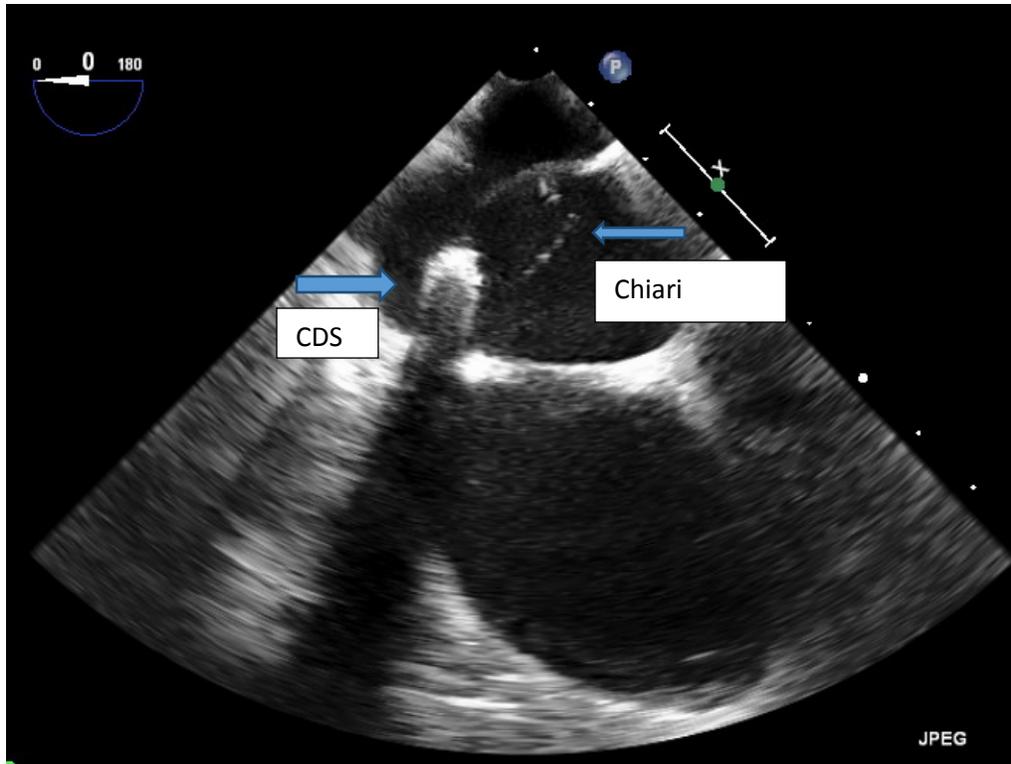
Mitraclip implantation.

Procedure :

Pre-procedural, TEE was done & showed giant Chiari network in right atrium which never appreciated before, as additional to TTE finding. The thought was to stop and refer surgery to avoid chiari embolization but decided to proceed because patient is symptomatic and refuses surgery.

Procedure went well but after the inter-atrial septum puncture the trouble comes. While advancing the Mitraclip delivery system (mitral CDS) into left atrium (LA), we noticed the chiari network dragged into LA, and upon attempt to release the clip, the strands were clinging to the clip at the mitral leaflet and floated away.

Plan to stop and remove the delivery system to avoid embolization of Chiari's strands, but noted that the strand adhere to Mitral CDS. We try to release it in its place with many manipulation but it was unsuccessful.



Options are to

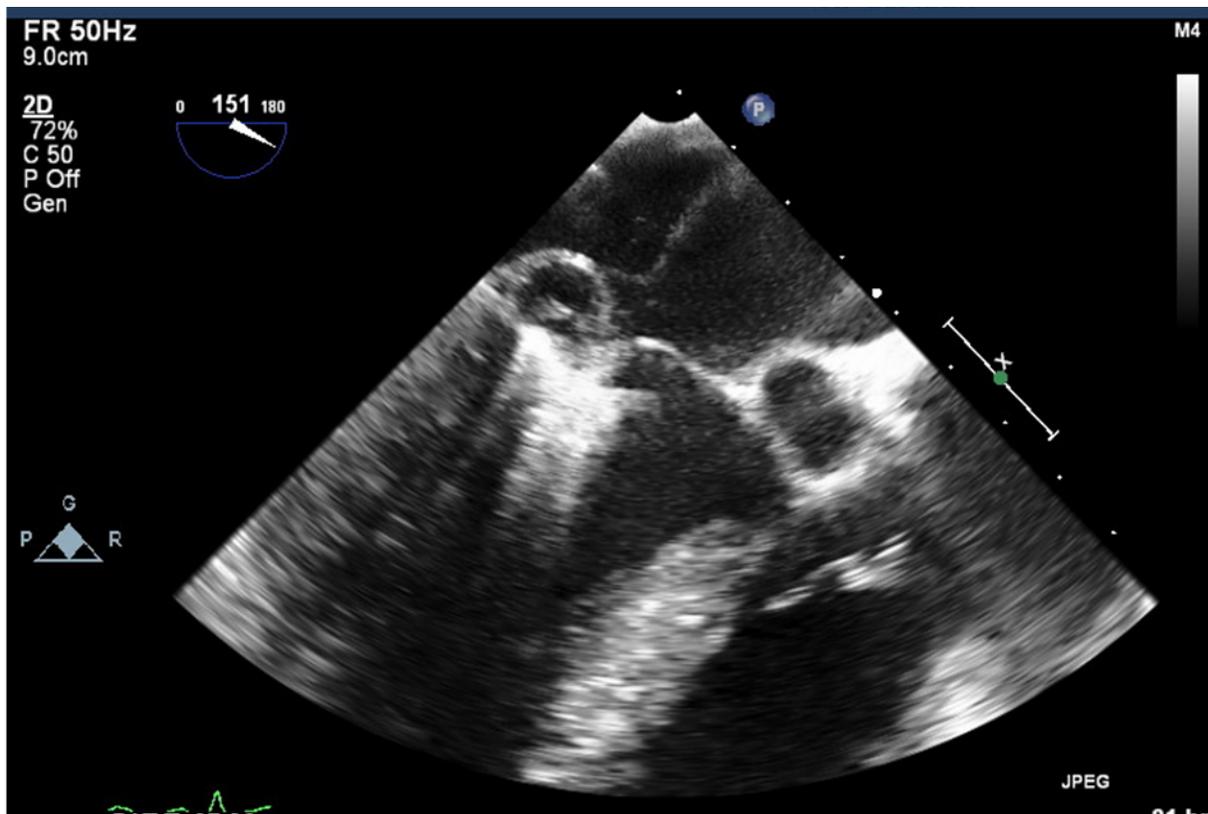
1. Deploy the Mitral clip CDS with chiari ,hoping the strands will be released and returns to its place in RA.
2. Stop and send patient for surgery to remove the CDS, Chiari network & repair MV.
3. Pull out the mitral CDS together with the strands.

Since surgery is not an option, we left with the double trouble, high risk of embolization if we deployed the clip with clinged chiari strand or the risk of endocardial injury by pulling the chiari strand with CDS system

Since chiari is fibrous remnant with no functions, we decided to pull the system out, we notice the whole network came out with CDS.

Patient was stable, TEE showed clean RA and other chambers no evidence of bleeding or residual network strands. A second Mitral CDS was advanced smoothly into LA, and then LV, clip deployed at A2/P2 resulted in reduction of MR. giving an excellent outcome with deploying clip and removal of chiari network.

Post procedural TEE showed, double mitral inflow orifices with reduction of MR from 4+ to trivial,



- Learning Points of the Procedure

1. Mitraclip implantation carries risks and the presence of giant chiari network may complicate it.
2. Entanglement of catheter devices in the Chiari network is a serious concern because it increases the complexity & the complication of procedures.
3. Careful selection and evaluation of recipients, adequate planning and anticipation of complications will reduce the risks of undesirable outcome and maximize the benefit of this procedure.