MITRACLIP FAILURE: ENDOSCOPIC REMOVAL FOLLOWED BY MITRAL VALVE PLASTY: CASE REPORT

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INTRODUCTION

MitraClip presents an alternative for surgical mitral valve repair. It mimics the edge-to-edge repair, known as the Alfieri-stitch. Suboptimal positioning often leads to deterioration of mitral valve function, necessitating surgical removal. This is usually done by full sternotomy. We describe a Minimally invasive approach by Video Assisted Thoracoscopy (MVATS). During the same procedure, a MAZE procedure and left atrial appendage amputation for atrial fibrillation was done.

CASE SUMMARY

A 70 y.o. male was referred to our hospital with NYHA IV dyspnea after failed MitraClip Application 2 months earlier.

PROCEDURE

- Single lumen intubation
- Femoral cannulation – jugular cannula for venous return
- 3x 5mm trocars intercostal 2, 3 and 4
- Mid-clavicular mini-thoracotomy intercostal 2

ACCESS

- By left atria
- MitraClip clearly visible: partially closed and obliquely positioned.
- Dissection and removal without leaflet damage .
- Repair of valve by annuloplasty
- Closure of perforation in A1 and cleft in P2-P3 by single sutures.
- Release of aortic clamp after 70 minutes.

POSTOPERATIVE

- Extubation after arrival on ICU
- Antibiotics due to pneumonia
- Discharge of ICU POD 6
- Discharge of hospital POD 11

DISCUSSION

MitraClip is a valid alternative for mitral valve repair in high risk patients.

Main limitation is inability to adress to address annular dilatation, leading to decreased reduction in mitral valve regurgitatoin when compared to conventional surgery.

Up to 28,4% of MitraClip patients need surgery within 4 years.

PRIMARY INDICATION?

Steady increase in MitraClip caseload means an equal increase in cases of failed application.

Surgery inevitable, despite even poorer condition of these high-risk patients after failed application.

High-risk patients can still undergo surgery with excellent result.

Need to re-evaluate exclusion criteria for surgery and inclusion criteria for MitraClip.

WHY MINIMALLY INVASIVE ?

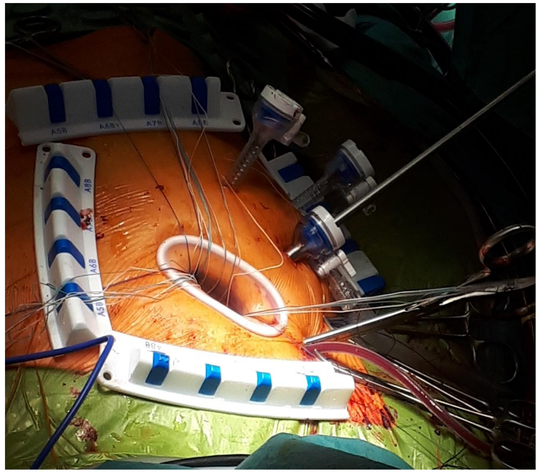
Well-known morbidity of full sternotomy is avoided.

Valve-sparing approach cancels the need for anticoagulation.

Option for future valve-replacement remains open.

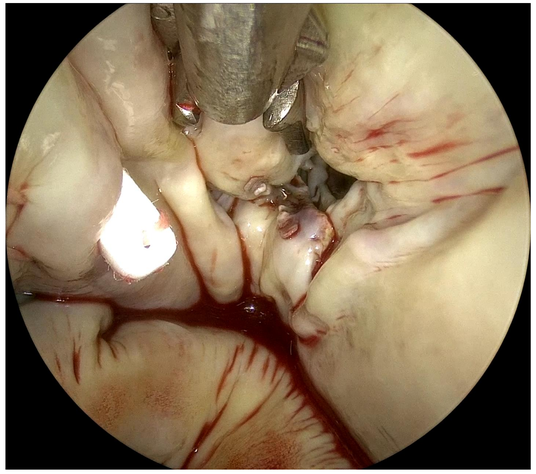
Reduction in morbidity especially beneficial for these high risk patients.

For references, please contact main author.



Above: operative setting. Note the 2 cm minithoracotomy.

Below: MitraClip when removed from mitral valve. Note its partial closure.

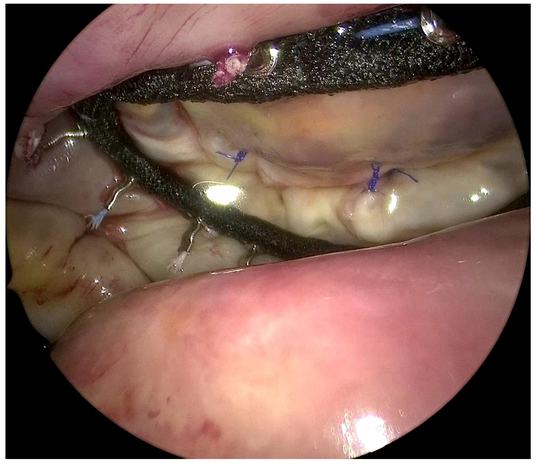


Above: MitraClip in situ. Not fully closed and obliquely positioned.
Below: Mitral ring in situ tied down by Corknot closing device. 2 single sutures for A1 perforation and cleft betweed P2-P3.



Above: Patiënt thorax at POD 1. Drain and temporary pacemaker wires still in situ.





CONCLUSION

Primary indication point of ongoing discussion.

Need for multidisciplinary approach.

Consequences of failed application underreported.

Need for futher research.

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