

The Needs of The Patients and The Customers Come First

MitraClip: One Center Experience in China

Jian-an Wang MD, PhD, FACC

President, Second Affiliated Hospital, Zhejiang University

Vice chair, Chinese Society of Cardiology

Chair, Zhejiang Society of Cardiology





Disclosure

✦ **No disclosures related to this presentation.**

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Outlines

◆ Backgrounds

◆ Our experience

◆ Case

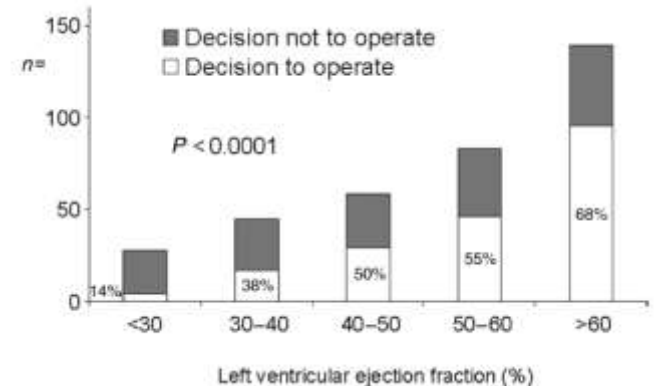
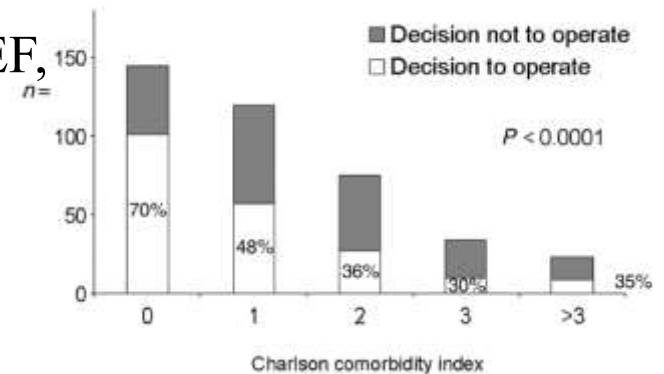
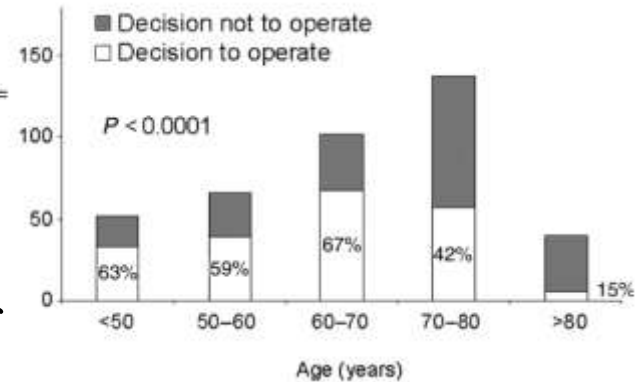
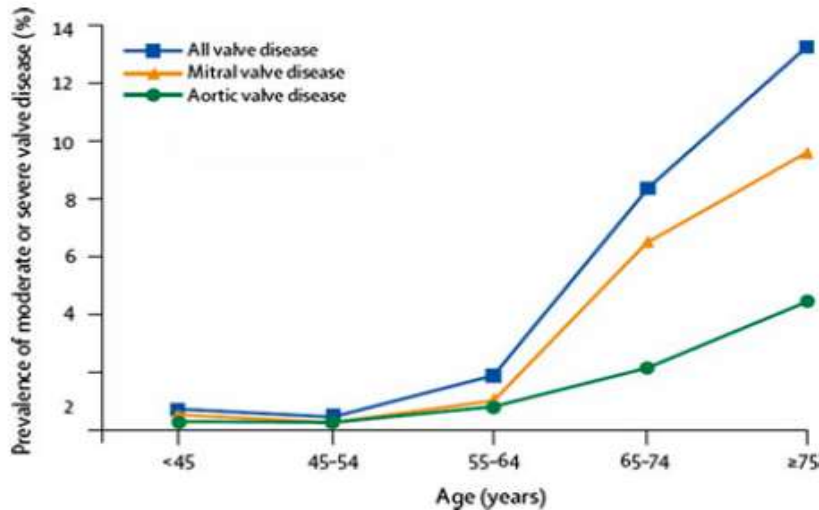
◆ Conclusion

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Backgrounds

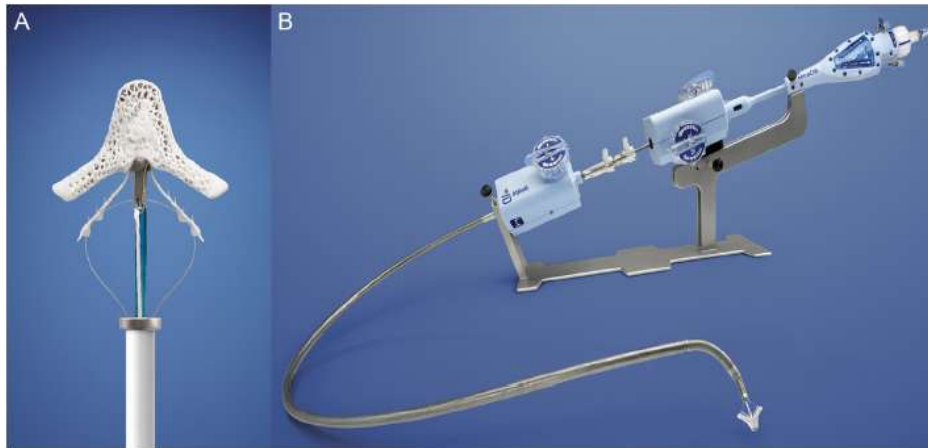
- ★ Prevalence of MR increases with increasing age, from 0.5% for 18-44 yr olds rising to 9.3% for ≥ 75 year olds.
- ★ However, up to 50% of patients with severe symptomatic MR are not referred to surgery, even if a surgical indication exists.
- ★ Reasons for denying surgery include impaired LVEF, a high operative risk, multiple comorbidities, and advanced age.





Backgrounds

- ✦ Medical therapy is ineffective in treating underlying pathophysiology and disease progression.
- ✦ Surgical repair or replacement is effective but associated with morbidity and mortality. Only ~20% of patients with severe MR undergo surgery.
- ✦ A less invasive and less risky option is necessary.
- ✦ MitraClip is promising in the management of MR. (EVEREST II, ACCESS EU, REALISM, GRASP, et al.)





MitraClip in China



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MitraClip in China

- ✦ MitraClip procedures were performed in 2 centers with 13 cases in total since May, 2012.
- ✦ We've successfully finished 10 cases of MitraClip with 1 live case in China Interventional Therapeutics (CIT2014) since October, 2013.



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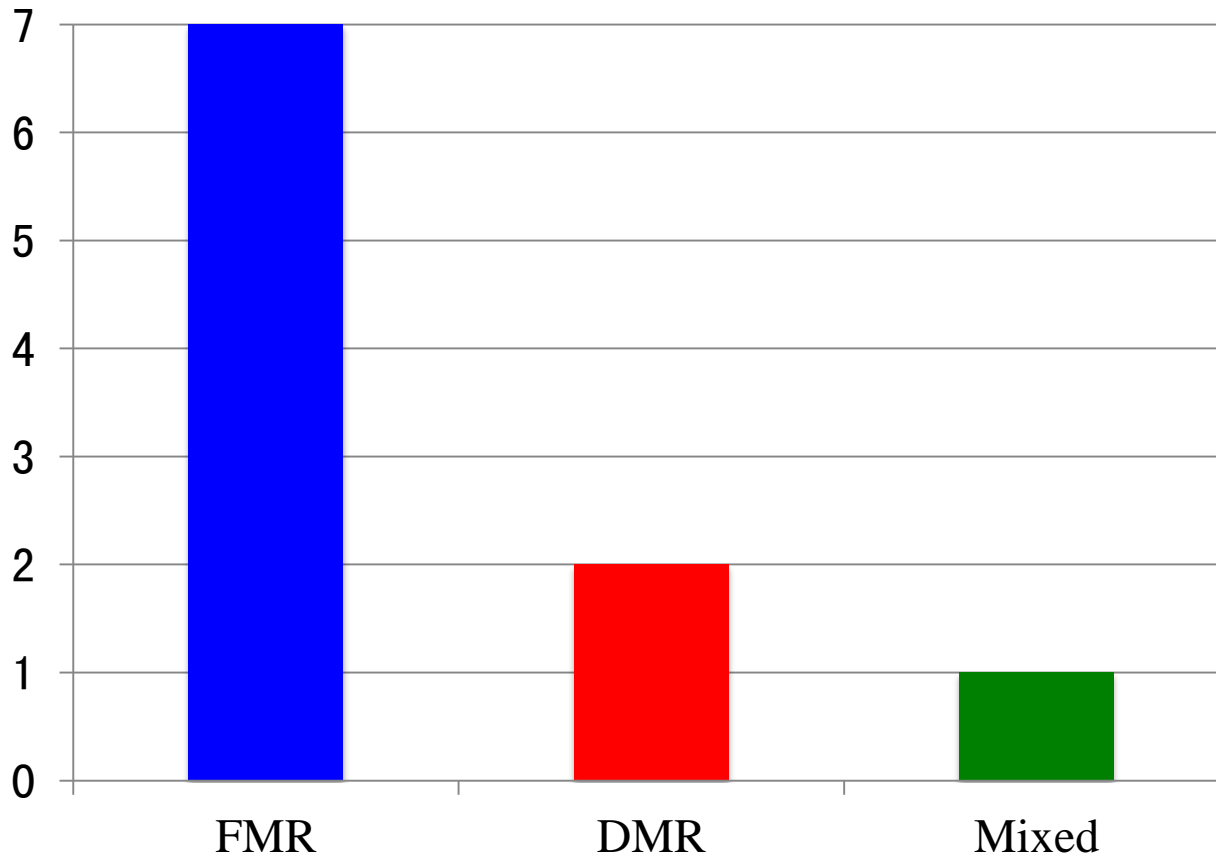


Patient Selection

- Symptomatic moderate-severe (3+) or severe (4+) chronic MR
- **Surgical high risk or in-operable determined by the heart team.**
- Regurgitant jet originates from the A2 and P2 scallops of the MV
- MV orifice area $\geq 4.0 \text{ cm}^2$
- If leaflet flail is present, width of the flail segment $< 15 \text{ mm}$, or flail gap $< 10 \text{ mm}$
- If leaflet tethering is present, coaptation depth $< 11 \text{ mm}$, or vertical coaptation length is $\geq 2 \text{ mm}$



Aetiology Comparison



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Basic Characteristics

| | N (=10) or mean \pm SD |
|---------------------|--------------------------|
| Age (yrs) | 72.6 \pm 11.5 |
| Male | 7/10 |
| NYHA III/IV | 8/10 |
| LVEF < 40% | 7/10 |
| Hypertension | 5/10 |
| Atrial Fibrillation | 7/10 |
| Prior PCI | 3/10 |
| MI | 2/10 |
| Diabetes Mellitus | 3/10 |
| COPD | 1/10 |

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Procedural Results

| | N=10 |
|--|----------|
| Successful clip implantation (one/two clips) | 10 (5/5) |
| MR reduction ≥ 2 | 10 |
| Death | 0 |
| MV surgery due to failure of procedure | 0 |
| Detachment of clip/injury of MV apparatus | 0 |
| Clip embolisation | 0 |
| Bleeding | 0 |
| Pericardial effusion | 0 |
| Significant shunt / right-heart failure | 0 |
| Stroke | 0 |
| Acute kidney failure | 0 |
| Ventilation > 24 h | 0 |
| Transfusion > 2U | 0 |

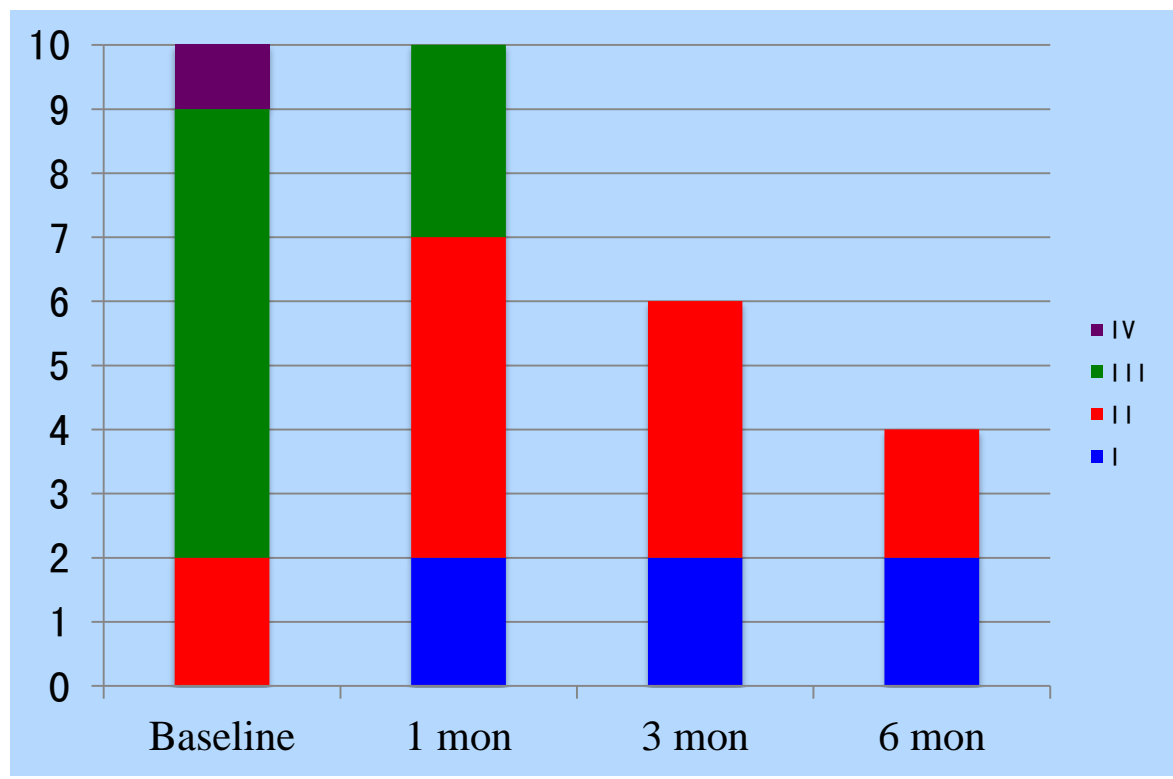


Clinical Follow Up

| Procedural characteristics | 30d (N=10) | 3 mon (N=6) | 6 mon (N=4) |
|-----------------------------------|-------------------|--------------------|--------------------|
| All cause mortality | 0 | 0 | 0 |
| Myocardial infarction | 0 | 0 | 0 |
| Cerebro-vascular accident | 0 | 0 | 0 |
| Major bleeding | 0 | 0 | 0 |
| MV surgery | 0 | 0 | 0 |
| CHF requiring re-hospitalisation | 1/10 | 1/6 | 0/4 |



Clinical Follow Up

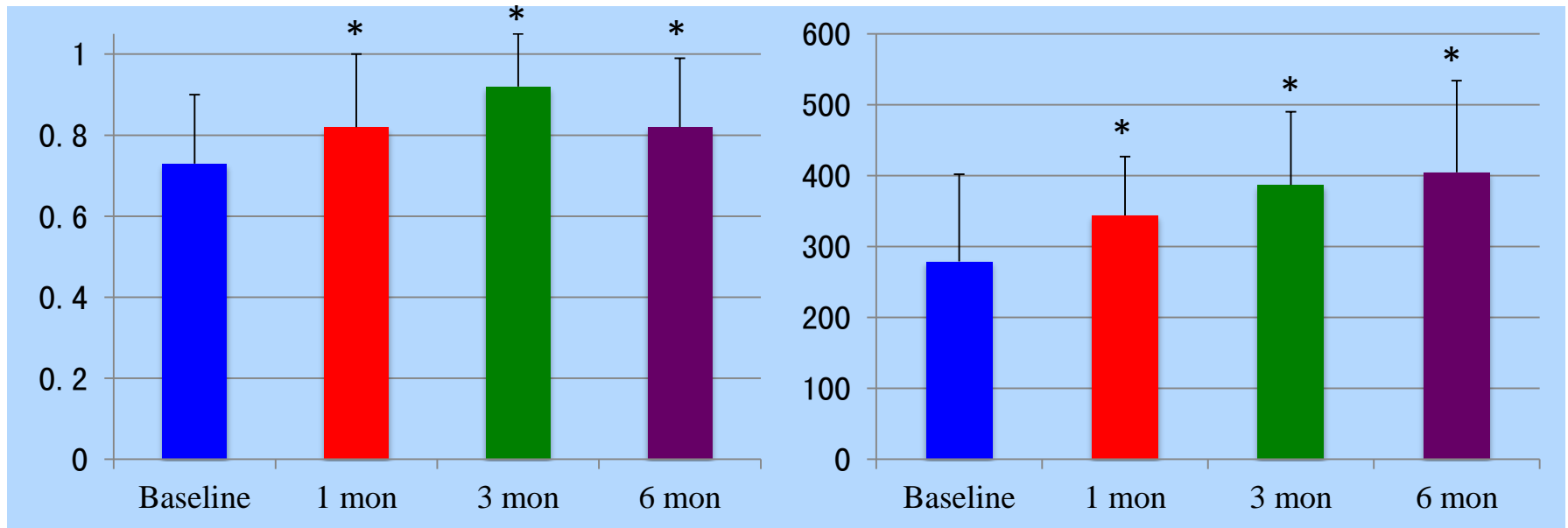


NYHA

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Clinical Follow Up



AQoL

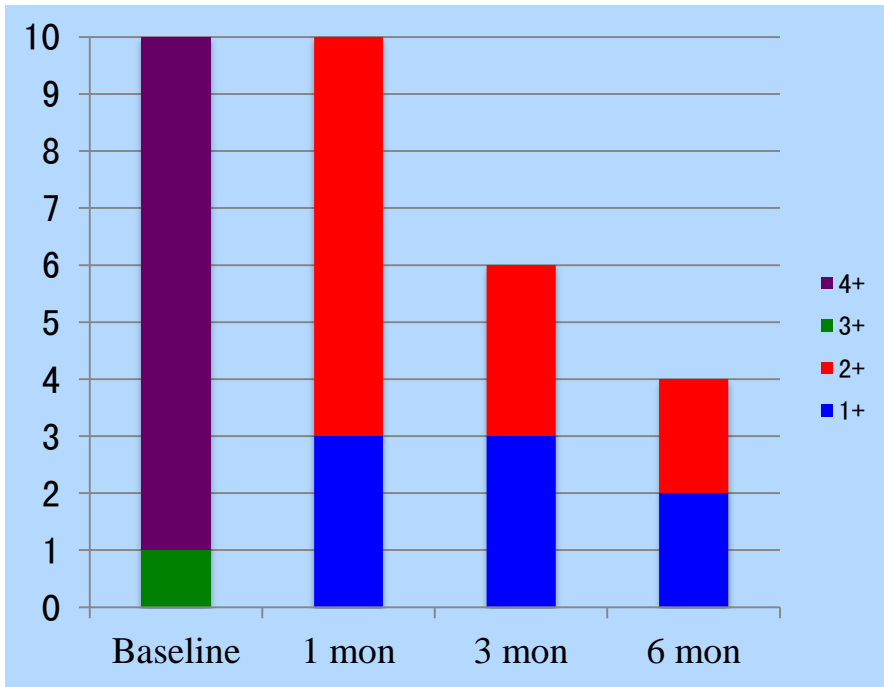
6MWT(m)

* $p < 0.05$, compared with baseline by using paired t test.

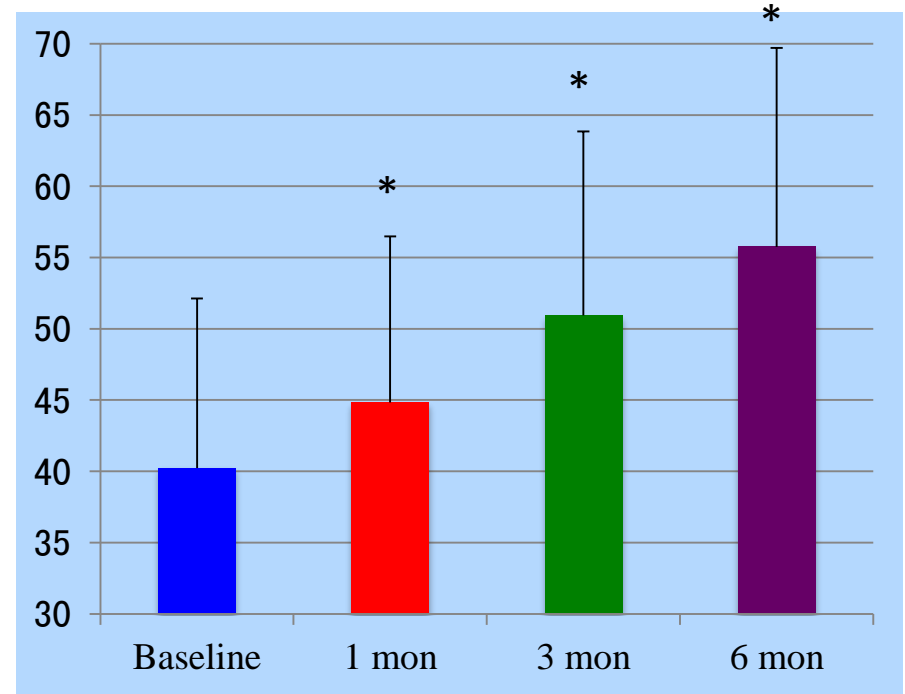
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Echo Follow Up



MR



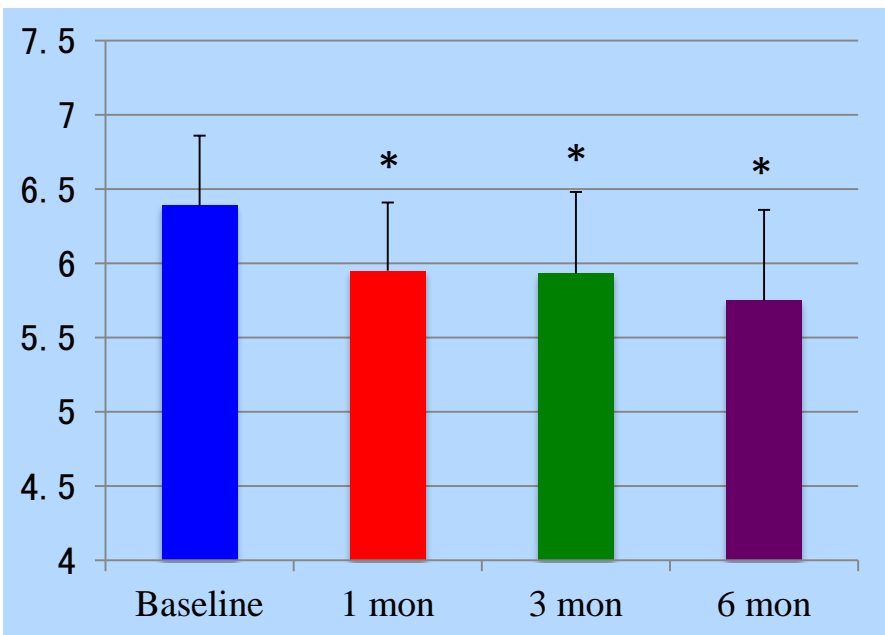
LVEF

* $p < 0.05$, compared with baseline by using paired t test.

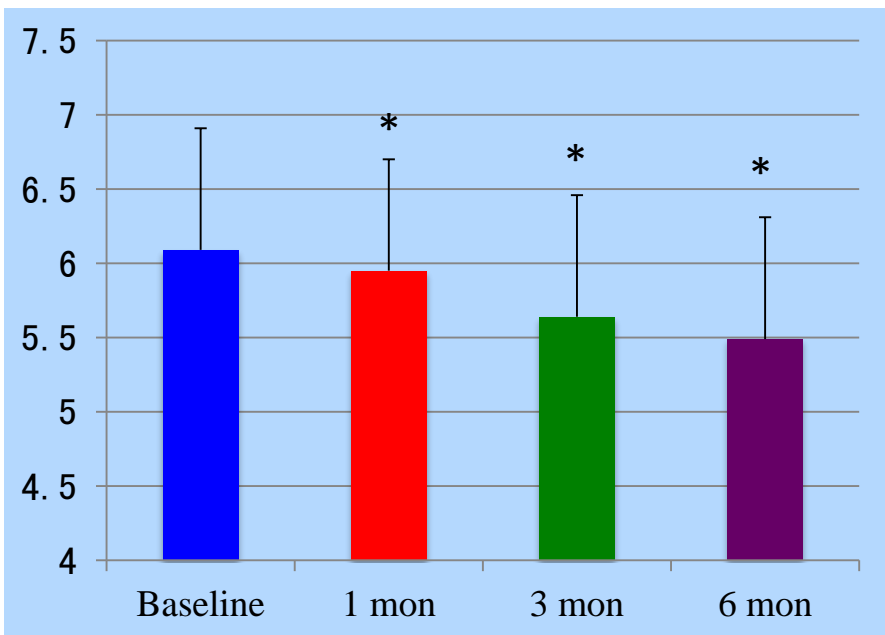
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Echo Follow Up



LA (cm)



LVEDD (cm)

* $p < 0.05$, compared with baseline by using paired t test.

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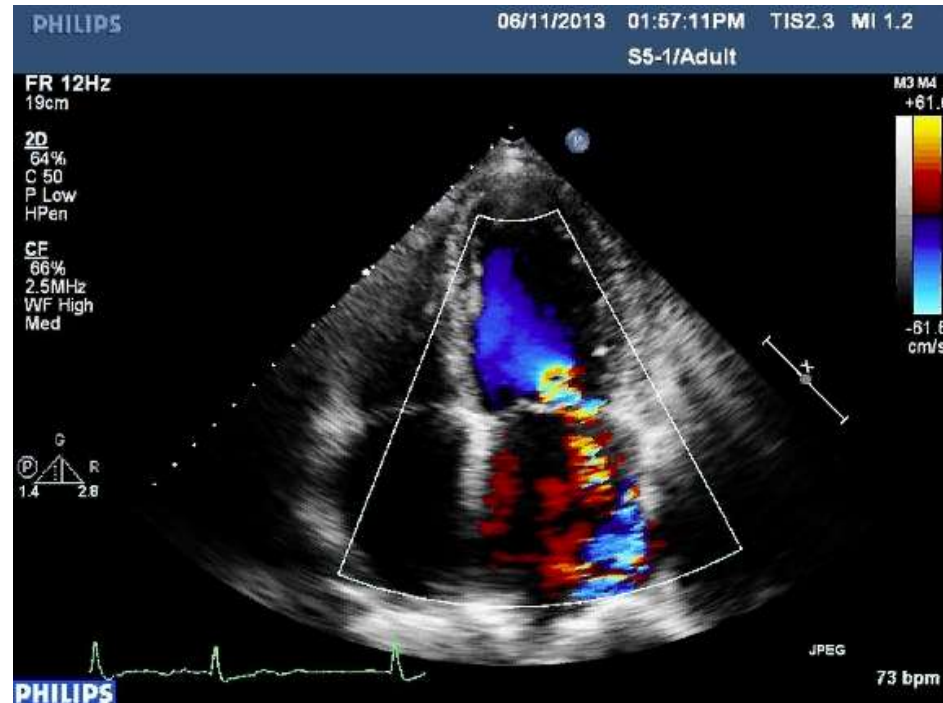
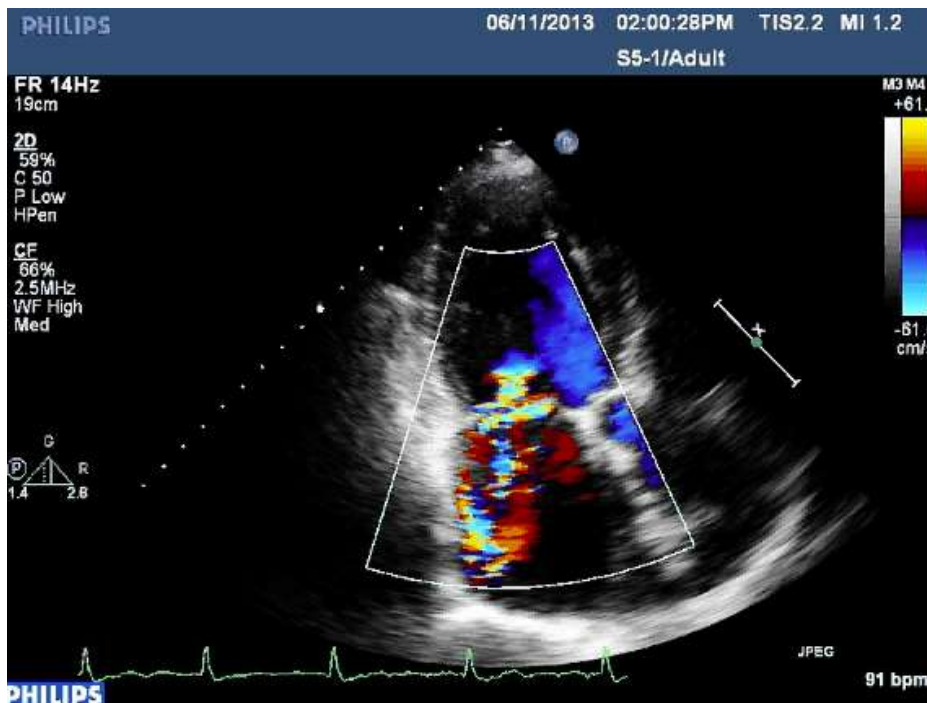


CASE

- ◆ A 86 years old male,
- ◆ Recurrent dyspnea for 4 years, aggravated for 2 months
- ◆ Cardiac history:
 1. Coronary artery disease
 - MI for 2 years
 - post-PCI
 2. Atrial fibrillation
 3. Hypertension
- ◆ Log ES 29.88%, STS 10.1%, STS M&M 43.8%



TTE



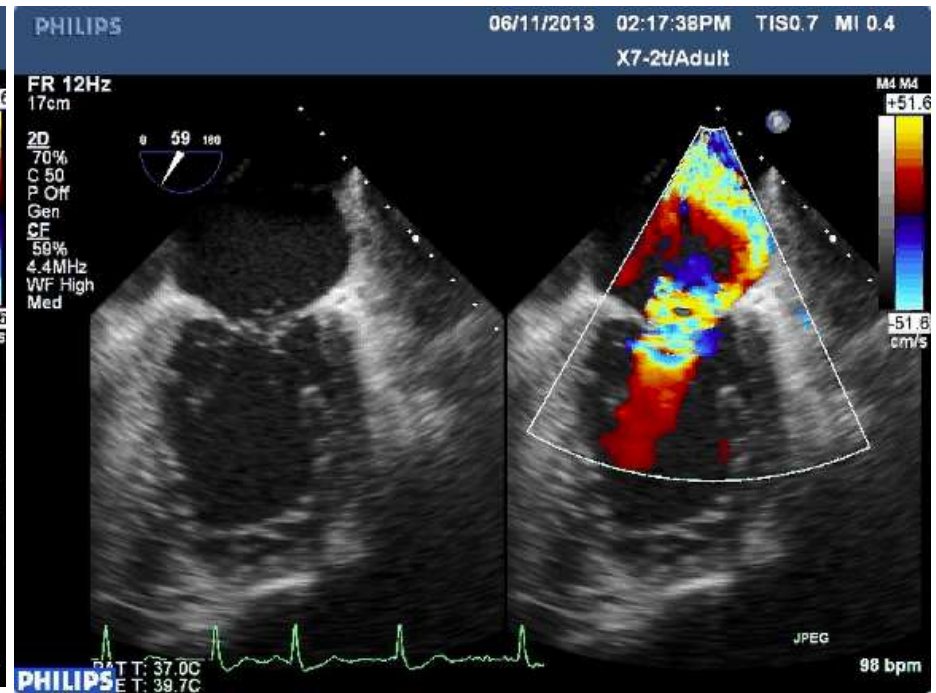
LVEDD 6.17cm, LA 6.65cm, EF 49.3%

Anterior leaflet prolapse, DMR 4+

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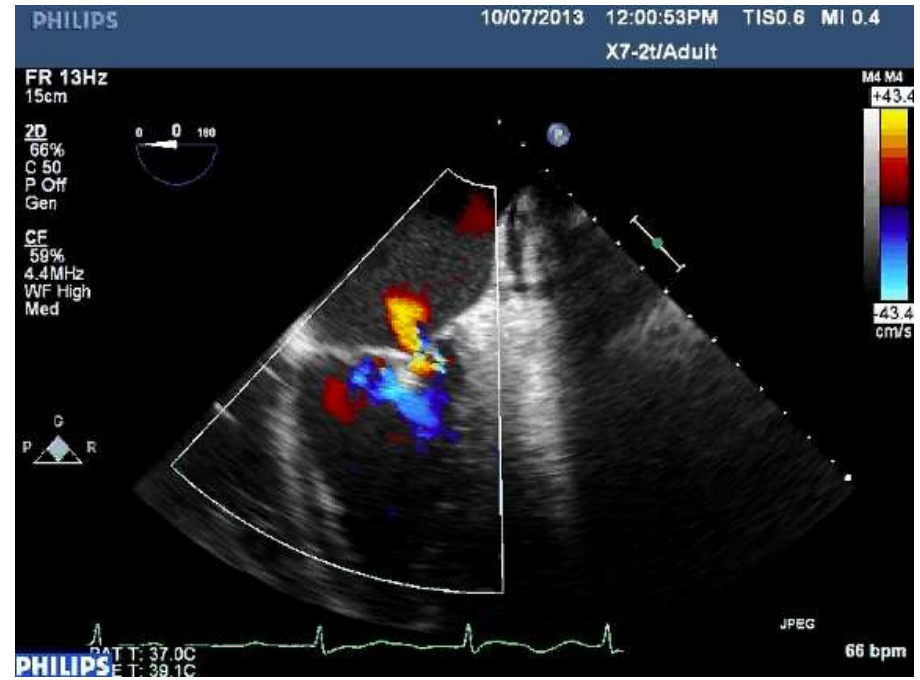
TEE



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Immediate result after 1 MitraClip



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Follow up

1 mon



6 mon



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Follow up

| | Baseline | 1 mon | 3 mon | 6 mon |
|------------|-----------------|--------------|--------------|--------------|
| NYHA | III | II | II | II |
| 6MWT (m) | 155 | 298 | 275 | 304 |
| AQoL | 0.49 | 0.66 | 0.67 | 0.7 |
| MR | 4+ | 1+ to 2+ | 2+ | 2+ |
| LVEF (%) | 49.3 | 57.8 | 62.1 | 62.6 |
| LA (cm) | 6.89 | 6.65 | 6.53 | 6.26 |
| LVEDD (cm) | 6.17 | 5.81 | 5.77 | 5.72 |

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Conclusion

- ★ **According to our initial experience, MitraClip is an effective and safe approach for the patients with symptomatic moderate to severe MR.**