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Left atrial appendage occlusion (LAAO) under local anaesthesia (LA) and intracardiac echocardiography (ICE) guidance:

A case series of 17 patients in a tertiary hospital in Hong Kong

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Left atrial appendage occlusion (LAAO) under local anaesthesia (LA) and intracardiac echocardiography (ICE) guidance:

A case series of **23** patients in a tertiary hospital in Hong Kong

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Speaker's name : Gary Shing-Him CHEUNG

I have the following potential conflicts of interest to report:

I am a physician proctor for Watchman (Boston Scientific) and Amulet (Abbott) LAO devices.

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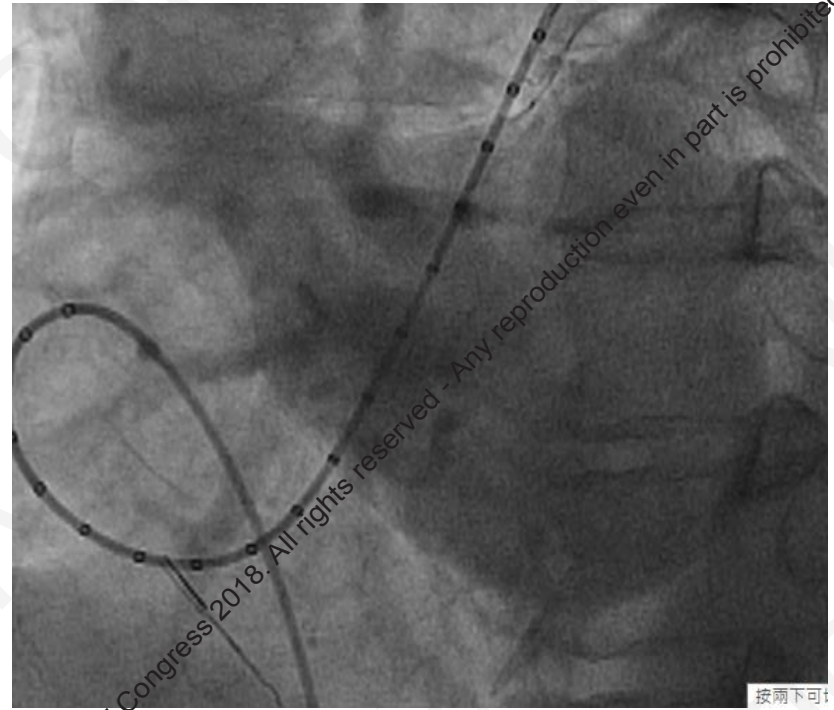
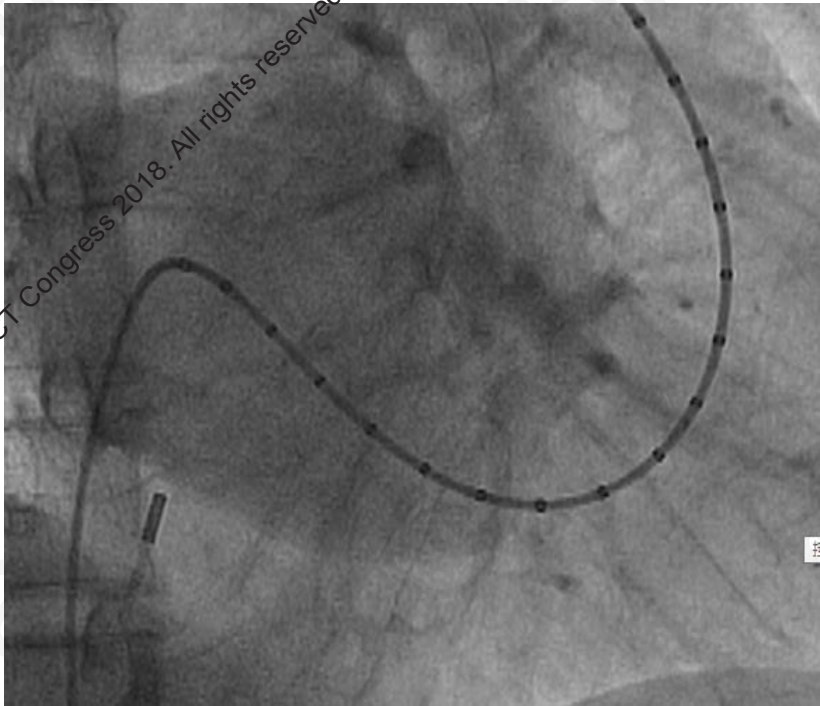
Background

- Transesophageal echocardiography (TEE) is the standard imaging tool for procedural guidance of percutaneous transcatheter left atrial appendage occlusion (LAAO), but it requires support under general anesthesia (GA) or monitoring anesthesia care (MAC).
- By using intracardiac echocardiography (ICE) guidance, LAAO can be performed under local anaesthesia (LA), which might improve the procedure logistics and reduce the turnover time in the catheter laboratory.

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Trans-septal puncture (ICE + LA Angiogram roadmap)

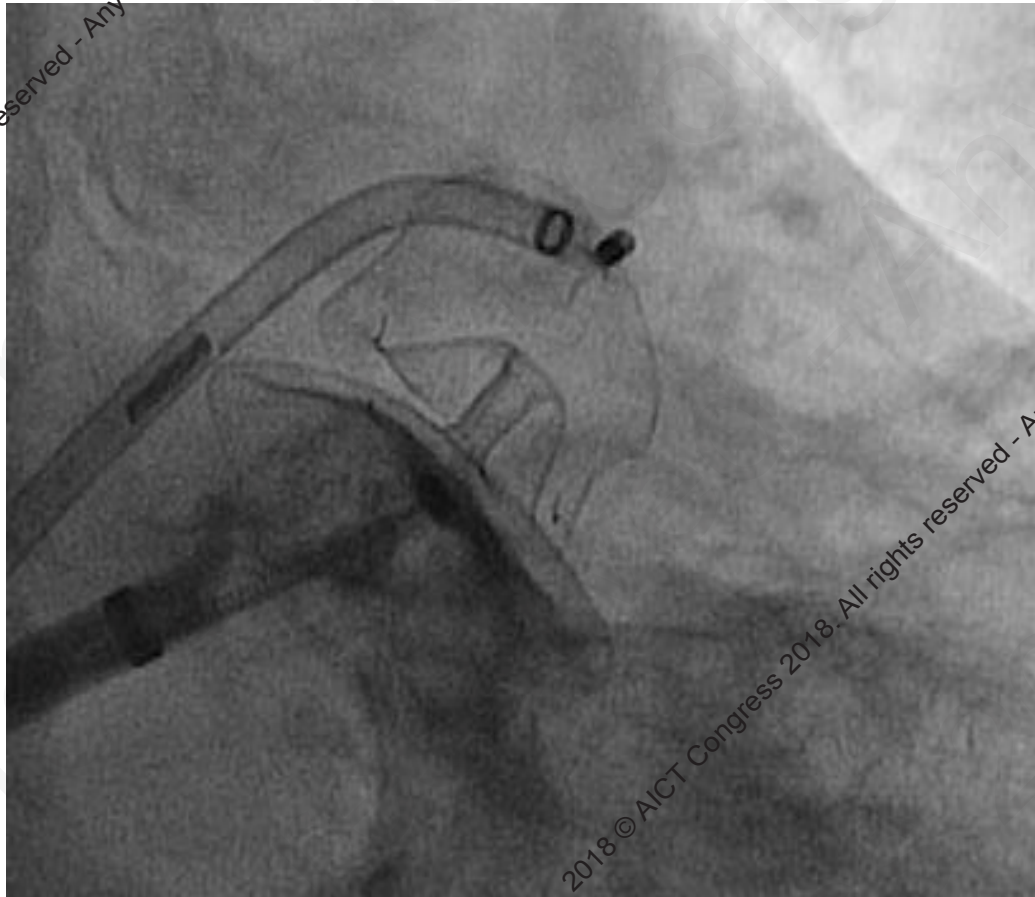


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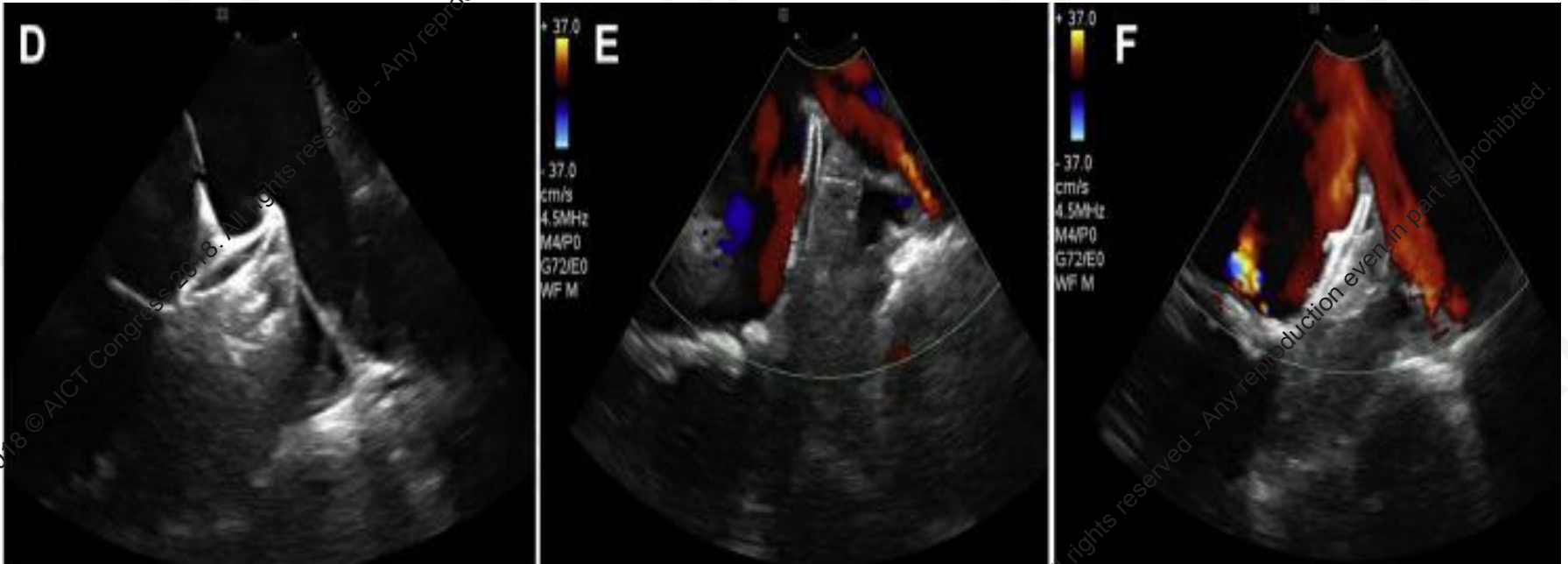
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按兩下可t

One TS sheath (for ICE) up to LUPV
One delivery sheath in LA for LAAO



ICE guided LAAO device deployment



JACC Cardiovasc Interv. 2017 Nov 13;10(21):2198-2206. doi: 10.1016/j.jcin.2017.06.057. Epub 2017 Aug 30

Method

- A retrospectively review of all patients underwent LAAO under ICE guidance at one tertiary hospital in Hong Kong was performed in order to review its efficacy and safety.
- Patients' demographics, clinical characteristics, operative procedures, postoperative complications and outcome were recorded and analyzed.
- Study outcomes including technical and procedural success rate, and complication rate were defined according to the 2016 Munich Consensus Document on LAAO.
- The result will compare with those of TEE guided LAAO (either at GA or MAC)

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Results

- A total of 22 patients underwent LAAO with ICE guidance from Jan 2017 to Aug 2018
- Mean age 75 years old; 61% male
- All were performed under Local Anaes (LA)
- Majority of the patients received Amulet device (n=20), while the remaining 2 had LAmbré device,
- The mean CHA2DS2-VASc and HASBLED scores were 4.5 and 2.8 respectively.

Results

| | ICE + LA (N =22) | TEE + GA/MAC (N=270) | p value |
|--|---------------------------|----------------------|---------|
| Procedural Time, min (mean) | 95.8 | 91.6 | 0.03 |
| Fluoroscopy Time, min (mean) | 21.5 | 17.2 | <0.001 |
| Peri-procedural complications | 0 | 12 | <0.001 |
| Procedural Success rate, % | 100 | 97.5 | 0.77 |
| Average Length of Stay, days | 2 | 2.5 | 0.37 |
| Follow-up TEE | | | |
| - Significant Peri-device leak >5mm (n, %) | 0 | 4 (1.5%) | 0.45 |
| - Device related thrombus (n, %) | 1 (4.5%) on aspirin alone | 5 (1.8%) | 0.24 |
| 6 Month stroke rate | 0 | 1 | 0.68 |

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Limitation

- Not randomized controlled
- Time period is not matched
- Selection bias

Suggestion:

- Compared to the matched patients within the same study time period
- Limit to same LAAO device

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Conclusion

- In this cohort of case series in one tertiary hospital of Hong Kong, ICE guided LAAO and local anesthesia could give a high success rate and low complication rate as similar to TEE guided procedure.
- The duration of procedure was longer during the initial phase of the learning curve, but increased experience may shorten the procedure time.
- Moreover, ICE guided procedure could reduce the turnover time in the cardiac catheter laboratory, and also could avoid the patients from general anesthesia, endotracheal intubation and post-anesthesia care.



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Thanks your attention

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