*Conclusion* 3D echocardiography is able to reveal subtle changes in RV-PA unit equilibrium. Together with an increase in RV end-systolic volume, our study reveals a progressive alteration in RVAC in parallel with the severity of MR in patients with MVP as compared to normal patients.

*Disclosure of interest* The authors declare that they have no competing of interest.

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**Poster n°19**

### One-year experience of the micro trans esophageal probe in cardiac structural interventions

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*Introduction* Transoesophageal echocardiography (TEE) under general anesthesia (GA) is the reference technique to guide most of transcatheter cardiac structural interventions (TCI). However, the need for GA represents an important limitation in the context of the dramatic increase of this activity. Multiplane micro TEE probe (MMt) has recently emerged as an alternative imaging technique for procedural guidance that would not require GA. The aim is to evaluate the feasibility of the use of MMt to guide TCI without GA.

*Method* We report our 1-year experience of TCI guidance with MMt used during the whole procedure under conscious sedation or without sedation in specific situations requiring unplanned TEE guidance.

*Results* MMt was used during the following interventions:
— Patent Foramen ovale closure ($n = 73$),
— Guidance of difficult transseptal catheterization during percutaneous mitral commissurotomy ($n = 6$),
— Selected cases of assessment after TAVI requiring TEE to evaluate the final result (position, paravalvular leak) ($n = 5$),
— MitraClip procedure with failure of conventional TEE ($n = 1$).
Overall, the tolerance of the probe and the comfort of the patients were excellent. There was neither complication related to its use, nor conversion to GA and conventional TEE. Although the quality of imaging might be inferior to that of conventional TEE, the information was sufficient to guide the procedures in all cases. The absence of GA significantly shortened procedural time and interval between procedures.

*Conclusion* This preliminary experience illustrates the role of MMt without GA during specific TCI, improving procedural time while preserving the comfort of the patients. In addition MMt appears particularly useful in patients requiring unplanned TEE during TCI. Despite some limitations, as the lack of 3-D imaging, we anticipate that MMt will play an important role in the context of increasing demand in interventional guidance.

*Disclosure of interest* The authors declare that they have no competing of interest.

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**Poster n°20**

### Echonavigator in children with congenital heart diseases

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*Introduction* Transesophageal echocardiography (TEE) has become indispensable in catlab to guide some percutaneous interventions as a complimentary imaging for fluoroscopy. However the tow imaging modalities are presented separately and differently. Echonavigator® is an innovative software enabling fusion between the tow imaging modalities on the same screen. We aimed to assess the feasibility of Echonavigator system to guide interventional procedure in children with CHD, and to present our initial clinical experience using this software.

*Method* We enrolled all children underwent interventional catheterization needing guidance by TEE from December 2015 to December 2017. Patients weighting less than 20 kg or having a contraindication for TEE were excluded. TEE was realized by using X7-2t TEE probe connected to an echocardiographic system (EPIC). Fluoroscopy was realized using Allura Xper FD/10 system. Image fusion was attempted in all patients using Echnavigator system. Markers were positioned on the target zone on echocardiographic images and projected to the interventionists on the fusing screen.

*Results* Fifty-one patients with CHD were included, mean age was 8 years old (5.5—14), mean weight was 25 kg (20—36 kg). 36 patients underwent Atrial septal defect closure, 10 ventricular septal defect closure, 3 aortic valve dilatation and 2 right ventricular outflow tract revaluation. Image fusions were successfully obtained in all patients in real time during all steps of procedure. No complication related to TEE probe insertion or manipulation was observed. Markers were successfully positioned in the all target zones and automatically projected to the interventionist on the fusion screen.

*Conclusion* Echonavigator system is feasible and safe to guide interventional catheterization in children with CHD. It enables better appreciation of anatomical relationships and improves confidence of interventionist to achieve the target zones.

*Disclosure of interest* The authors declare that they have no competing of interest.

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