TTE AND TEE VDSøASSESSMENT. WHATøS THE SIZE, WHERE ARE THE MARGINS?

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TTE AND TEE VDSØASSESSMENT. WHATØS THE SIZE , WHERE ARE THE MARGINS?

DISCLOSURE INFORMATION:

AB Medica- AGA division: Proctorship in Italy

Patients selection



clinical signs

left atrial enlargement, defined as a left atrial-to-aortic ratio >1.5;

left ventricular enlargement (left ventricular overload), defined as a left ventricular end-diastolic diameter > +2 SD above the mean for the patientøs age.

Hystory of bacterial endocarditis



Which patients with congenital VSD are not suitable to percutaneous closure?

Exclusion criteria:

Supracrystal VSD

Malalignement VSD

Associated significant aortic regurgitation

Prolapse of aortic cusp

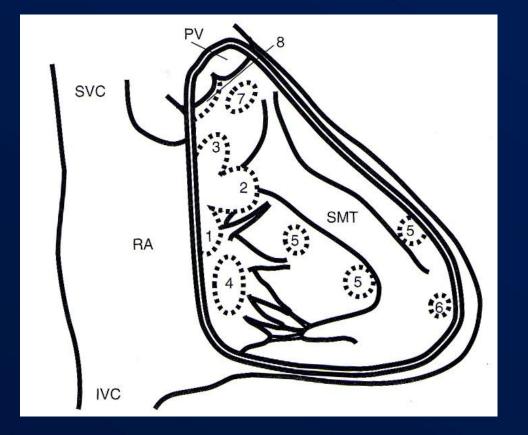
Sub-aortic stenosis

Sub-pulmonary stenosis (RV mid ventricular stenosis)

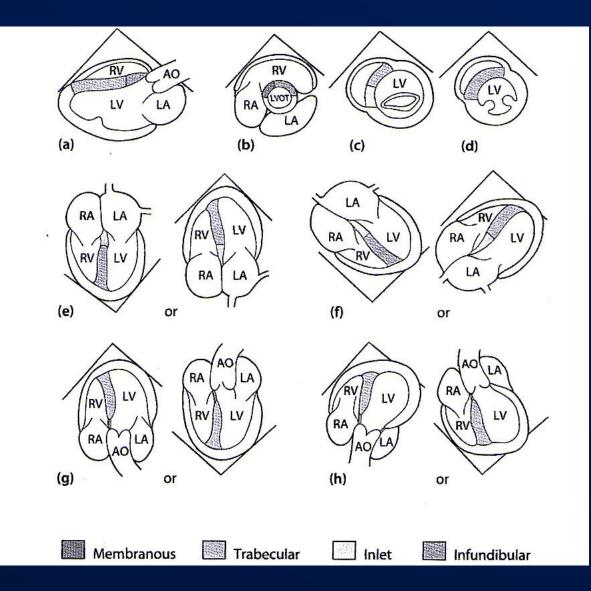
Eisenmenger syndrome

High pulmonary pressures ($PAR \ge 2/3 SAR$)

















Echocardiographic evaluation (TTE/TEE)

Size (measure in different views)

Number (single/multiple)

Location (apical/mid muscular/high muscular)

Associated defects (ASD/pulmonary stenosis/aortic coarctation/others)

Contra-indication to percutaneous closure





Echocardiographic evaluation (TTE/TEE)

TTE Views

Apical 4 chamber view

Parasternal long and short axis views

Subcostal views





Echocardiographic evaluation (TTE/TEE)

TEE Views

Mid-esophageal 0°

Trans-gastric views

Mid-low esophageal 30-35°





WHAT & THE SIZE, WHERE ARE THE MARGINS?

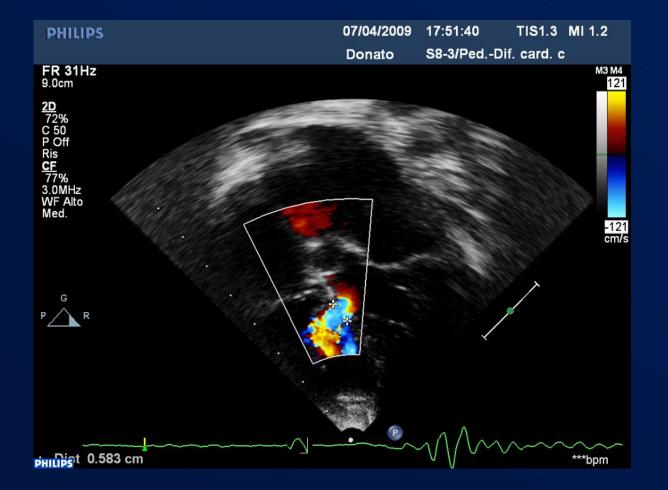
Usually it is quite easy to analyse the margins and measure the size of the defect

Margins are usually well seen

Measure of the defect in 2D and with color (measure at the õPISAö)

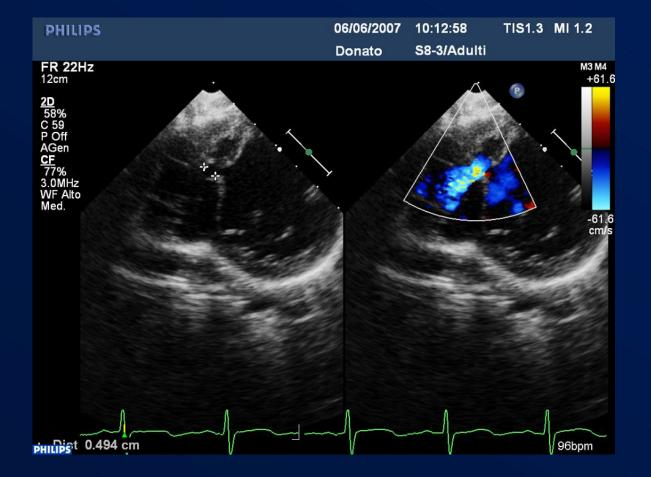






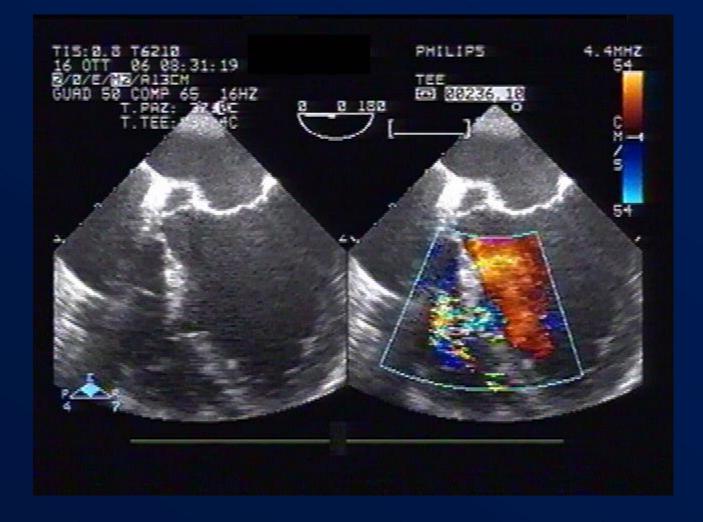






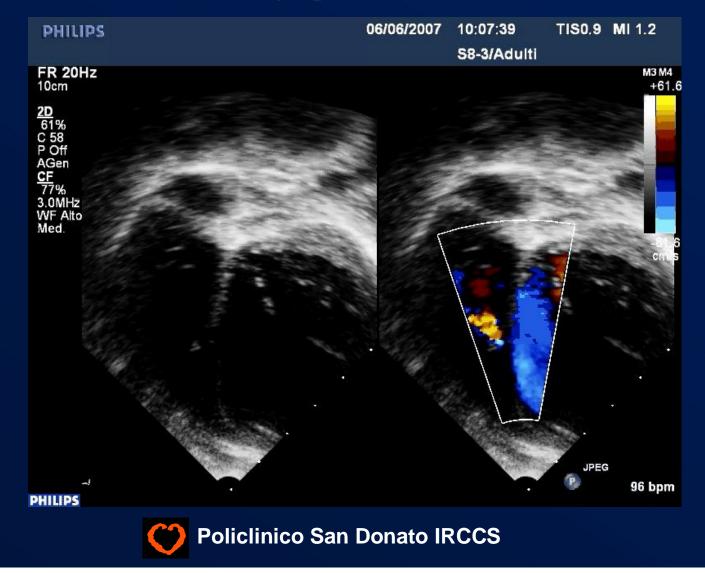


Muscular VSD

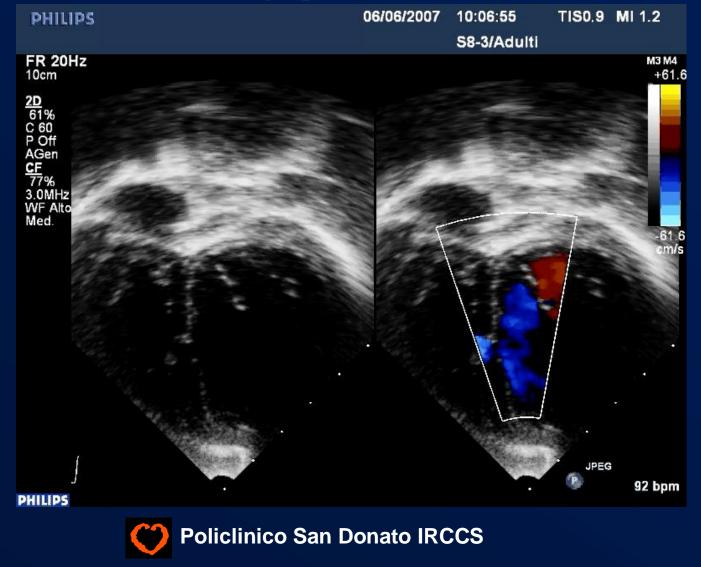










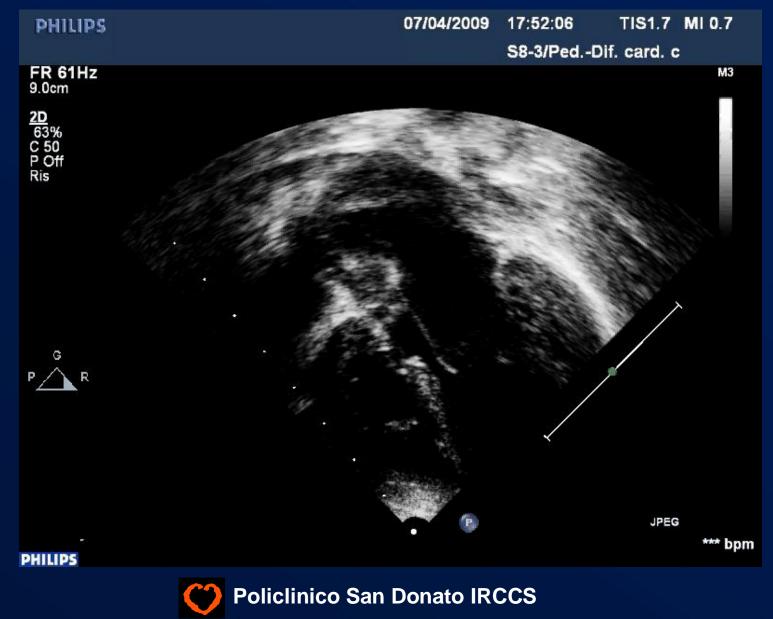




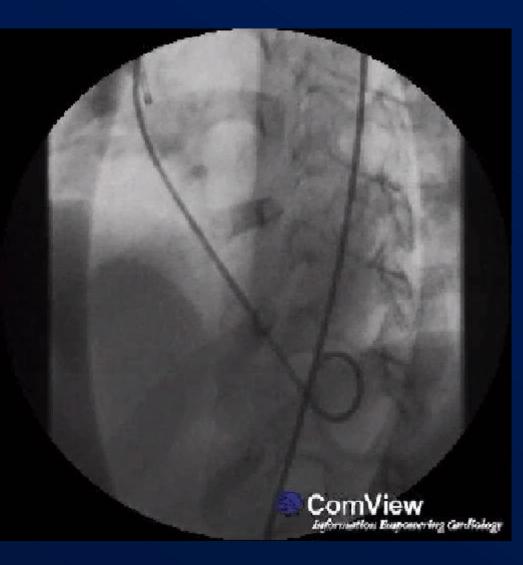








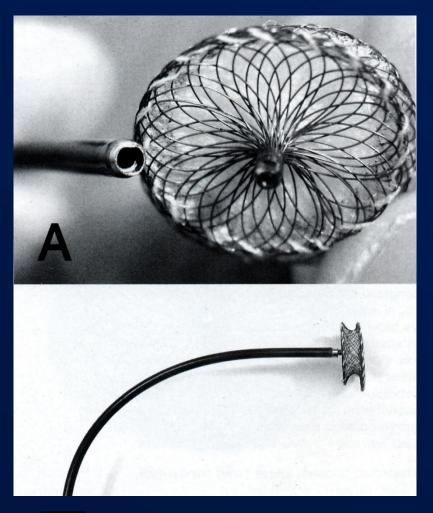














Echocardiographic evaluation (TTE/TEE)

Size (measure in different views)

Number (single/multiple)

Extension (inlet/trabecular/outlet)

Aneurysm/Pouches from the TV/ septal L of the TV

Associated defects (ASD/pulmonary stenosis/aortic coarctation/others)

Contra-indication to percutaneous closure

Echocardiographic evaluation

TTE Views

Apical 4 chamber view

Parasternal long and short axis views

Subcostal views



Echocardiographic evaluation

TEE Views

Mid-esophageal 0° (four-chamber view) Mid-esophageal 130° (long-axis view) Mid-low esophageal 30-35° (short axis view)



WHAT & THE SIZE, WHERE ARE THE MARGINS?

Sometimes it is difficult to analyse the margins and measure the size of the defect

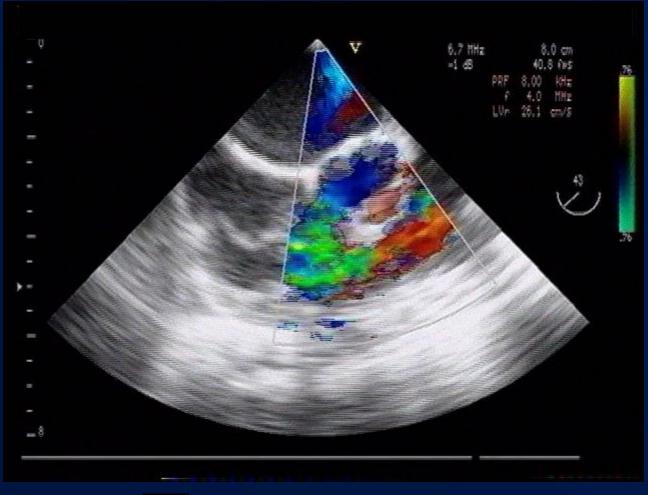
Measure of the defect in 2D and with color (measure at the õPISAö)







Echocardiographic evaluation

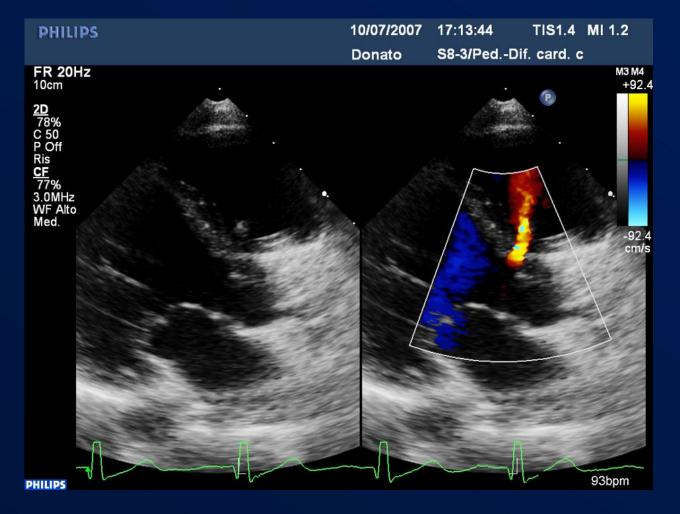




Echocardiographic evaluation

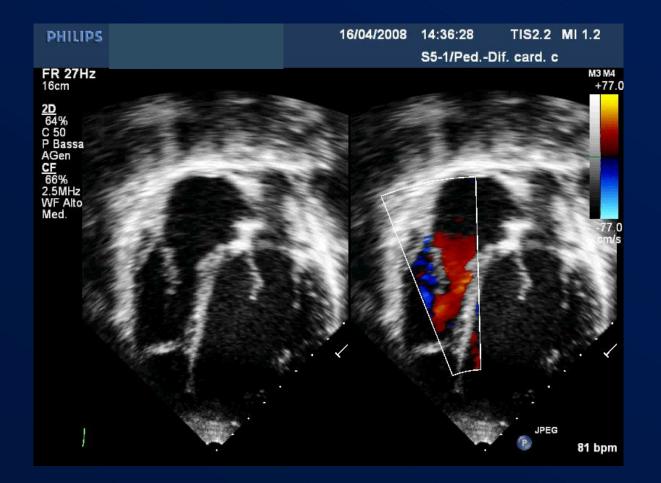






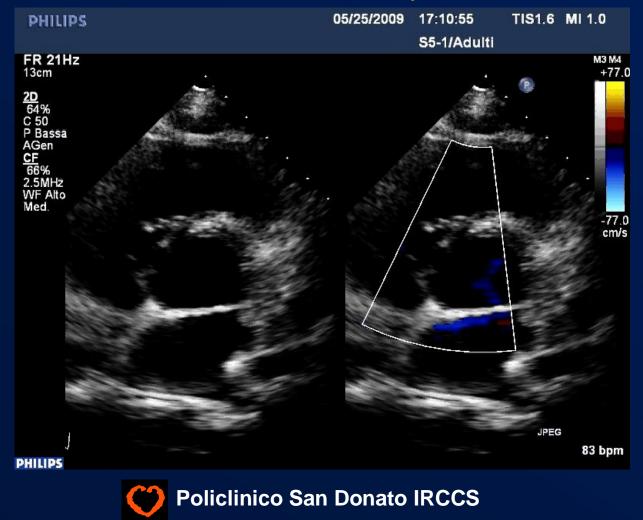




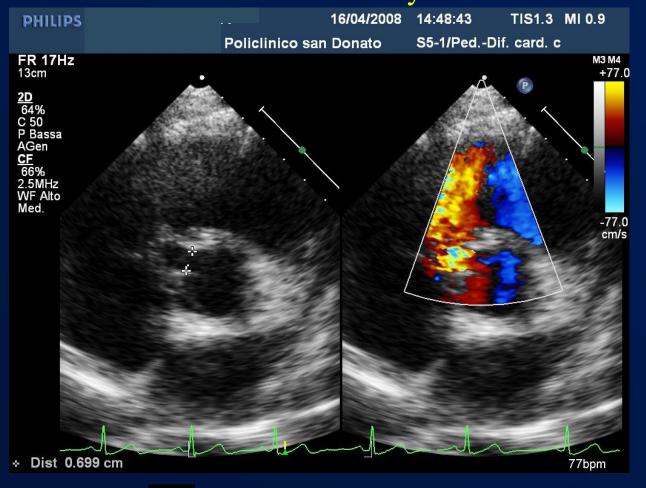




Echocardiographic evaluation Associated aneurysm



Echocardiographic evaluation Associated aneurysm



Echocardiographic evaluation Associated aneurysm

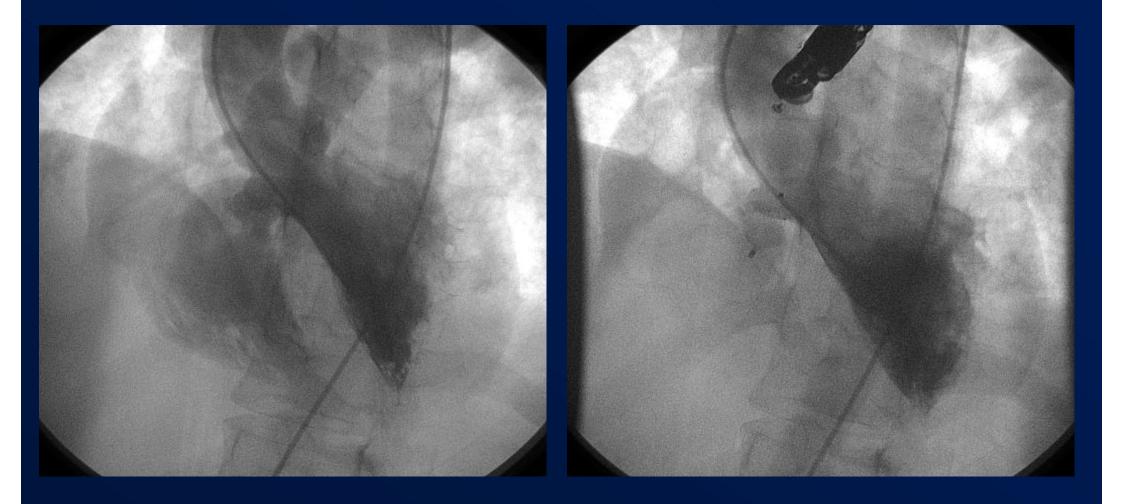
Defect closure

on the LV side

at the exit(s) of the aneurysm (on the RV side)

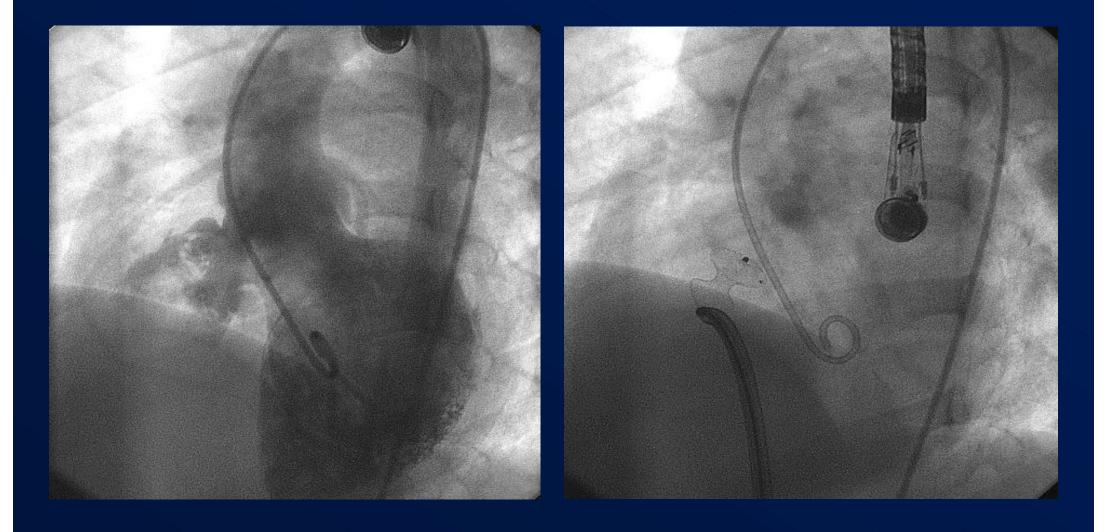


Perimembranous VSD with õseptal aneurysmö



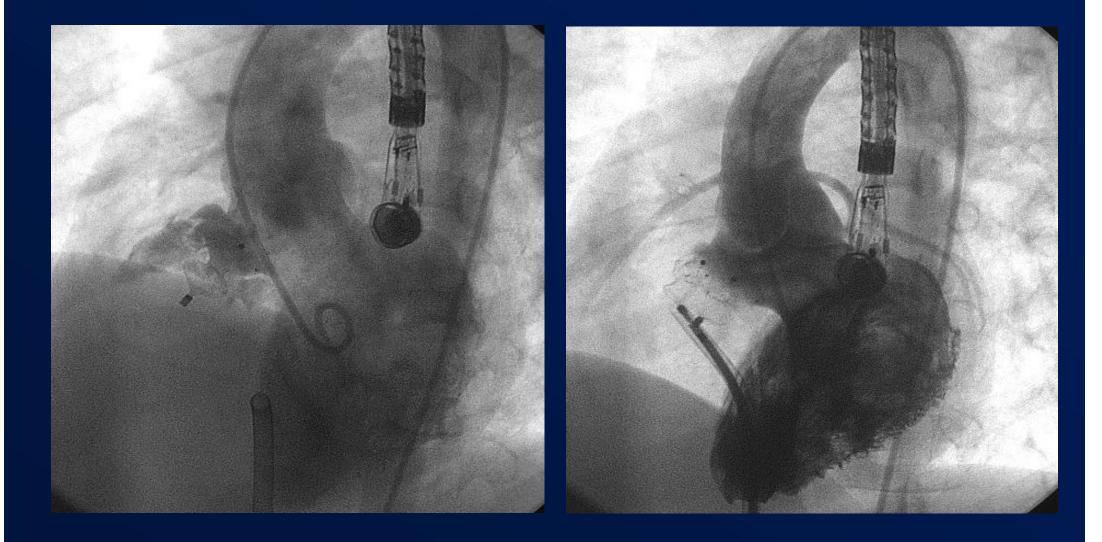


Multiple Perimembranous VSD with õseptal aneurysmö



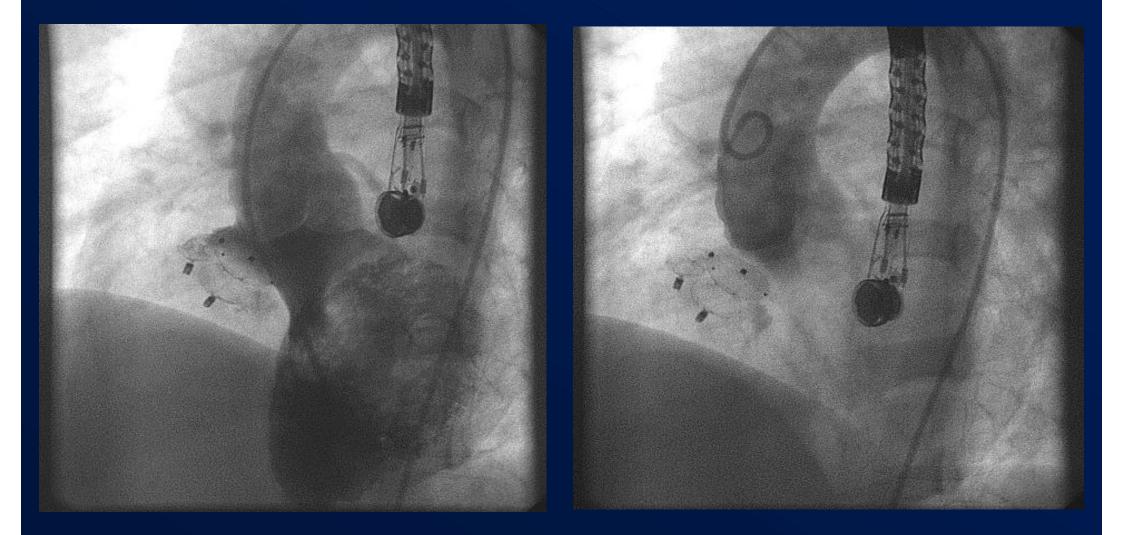


Multiple Perimembranous VSD with septal aneurysm



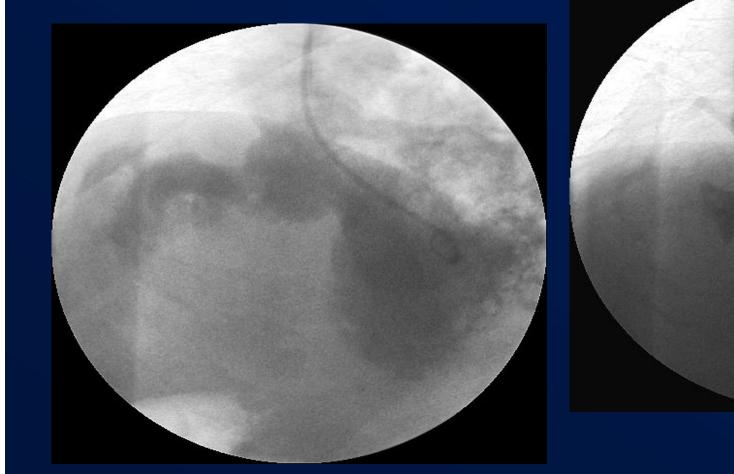


Multiple Perimembranous VSD with septal aneurysm





Perimembranous VSD with õseptal aneurysmö Closure with Muscular VSD occluder





Conclusions

Echocardiographic evaluation is mandatory in patients with VSDs

Integration of echocardiographic data with data from angiography is mandatory to perform successfully percutaneous closure



Thank you for your attention