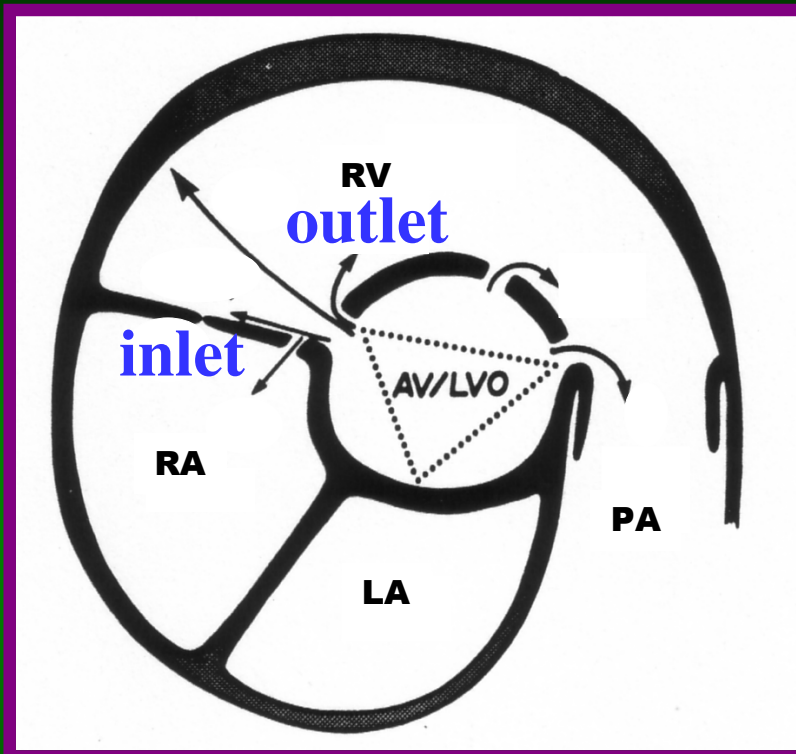


Echocardiographic Assessment of the Extension of Perimembranous VSD using Tricuspid En Face View

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Background



**Categorization by the direction
of the color flow jet**

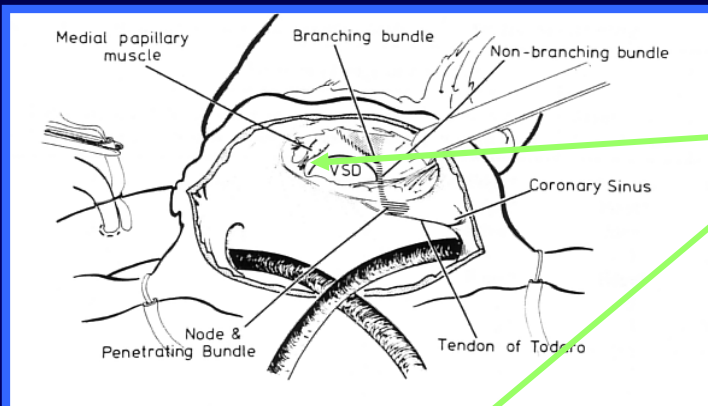
**Incorrect categorization;
6/39 Pm VSD (15%)**

**2 of 16 Pm inlet VSD as Pm outlet
4 of 23 Pm outlet VSD as Pm inlet**

**Helmcke F, Soto B
Am J Cardiol 1989;
63:1112-1116**

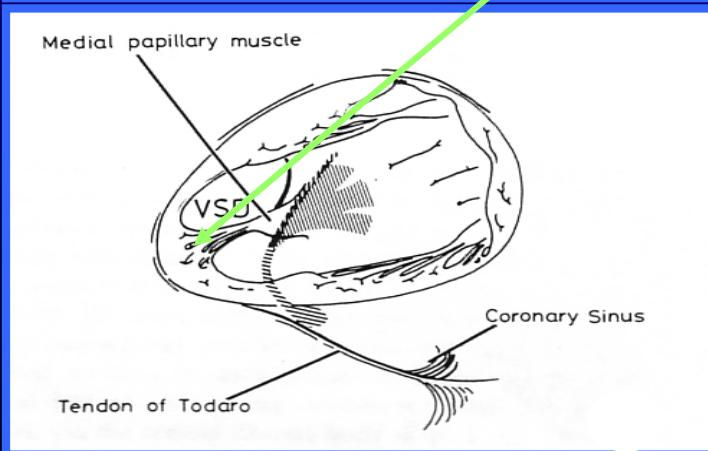
Background

Spatial relation of the tricuspid valve leaflets to the defect



Medial papillary muscle as Landmark for Cardiac Surgeon

Antero-septal commissure can be Landmark for Cardiologist



Tricuspid En Face View

Milo S JTCS 1980

Aim

To Evaluate Benefits and Limitations of Tricuspid en face view in categorizing the extension of perimembranous VSD

Patients

Age at operation : 1 mos-16years
(median:6.5mos)

92 patients with surgically confirmed Pm VSD

1997-1999
45

2000-2002
47

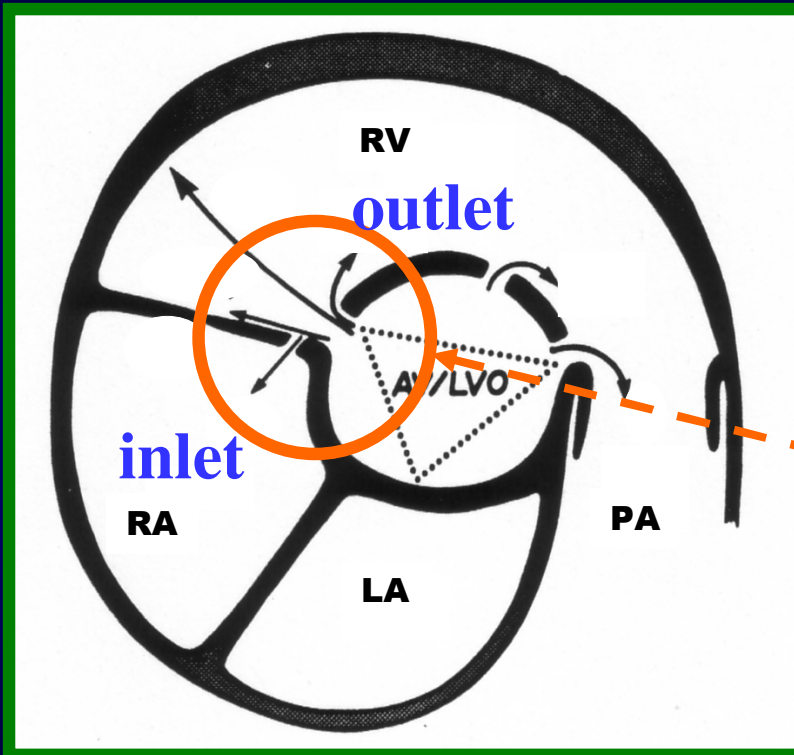
Tricuspid En Face View

Method

VSD classification

Pm VSD is present ;

when VSD adjacent to Tricuspid
septal leaflet is recognized
in the RVOT short axis view



Helmcke F, Soto B
Am J Cardiol 1989

Method

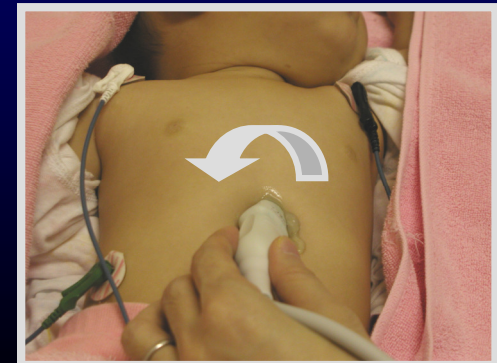
Echocardiographic study : segmental approach

parasternal short axis → apical 4 chamber

→ parasternal long axis → Tricuspid en face view

How to get Tricuspid en face View

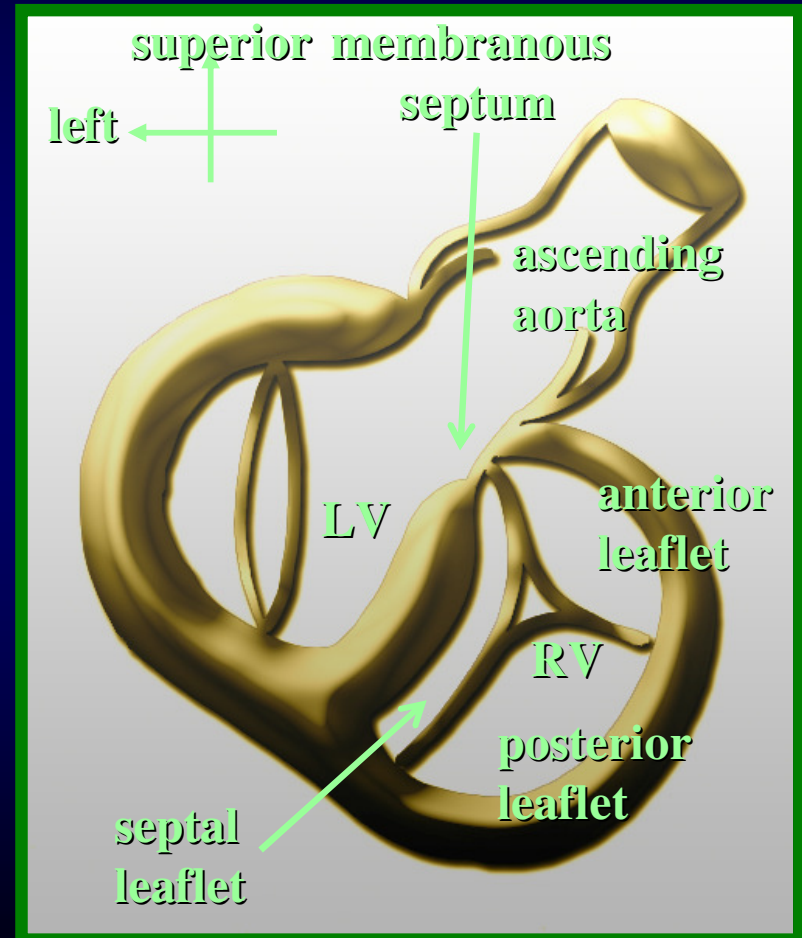
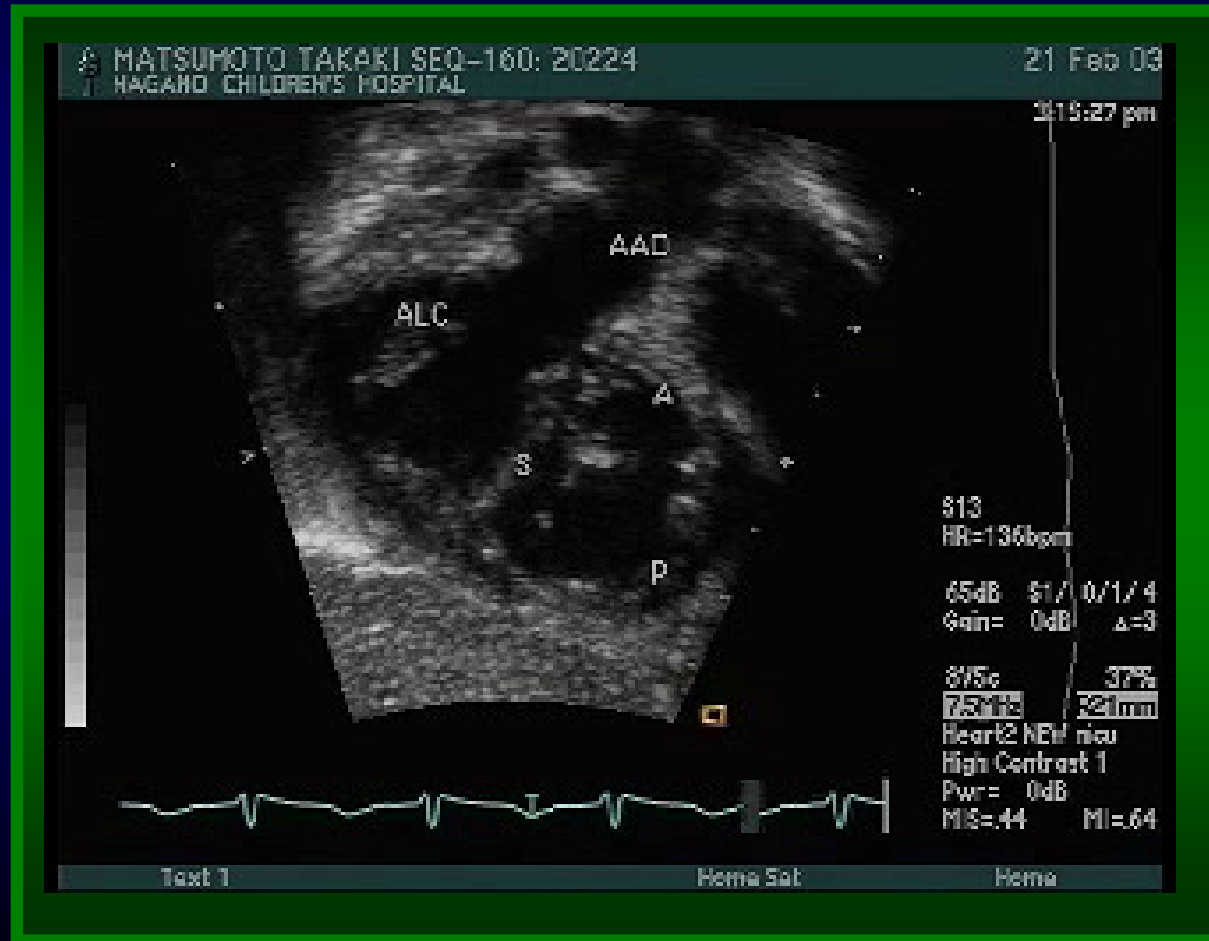
1. From the **subcostal sagittal** view,
2. **rotate 30-45° counter-clockwise**
3. until the **Tricuspid valve is seen en face**



Method

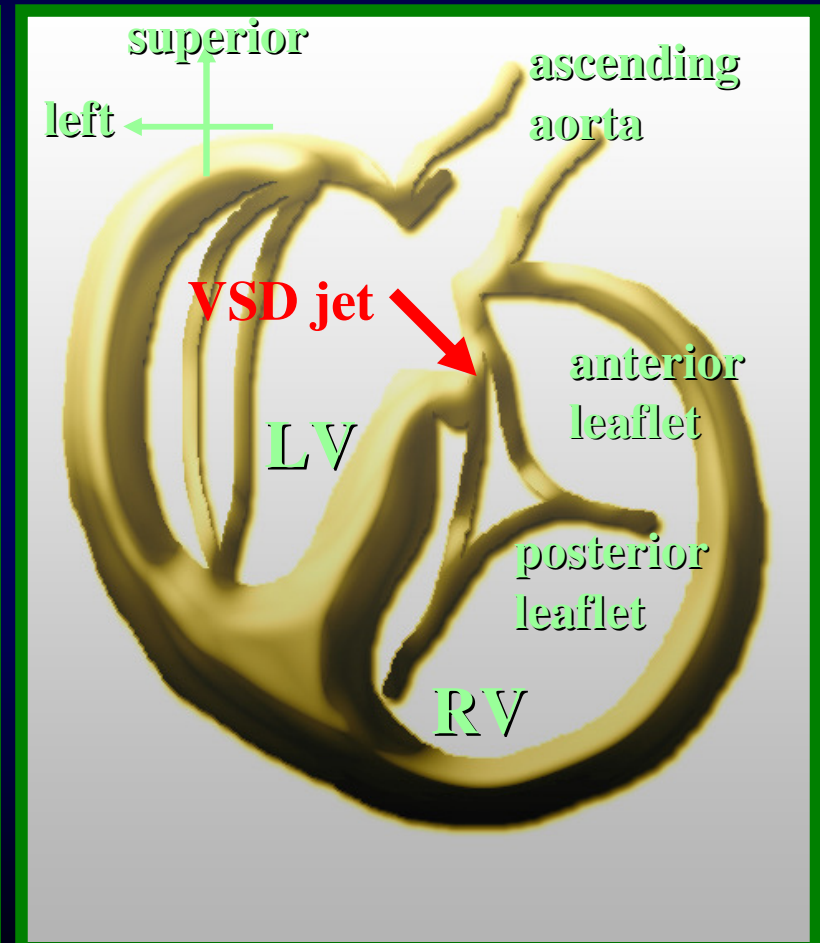
Tricuspid En Face View

Normal Heart



Diagnosis

Perimembranous VSD with inlet extension



Results

Diagnostic Disagreement

1997-1999 18/45 cases (40%)

Echo Dx - Surgical Dx

outlet - inlet	4
inlet - outlet	4
outlet - apical	5
inlet - ECD type	2
inlet - muscular inlet	1
inlet - apical	1
conal septal - total conus defect	1
outlet - outlet+inlet	2

2002 2/17 cases (12%)

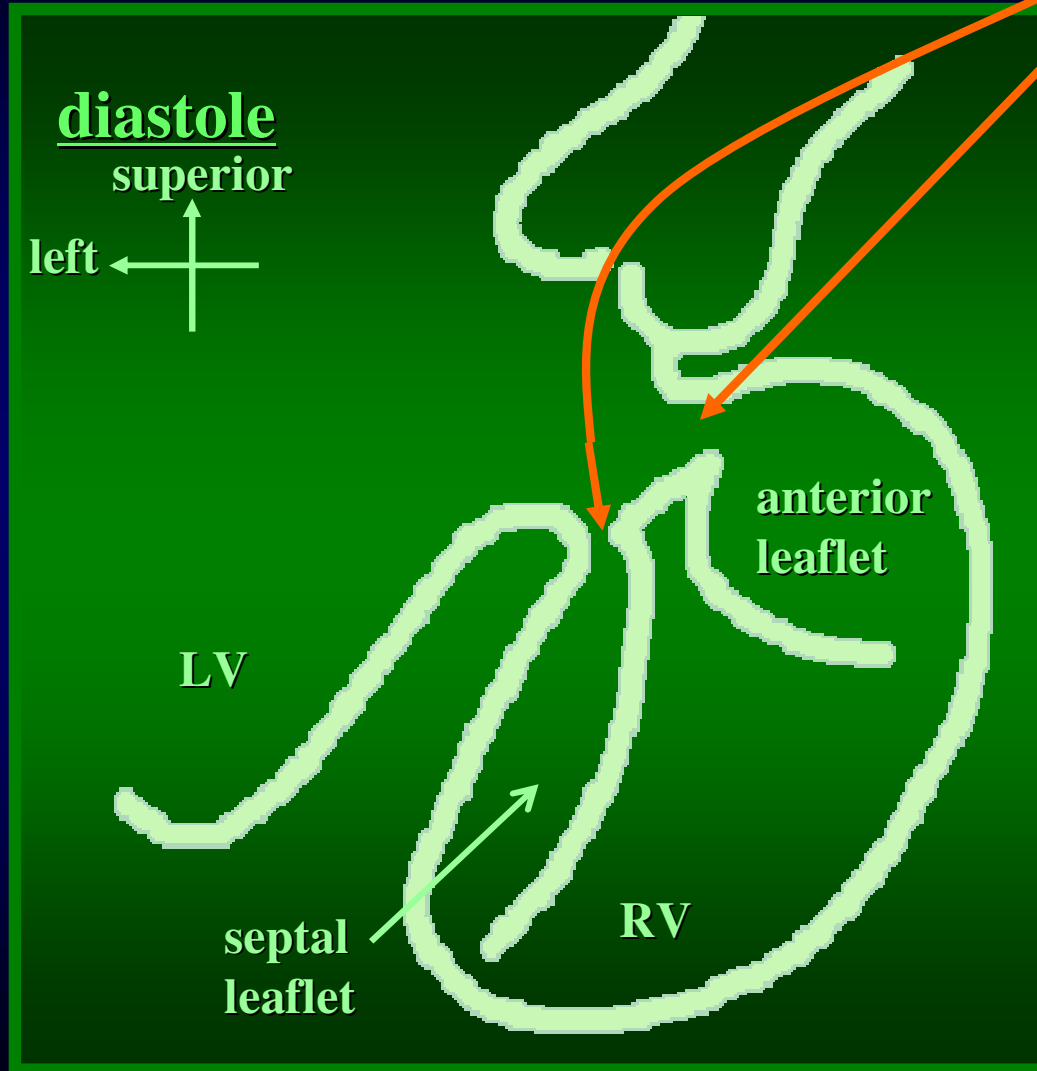
Echo Dx - Surgical Dx

outlet - conal septal	1 cases
apical + outlet - apical + inlet	1 cases

Limitation

Which is Antero-septal
Commissure ?

3/47 cases (6.4%)
during 2000-2002



Conclusion

1. Tricuspid en face view might have potential for identifying inlet or outlet extension more correctly than conventional RVOT short axis view when diagnosing perimembranous VSD.
2. There could be difficulty in judging the location of antero-septal commissure in a small number of patients.