Congenital heart diseases III
@ Interventional pediatric cardiology

- Valvular heart diseases
- Patent ductus arteriosus
- Atrial septal defect type II
- @
- Balloon valvuloplasty, angioplasty,stents
- Closures

Congenital heart diseases in children
VALVULAR STENOSIS

- Pulmonary 7-12% CHD 85% RVO
- Aortic 3- 8% CHD 70% LVO
- Mitral (part of HLHS)
- Tricuspid rare

Congenital heart diseases in children
VALVULAR INSUFFICIENCY

- Tricuspid Ebstein’s anomaly
- Mitral (AVSD)
- Pulmonary APVS
- Aortic Marfan’s syndrom

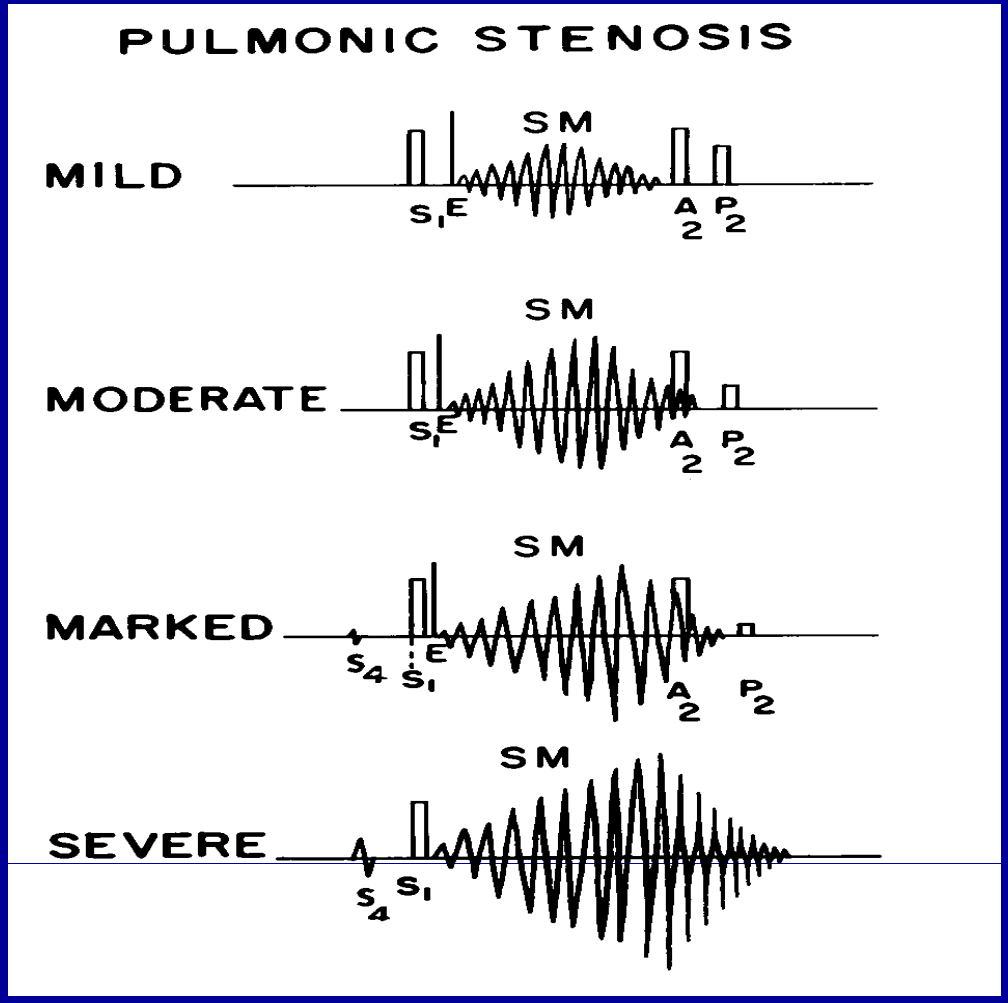
Critical neonatal pulmonary valve stenosis

- Symptoms: Cyanosis, critical hypoxemia, murmur ++/-
- Diagnosis: Echocardiography
- Treatment: Prostaglandin E1 (0.05-0.1 mg/kg/min), balloon valvuloplasty, surgery - valvulotomy or shunt

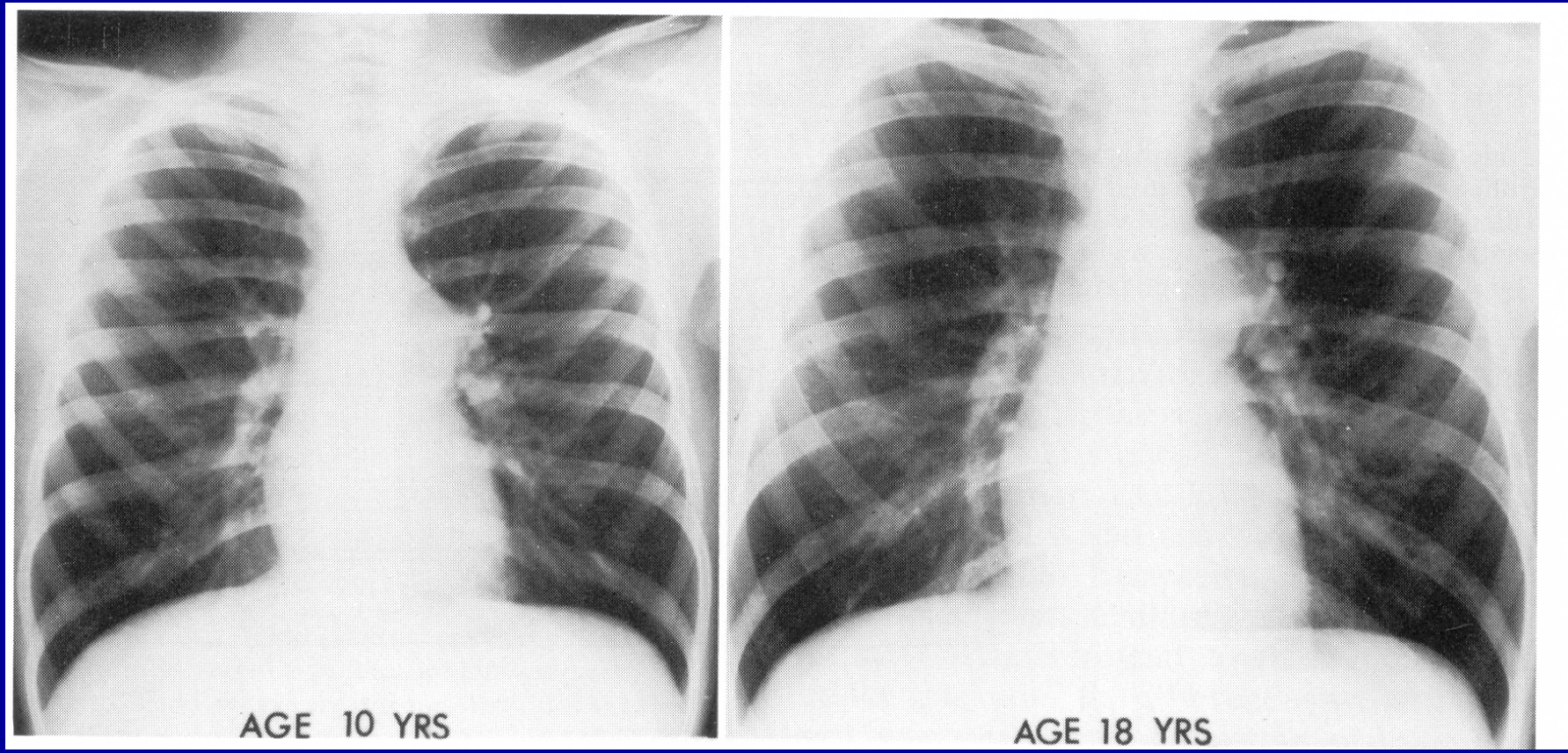
Pulmonary valve stenosis

- Symptoms: None, mild dyspnea and fetigue with exertion, cyanosis, ejection type of systolic murmur – maximum in upper left sternal border, systolic thrill
- Diagnosis: Clinical and echocardiography
- Treatment: Balloon valvuloplasty, surgery
- Regimen: Prevention of infective endocarditis

Pulmonary valve stenosis auscultation

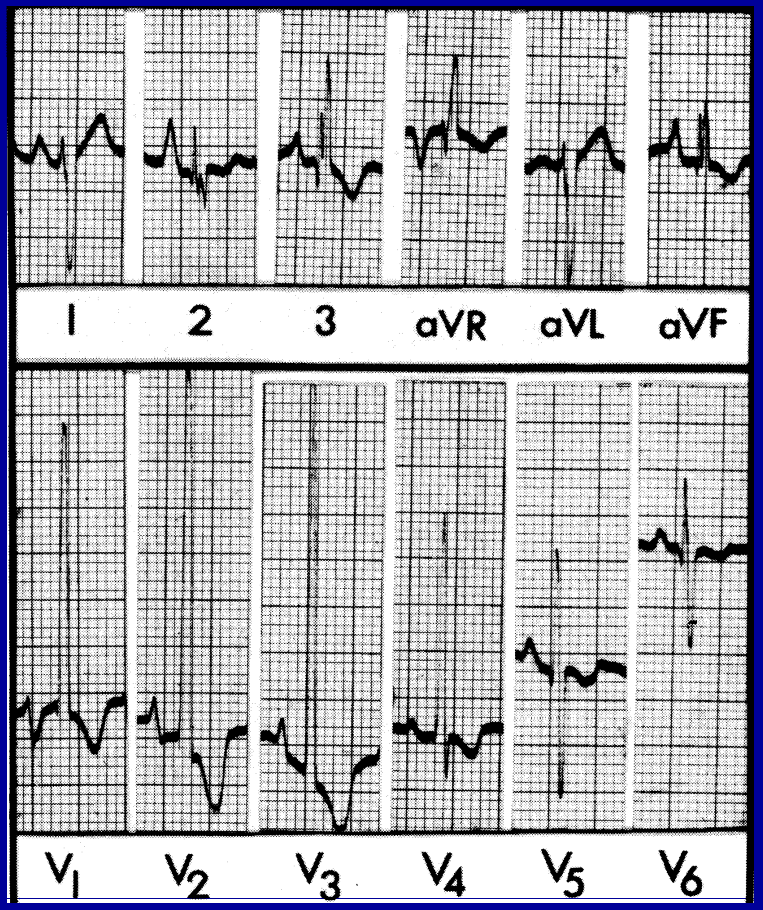


Pulmonary valve stenosis
x-rays

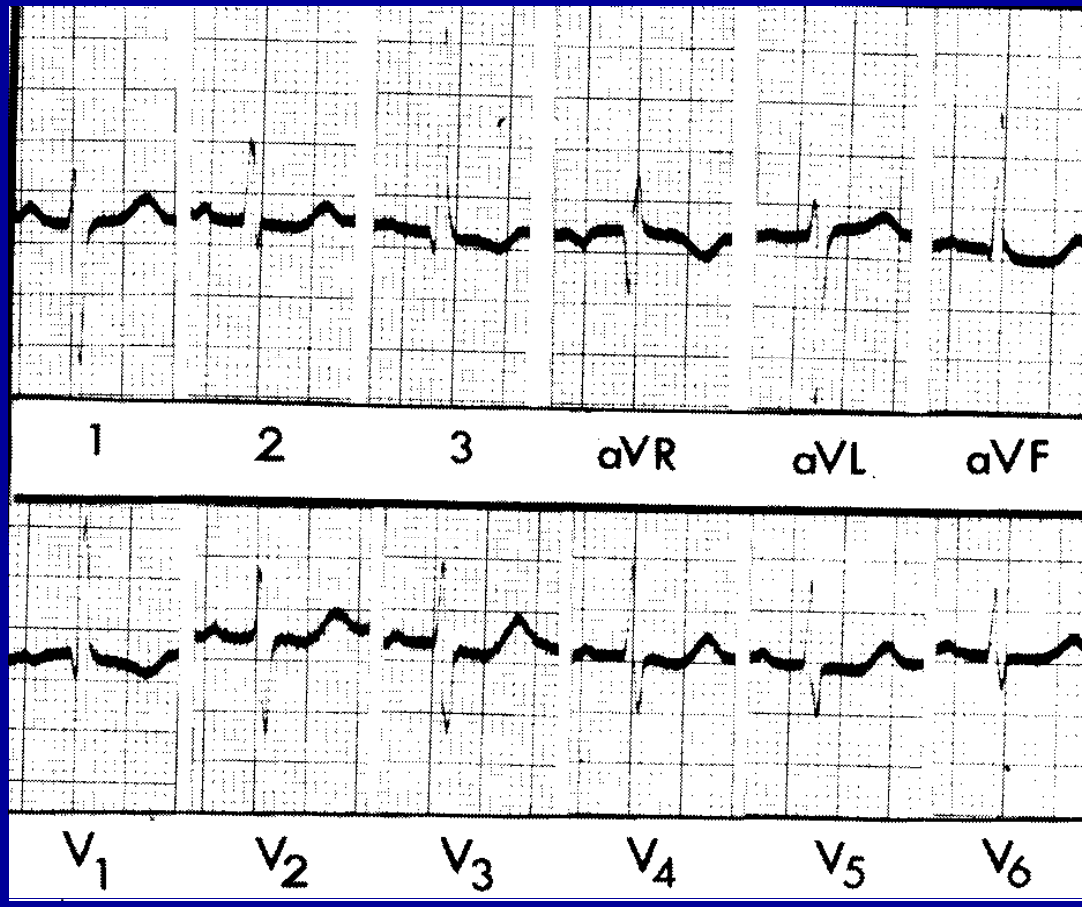


Poststenotic dilatation of pulmonary trunck
Pulmonary vascular pattern is normal

Pulmonary valve stenosis electrocardiograms



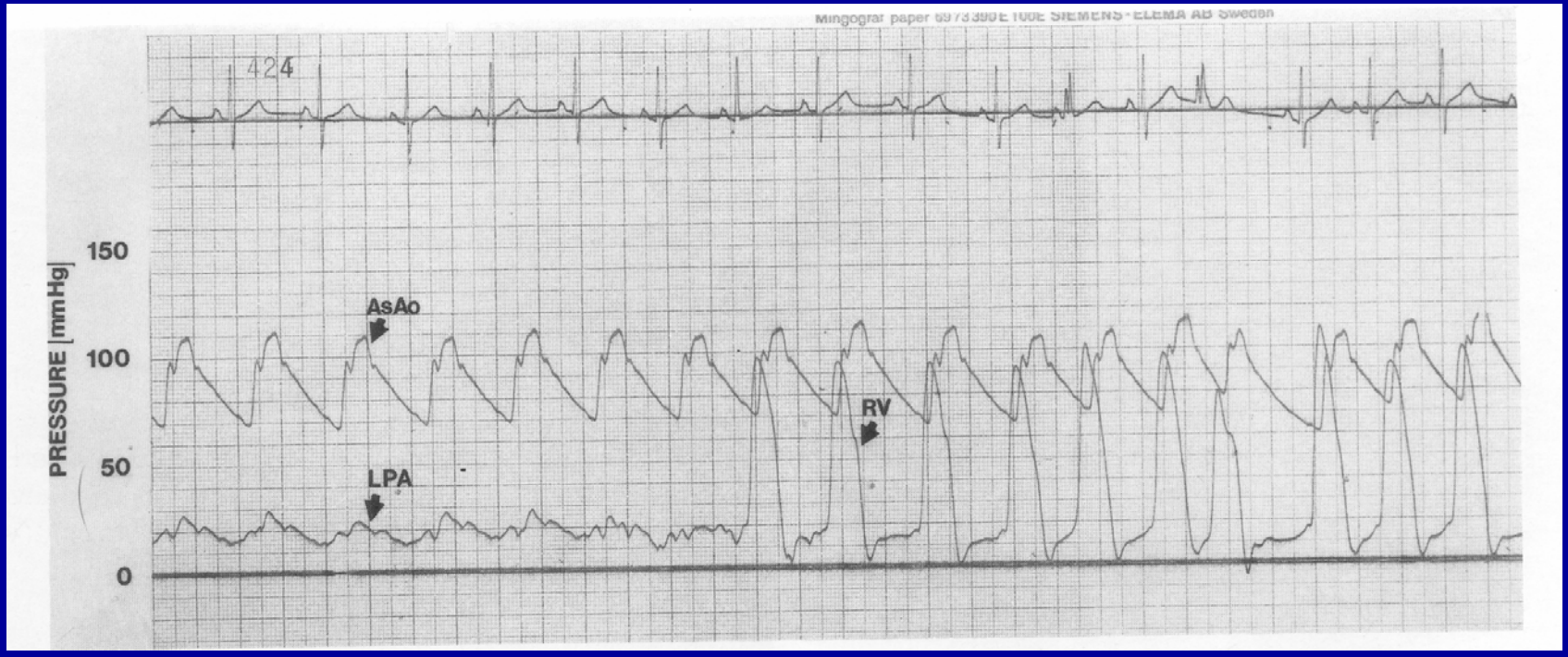
8 month
RVP>systemic pressure



16 year
Gradient 70 mmHg

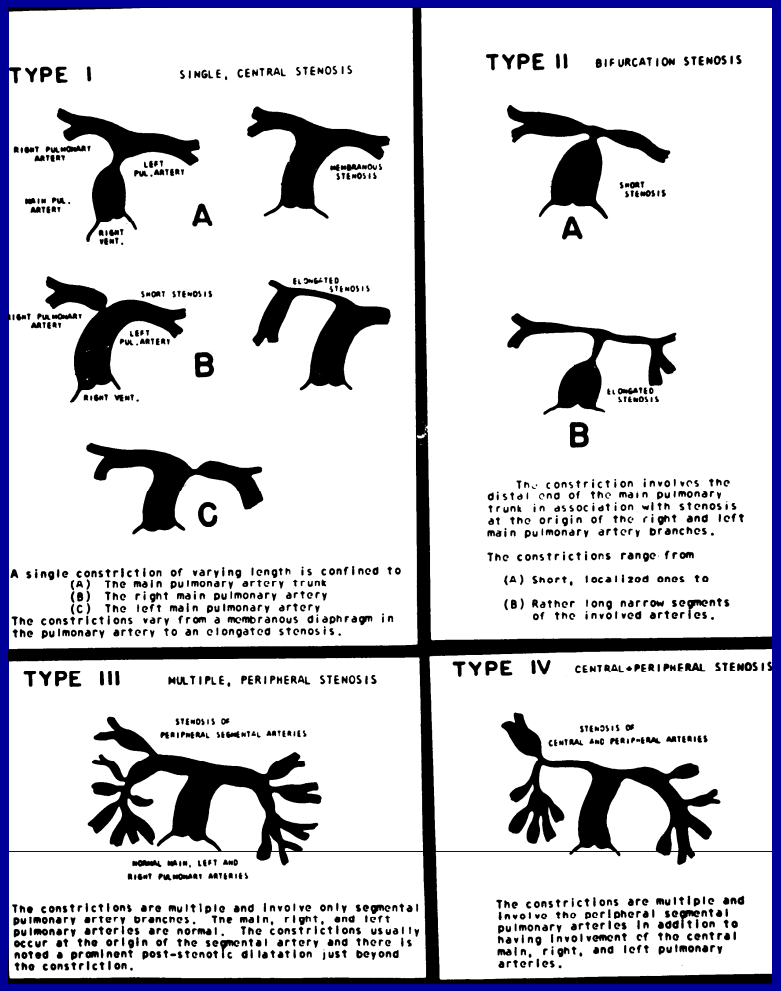
Pulmonary valve stenosis

pressure curve - pullback



Pulmonary artery stenosis

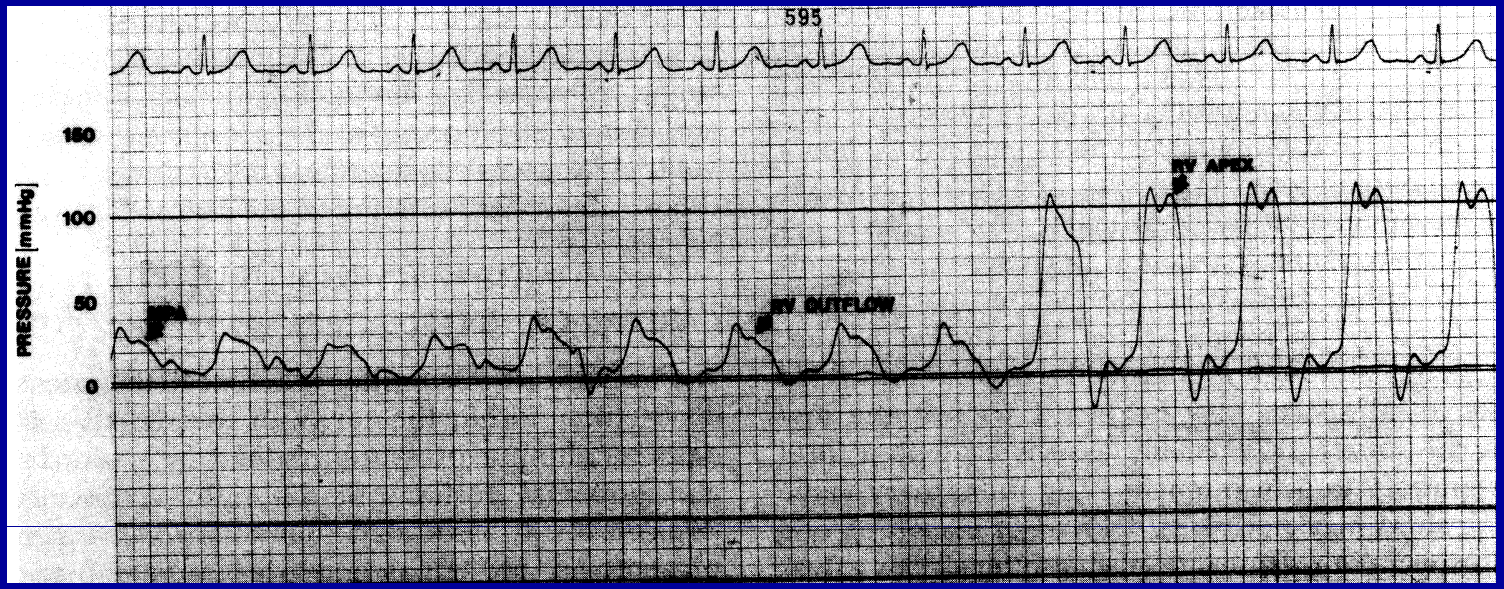
types



pressure curves

Subvalvular pulmonary stenosis

pressure curve - pullback



Aortic valve stenosis critical neonatal

- Symptoms: Irritation, paleness, tachycardia, tachypnea, hypotension, shock
- Diagnosis: Echocardiography
- Treatment: Prostaglandin E1 (0.05-0.1 mg/kg/min), cardiotonics, artefitial ventilation, balloon valvuloplasty, surgery(VT, Ross)

Aortic valve stenosis

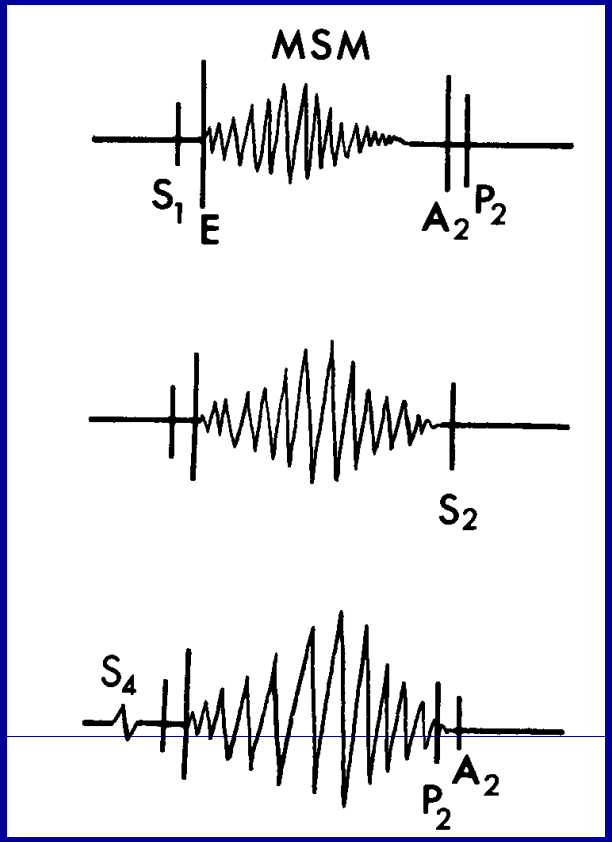
- Symptoms: None!(reduced functional reserve), dyspnea and fetigue with exertion, angina pectoris, syncope. Systolic ejection murmur in second right intercostal space.
- Treatment: Reducing intensive violent physical activity, prevention IE. Balloon VPL. Surgery AVR, auto-, homograft.

Aortic valve stenosis auscultation

mild

moderate

severe



Aortic valve stenosis
ECG @ X-ray

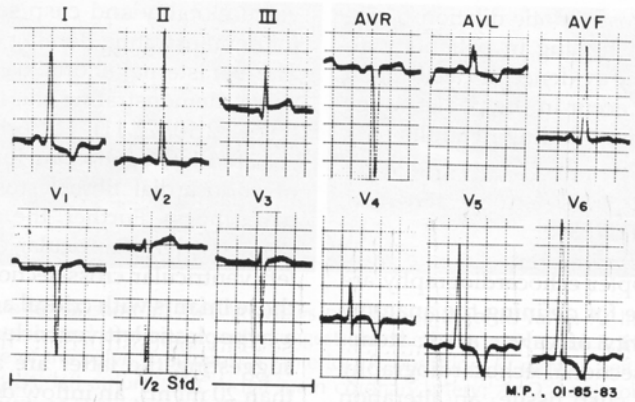


Figure 72.7. Electrocardiogram showing a left ventricular strain pattern in a child with severe obstruction (gradient systolic = 110 mm Hg).

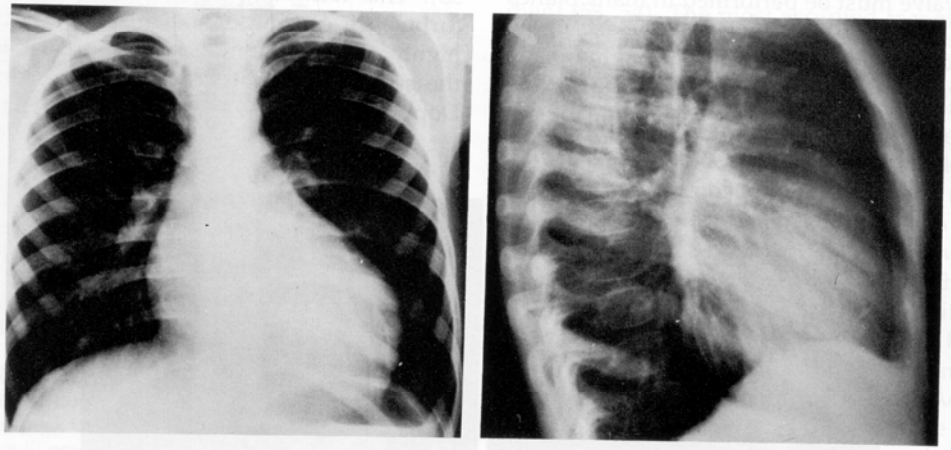
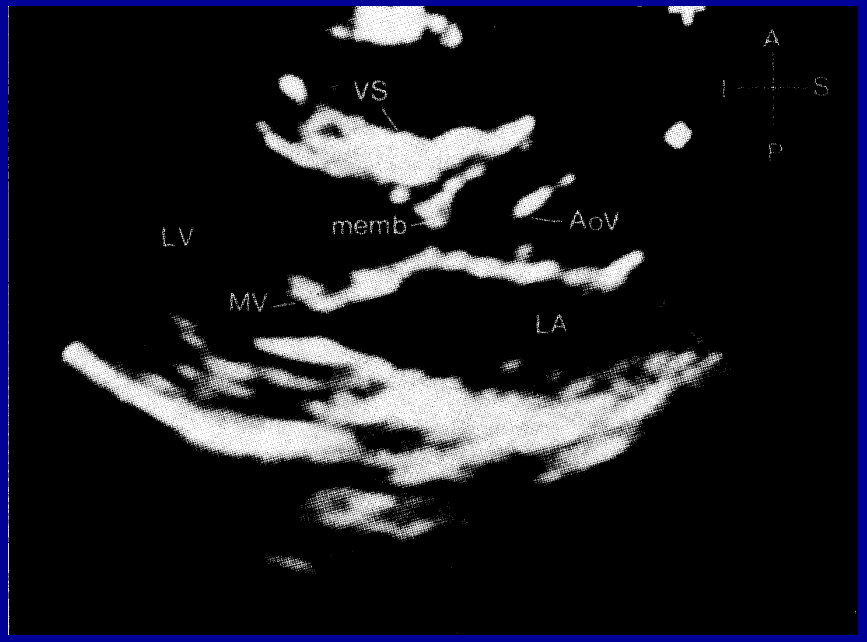


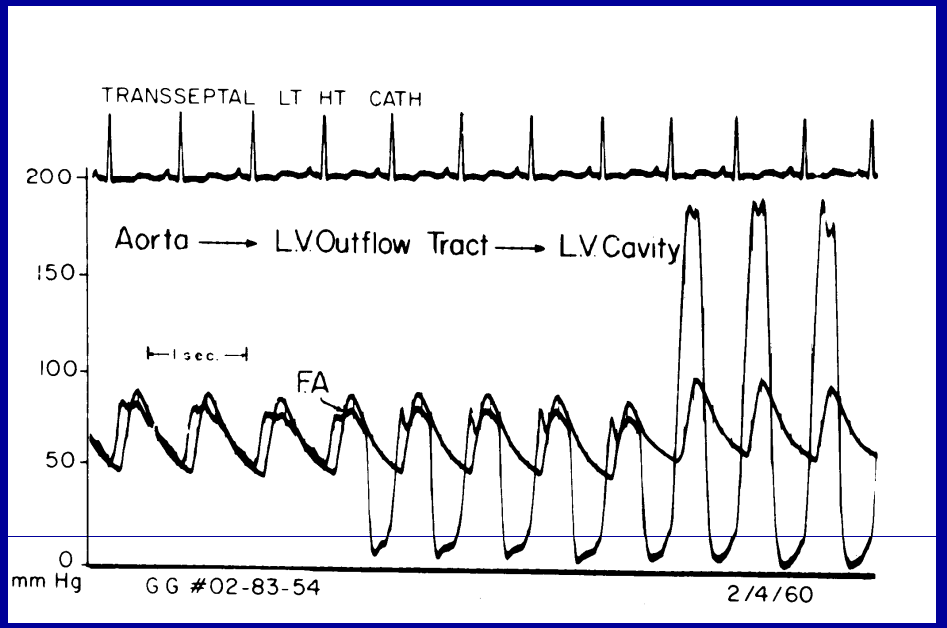
Figure 72.8. Roentgenograms of a 13-year-old boy with severe valvar aortic stenosis (Systolic gradient = 116 mm Hg). The heart is moderately enlarged, and left ventricular hypertrophy is evident.

Subaortic stenosis

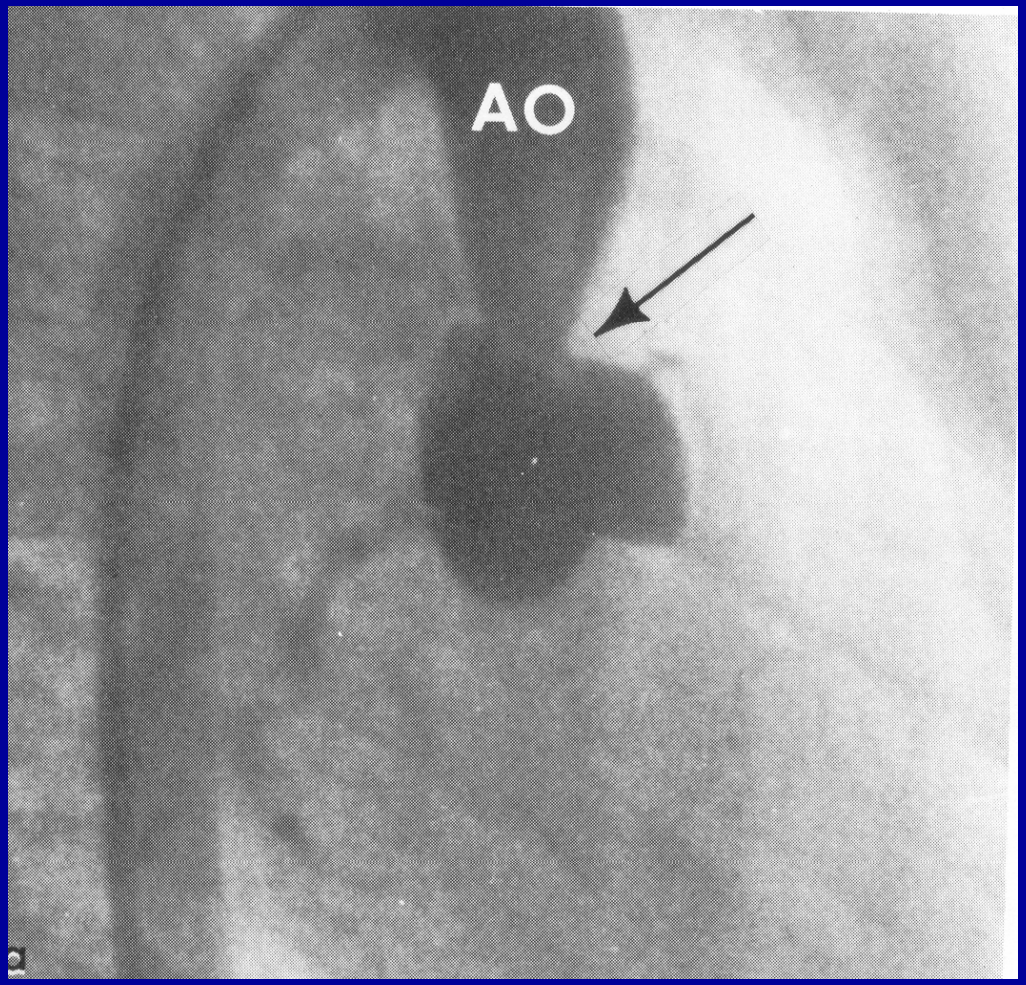
ECHO



Pressure curves

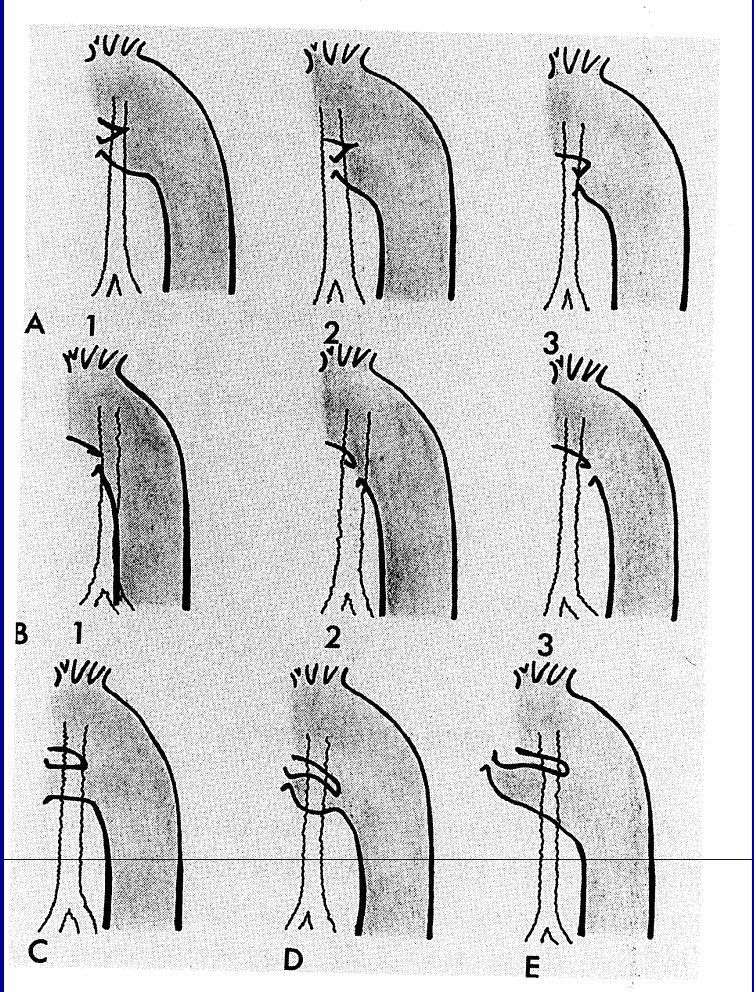


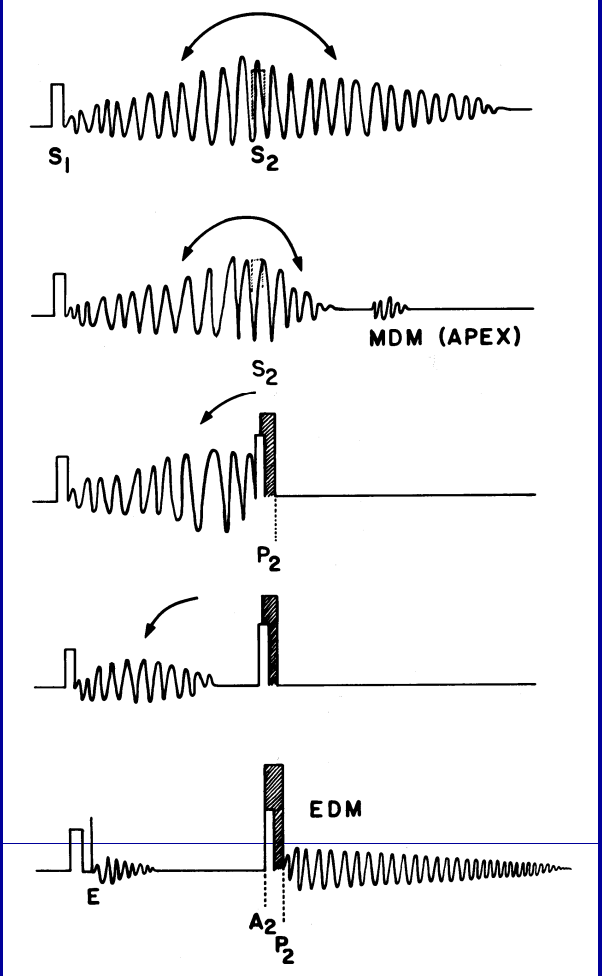
Supravalvular aortic stenosis



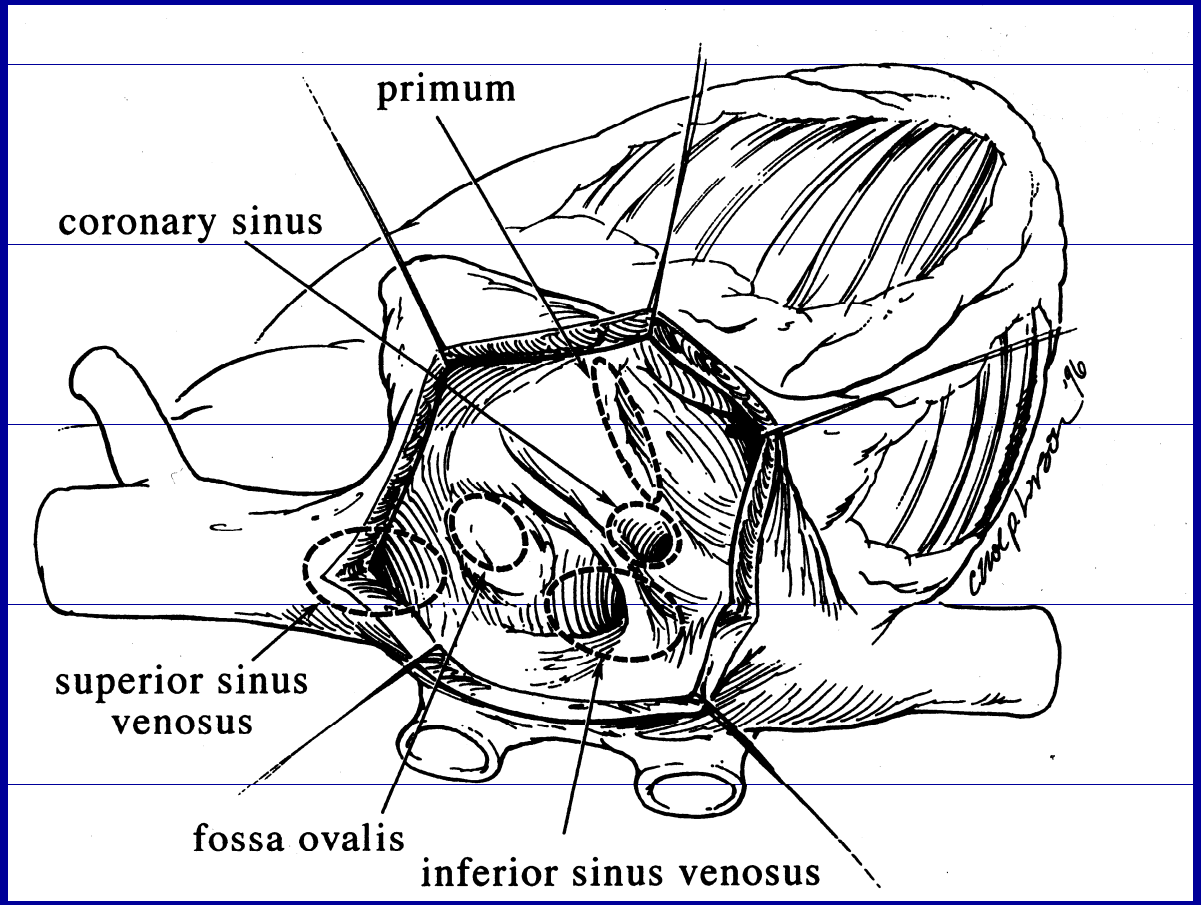
Patent ductus arteriosus

anatomic types @ auscultation





Atrial septal defect types



Atrial septal defect

aspection @ auscultation

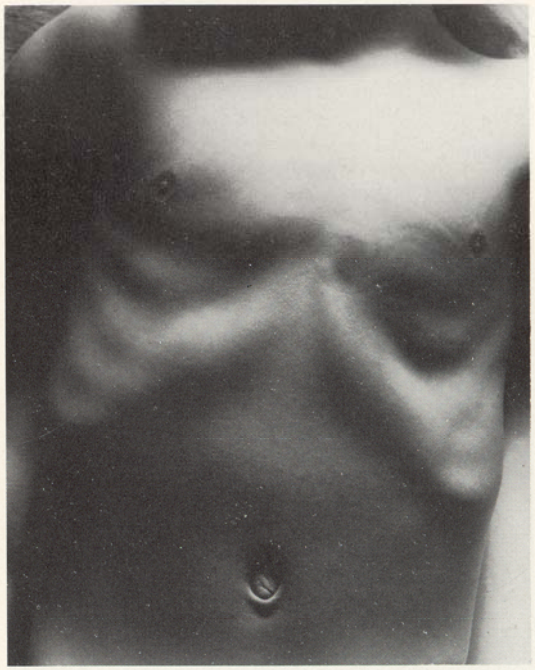
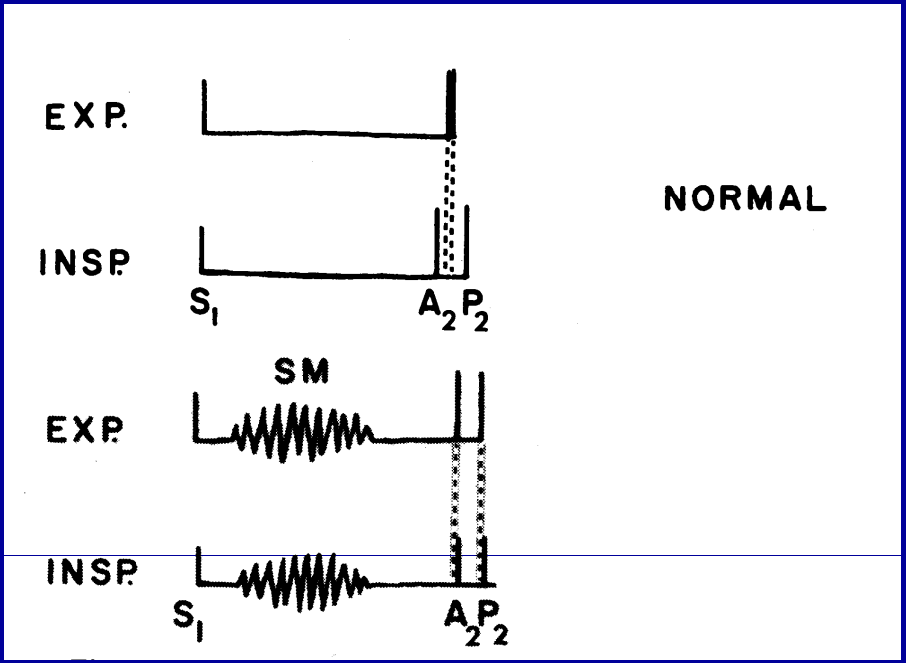
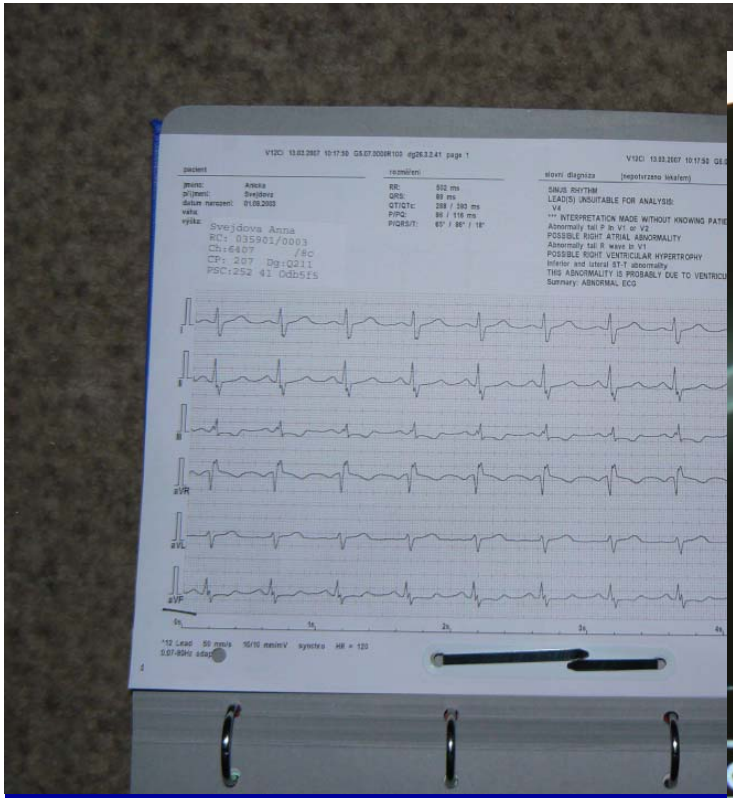
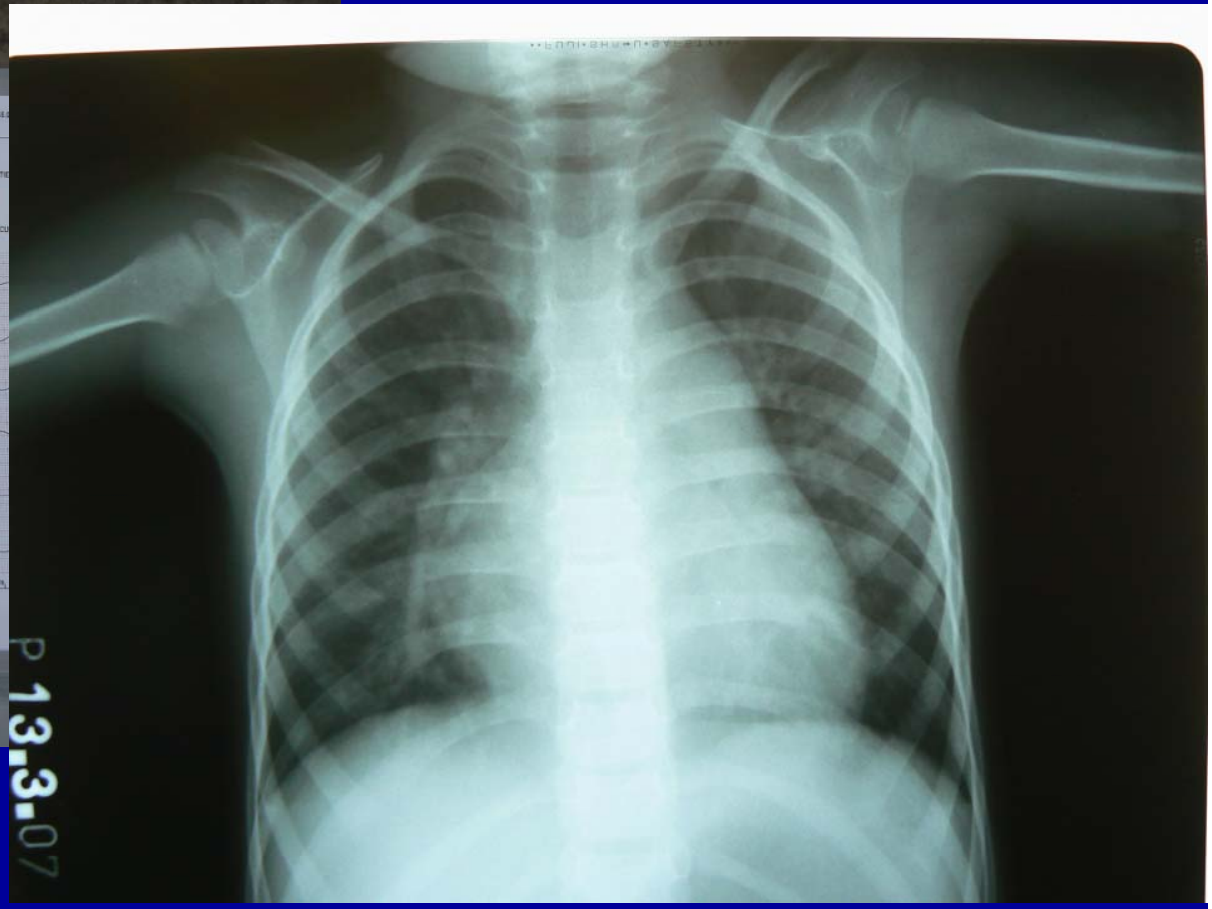
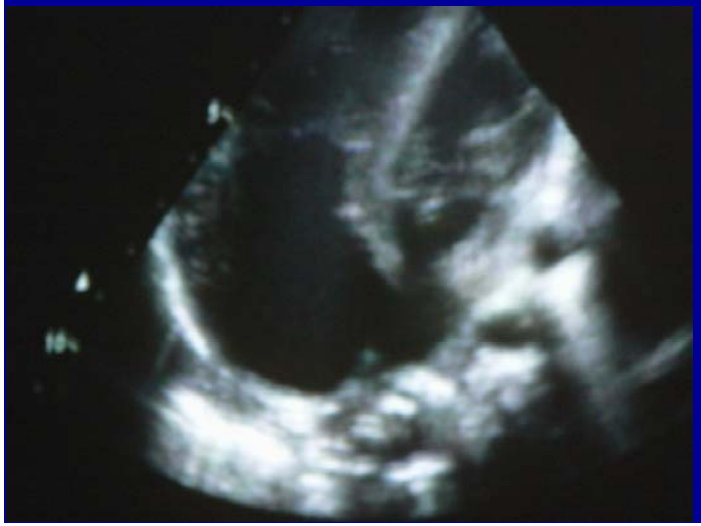


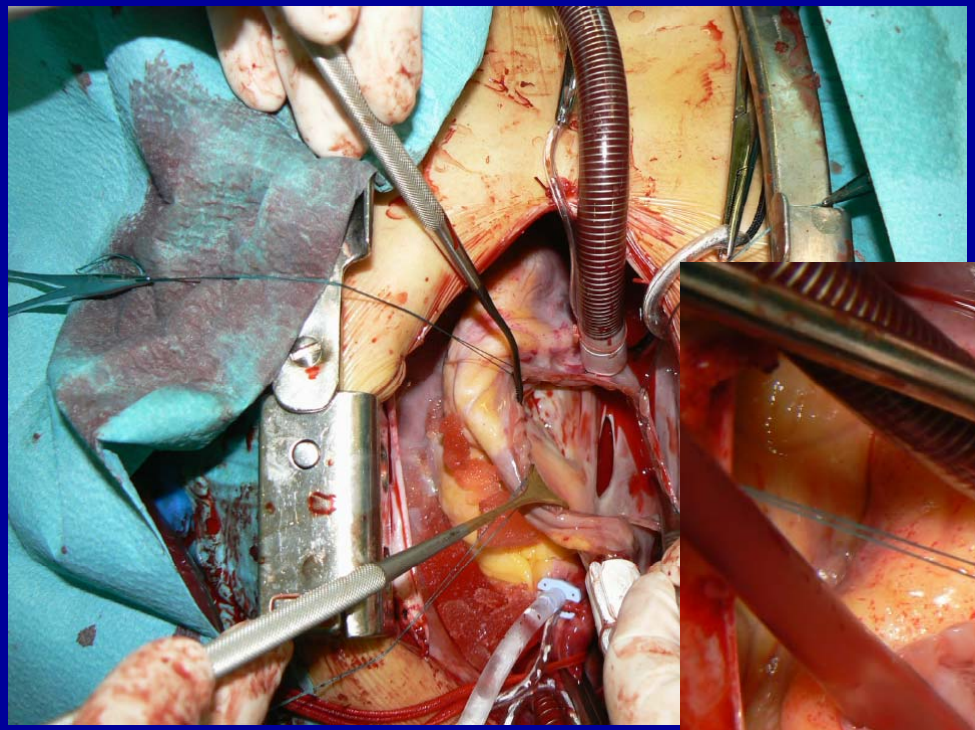
Figure 15–11 Photograph of the chest of a six year old girl with an ostium secundum atrial septal defect, a large left to right shunt (3.4 to 1) and normal pulmonary arterial pressure. Lighting was arranged to emphasize the Harrison's grooves. In addition, there is a moderate left precordial bulge.

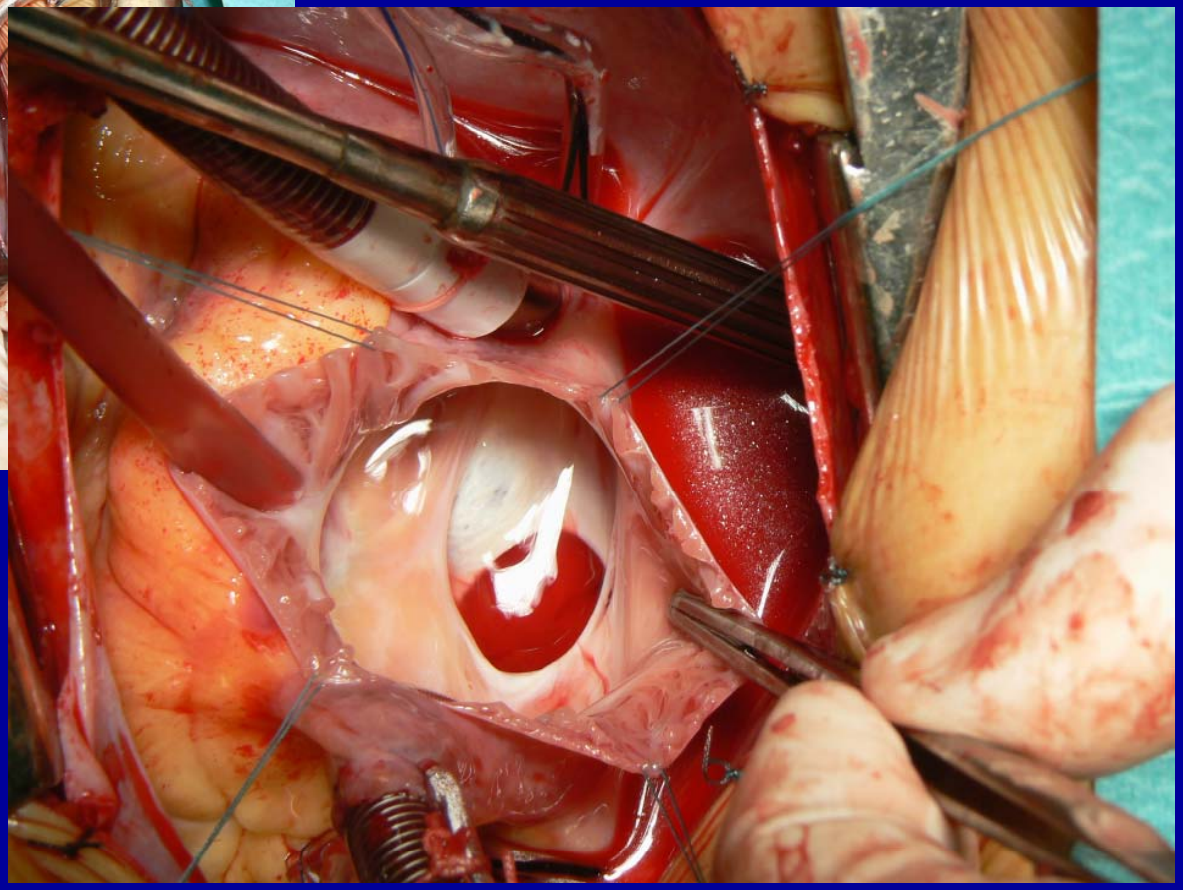



Svejdova Anna
RC: 035901/0003
Ch:6407 /6c
CP: 207 Dg:Q21i
PSC:252 41 Odb5f5
SINUS RHYTHM
LEAD(S) UNSUITABLE FOR ANALYSIS:
V4
POSSIBLE RIGHT ATRIAL ABNORMALITY
POSSIBLE RIGHT VENTRICULAR HYPERTROPHY
Summary: ABNORMAL ECG


P 13.3.07

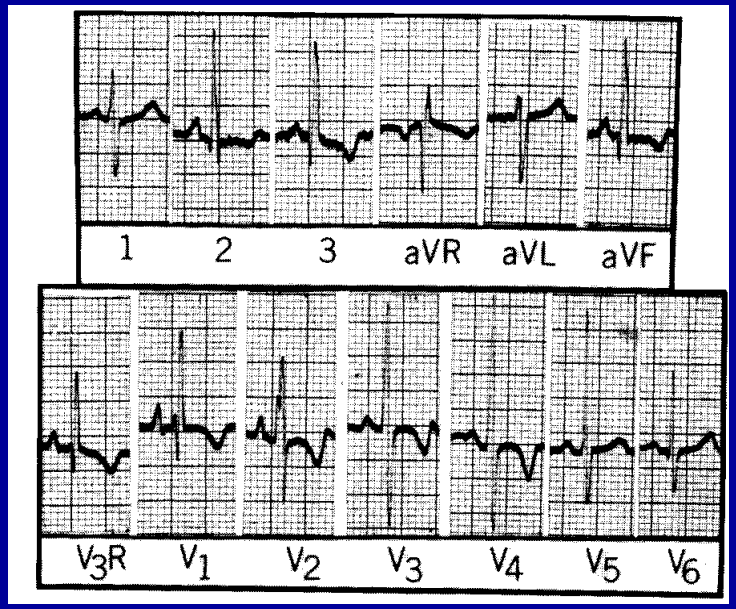




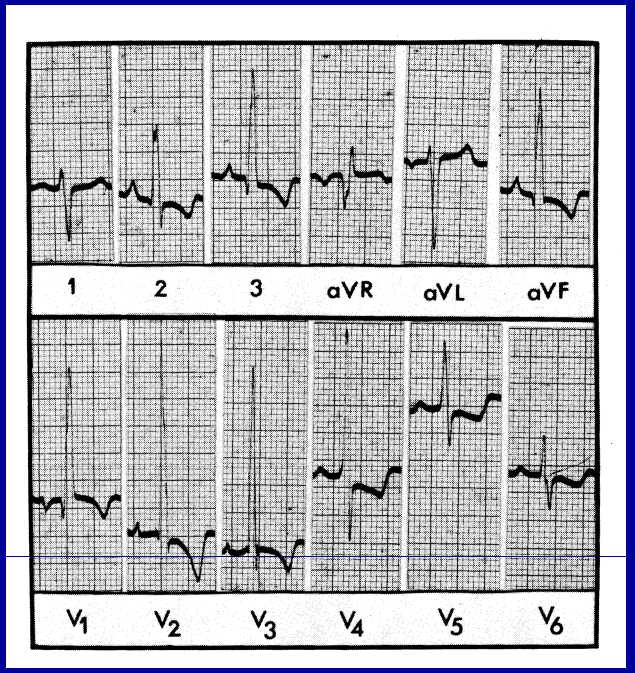


Atrial septal defect

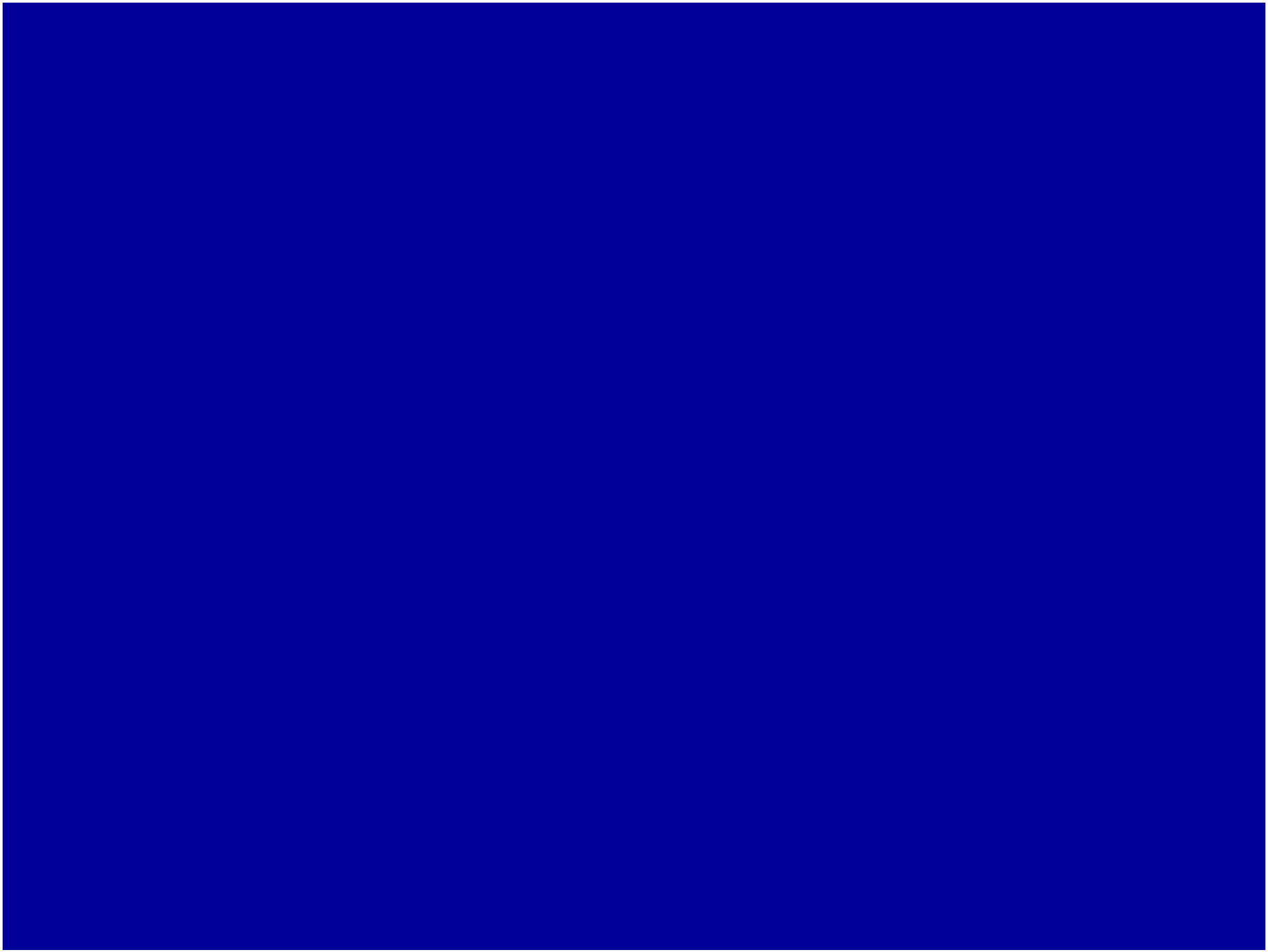
ECG



5 year



32 year



Patent ductus arteriosus

auscultation