Contraception and Pregnancy in Women with Cardiac Disease

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Objectives

- Issues for women with heart disease considering pregnancy
- What to expect during pregnancy
- Issues related to contraception

Why is pregnancy an issue for women with congenital heart disease?

- During pregnancy the heart :
  1. Beats faster
  2. Pumps more blood
  3. Generally works much harder
- This can be hard on a diseased heart

Issues for women with heart disease considering pregnancy

- Risk of pregnancy to the mother
- Risk to the baby
- Risk of transmission of congenital heart disease to children

Issues for women with heart disease considering pregnancy

Risk to the mother

- Generally women with heart disease do well
- However, some women with heart disease are at higher risk for cardiac complications during pregnancy
- The most common complications are arrhythmias (fast heart rhythms) and heart failure (fluid on the lungs)

Risk to the mother

- The good news is that most of these complications can be successfully treated during pregnancy

Risk to the mother

- There are a small group of women with a high risk for complications during pregnancy
- This includes women with significantly weakened heart muscle, severe heart valve narrowing, Marfan syndrome with an enlarged aorta, severe pulmonary hypertension and significantly low oxygen levels

Pregnancy Education

Patient Behaviour vs. MD Judgment		MD Judgment: The patient should be advised to avoid pregnancy	
		OK	Avoid
Have you postponed/avoided pregnancy based on MD advice?	No	83	7
	Yes	17	9

Kovacs et at. JACC In Press

Risks to the Baby

- Babies of mothers with heart disease are at higher risk of early delivery and having lower birth weight
- Risk factors for fetal complications include severe valve narrowing, maternal age <20 or > 30 years, smoking and treatment with blood thinners

Heart Disease in the Baby

Table 2 Risk of recurrent disease in offspring of parents with congenital heart disease

Lesion	Mother affected		Father affected	
	Risk of transmission (%)	No of cases	Risk of transmission (%)	No of cases
Atrioventricular septal defect	11.6	5/43	4.3	1/23
Aortic stenosis	8.0	36/248	3.8	18/469
Coarctation	6.3	14/222	3.0	9/299
Atrial septal defect	6.1	59/969	3.5	16/451
Ventricular septal defect	6.0	44/731	3.6	26/717
Pulmonary stenosis	5.3	24/453	3.5	14/396
Persistent ductus arteriosus	4.1	39/828	2.0	5/245
Tetralogy of Fallot	2.0	6/301	1.4	5/362
Total	5.8	222/3795	3.1	93/2961

Data from Nora 1994,[13] a meta-analysis of 13 studies undertaken between 1969 and 1994. Recurrence risk largely depends on the type of the lesion, the sex of the parent affected, and the family history of congenital heart disease if present.[13 w6 w7] For lesions with autosomal dominant inheritance (DiGeorge, Marfan, and Noonan's syndromes), the risk for recurrence of congenital heart disease can be as high as 50%.

What to expect during pregnancy

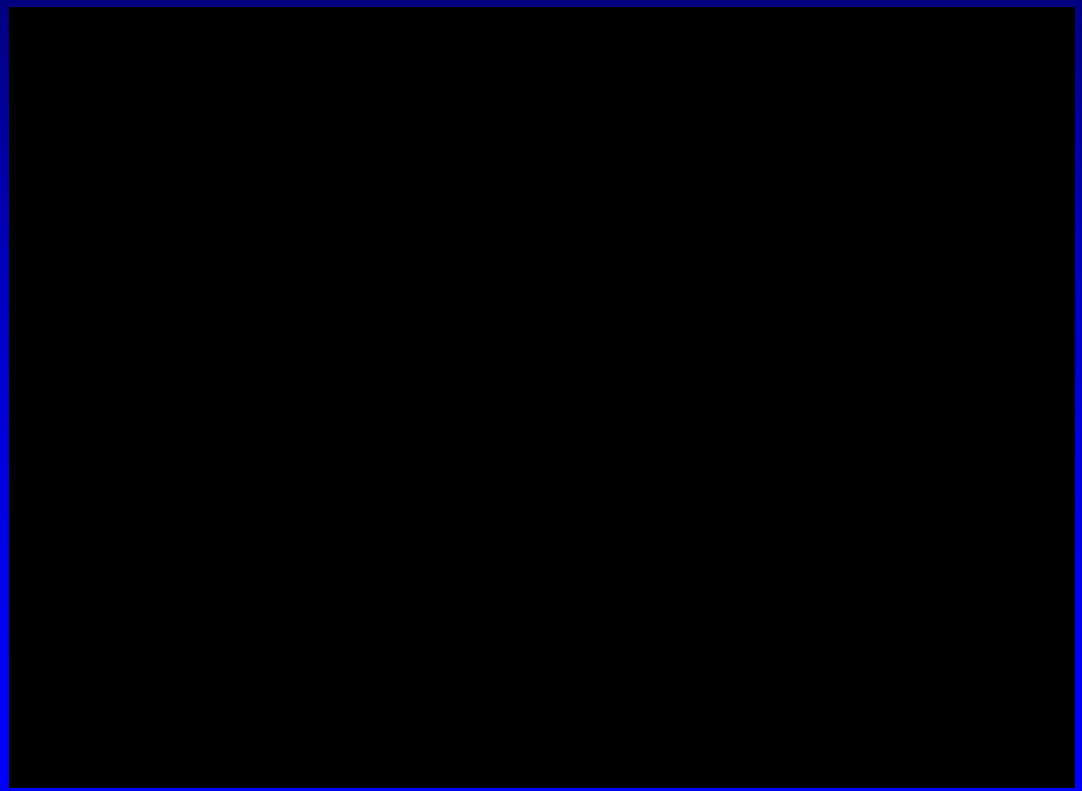
What to expect during pregnancy

- Prenatal counseling is ideal
- Regular follow usually in the 1st trimester, 3rd trimester and 6-8 weeks postpartum
- More frequent visits if there are any issues
- Serial echocardiograms during pregnancy
- Coordinated efforts between the Cardiac team, the Obstetricians and the Anesthetists

What to expect during pregnancy

- Often we suggest an epidural to minimize the pain and work during labour and delivery
- The Obstetrician may use tools to help assist the delivery
- These issues are discussed with women prior to delivery so that they can be part of the decision making

Contraception



Contraceptive method	Typical Use	Perfect Use
No method	85	85
Barriers	15-32	2-26
Progesterone only pills	5-10	0.5
Combined oral contraceptive pills	3-8	0.1
Depo provera	3	0.3
“Traditional” copper IUD	0.8	0.6
Mirena IUS	0.1	0.1
Implanon	0.05	0.05
Female sterilization	0.5	0.5
Male sterilization	0.15	0.15

Contraception

- Some forms of contraception can be unsafe in women with congenital heart disease
- Discussing safe contraception options with your Cardiologist is important

Contraception

Emergency Contraception

- Emergency contraception (“morning after pill”) is safe for women with congenital heart disease

What we have learnt from you….

- The risk of pregnancy for women with heart disease including the risks for specific lesions
- The risks for the fetus
- There is a lack of adequate education regarding pregnancy and contraception in women with congenital heart disease
- Ways to improve care for women with heart disease

What we hope to learn…

- Are there better ways to detect complications early?
- Are there late effects after pregnancy?

Thank you