INITIAL DIAGNOSTIC EVALUATION OF CONGENITAL HEART DISEASE AT PRENATAL VESUS POSTNATAL IN NATIONAL HOSPITAL FOR OBSTETRIC-GYNEACOLOGY

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Question

- Congenital heart abnormalities are one of the common congenital abnormalities
- Rate 0.5 to 0.8% of live births, higher in stillbirth, premature babies
- Approximately 40% of patients with congenital heart disease are diagnosed in the first week after birth and 50% were diagnosed in the first month

Bernstein, Nelson Textbook of Pediatric 2015

- Fetal echocardiography: safety, high precision, detection of congenital heart abnormalities was important for counseling before and after birth
- Reduce infant mortality and improve treatment outcome of congenital heart desease
- In Vietnam, there are no studies comparing diagnostic results before and after birth

Aim

To Collate the prenatal vs postnatal dianogic results of congenital heart disease in newborns in the National hospital for obstetric-gyneacology

Subjects and Methods

Subjects:The children were born at National hospital for obstetric-gyneacology from1/ 8/2017 to 1/1 /2018.

- Selection criteria for study patients:
- Pregnant women with routine checks, ultrasonic detection of congenital heart disease. Women with fetuses suffering from congenital heart disease rechecked 2nd by a specialist doctor or consultation with the cardiologist
- Right hand screening if SpO2 <95% or difference between right hand vs the leg> 3%, guests CHD would be explored echocardiography

Exclusion criteria:

- These children did not get prenatal ultrasound.
- These children did not have an echocardiogram.

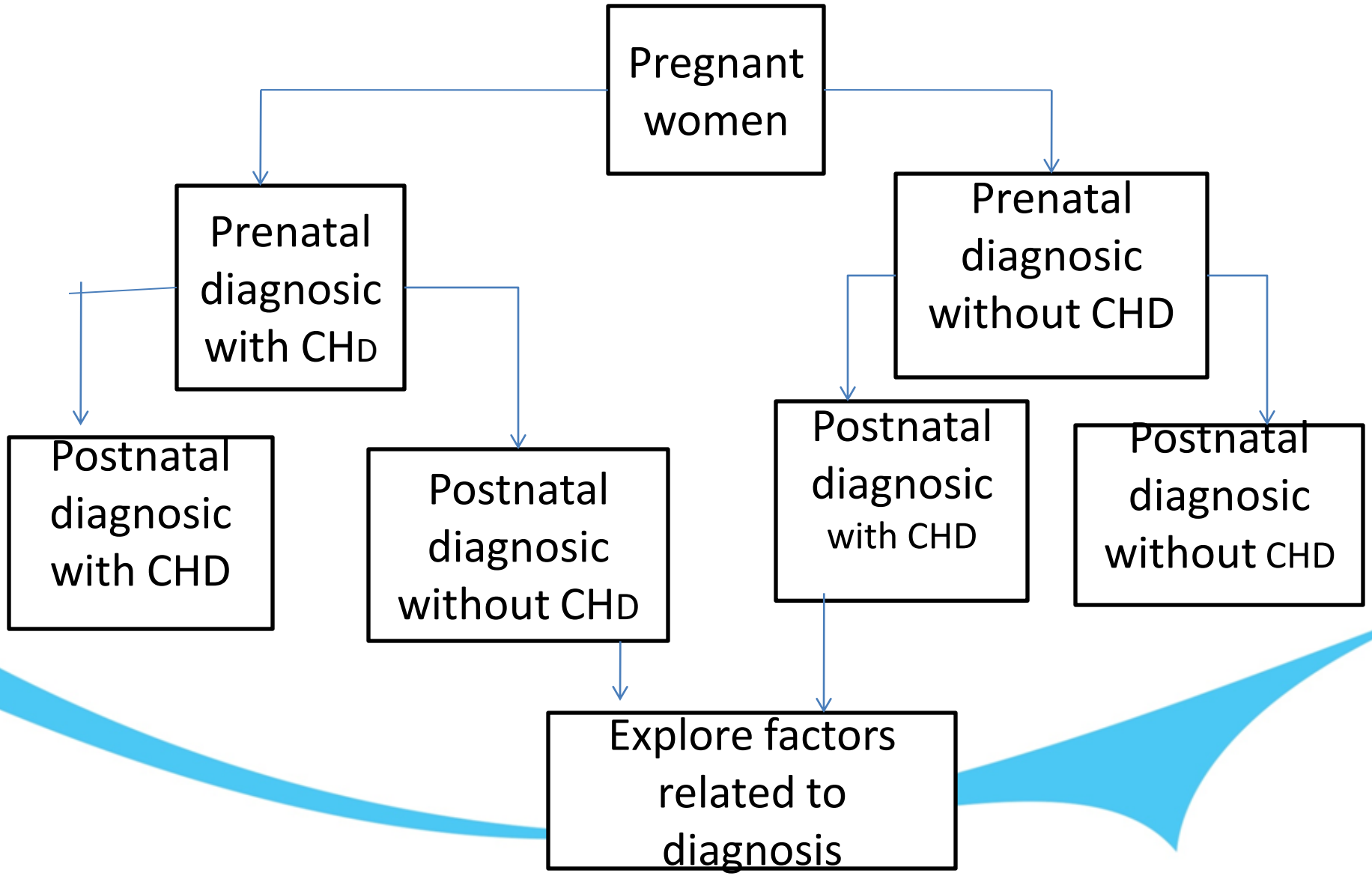
Methods

- Research design.
- A prospective description study of case series
- Sample sizes: convenient
- Screening patients for CHD by measuring SpO2 .

- Echocardiography confirmed the diagnosis by the physician and cardiologist.
- Ultrasound at least 2 times and consultation of a cardiologist to diagnose uniform.
- Comparing these findings with echocardiographic postpartum vs prenatal diagnosis.

- 4-D ultrasound probe Philip S 12-4 mark device produced in 2014
- Patients indicated surgery or cardiology intervention at the Hanoi cardiology hospital or National Paediatrics hospital .
- Clinical examination and ultrasound after surgery or intervention by pediatric cardiologist.

Chart Research



Results

Table 1: Rate of congenital heart disease diagnosed Prenatal vs postnatal

Prenatal diagnosis of CHD	Number of patients**(n)**	**Rate(%)**
Finding Congenital heart disease	103	93,6%
Unfinding Congenital heart disease	7	6,7%
Total	110	100%

Table 2. Proportion of abortion

Attitude management	Patients (n)	(%)
Abortion	47	42,7%
Intervention after birth	63	57,3%
Total	110	100%

Table 3. Percentage malformation accompanied by CHD

Deformities accompanying	Patients (n)	(%)
Yes	27	24.5%
No	83	75,5%
Total	110	100%

Table 4: Comparing pre and postnatal diagnosis of Group suspended pregnant

Shunting group	Prenatal N (%)	Postnatal N (%)
Ventricular septal	26 (40,6%)	25 (39,1%)
Atrial septal	0 (0%)	2 (3,1%)
Atrioventricular canal	10 (15,6%)	11 (17,2%)
Fallot4	8 (12,5%0	8 (12,5%)

Group of ventricular outlet obstruction	Prenatal **N (%)**	Postnatal **N (%)**
Pulmonary artery stenosis	3 (4,7%)	5 (7,8%)
Aortic valve stenosis	3 (4,7%)	3 (4,7%)
Aortic stenosis waist	2 (3,1%)	4 (6,3%)
Pulmonary valve stenosis	1 (1,6%)	2 (3,1%)

Group abnormal blood vessels outside the heart	**Chẩn đoán trước sinh**	Diagnosed after birth
2 road to the right ventricle	5 (7,8%)	5 (7,8%)
Original transfer artery	10 (15,6%)	11 (17,2%)
Pulmonary venous return anomaly	1 (1,6%)	1 (1,6%)
One artery trunk	1 (1,6%)	1 (1,6%)

Other abnormalities In the heart	Chẩn đoán trước sinh	Chẩn đoán sau sinh
Left ventricular Hypoplastic	2 (3,1%)	2 (3,1%)
Right ventricular Hypoplastic	3 (4,7%)	3 (4,7%)
Tricuspid Hypoplastic	1 (1,6%)	1 (1,6%)
Ebstein	0 (0%)	2 (3,1%)
Myocardiology tumer	1 (1,6%)	1 (1,6%)
Slow arrhythmias	2 (3,1%)	2 (3,1%)

Discussion

- There were 103/110(93,6%) congenital heart diagnosed at prenatal appropriately vs Neonatal
- Nguyen Viet Hung (2006) with 20/21(95,2%).
- Isacksen (1999) ratio of correction diagnosis of prenatal serrious congenital heart disease was 91%
- 47 (42,7%) abortion vs Phan Quang Anh (2010) 67%,

- Ventricular septal (38.2%), hypoplastic left ventricle (16.4%) and atrioventricular tube (12.7%).
- Isaksen (1999) and Phan Quang Anh (2010) ventricular septal respectively 28.6% and 32.2% the highest in CHDs. Particularly atrial septal we had not met before birth because the fetus has always existed Botal hole. Postpartum not headlining purple and difficult diagnosis, only 2 patients detected at neonatal period.

Conclutions

- Rate of congenital heart disease diagnosed in prenatal corresponding neonatal period was 93.6%.
- Prenatal diagnosis consistent high corresponding in shunt group such as: ventricular septal, atrioventricular canal, Fallot 4 and hypoplastic ventricles. Group of ventricular outlet obstruction as: pulmonary artery stenosis, narrow waist at aorta was detected before birth less.
- All fetuses and infants should be examined and screened for congenital heart disease.

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THANK YOU VERY MUCH !