

Study of Congenital Heart Diseases in Pediatric Patient

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Abstract:-

Introduction: Congenital heart disease is important cause of morbidity and mortality in pediatric practice.

Objectives: - 1) To establish the diagnosis and find out incidence of CHD in various age group. 2) To study various mode of presentation of various CHDs. 3) To study morbidity and mortality in various CHDs in children.

Methodology:- Total 60 cases of congenital heart diseases coming to K.T. Children hospital, Rajkot from July 2016 to November 2016 were studied. Informed consent and detailed history was taken followed by thorough clinical examination as per Performa attached. Echocardiography of all patients was done. School health cards were prepared for the patients having abnormal echocardiography and referred to higher centre for cardiologist opinion.

Conclusion:- Correct diagnosis can be made with help of thorough history and clinical examination especially in acyanotic congenital heart diseases. Early diagnosis and timely referral of patient can greatly improve outcome of patients with CHDs.

Keywords: congenital heart diseases

I. Background

Congenital heart disease refers to structural or functional heart defects that are present at birth, even if it is discovered much later ⁽¹⁾. Congenital heart disease occur approximately 8 out of 1000 live birth ⁽²⁾. Congenital heart disease is important cause of morbidity and mortality in pediatric practice. Outlook of CHDs was very gloomy in the past but scenario is changed with advancement in diagnosis and management.

OBJECTIVES:-

- 1) To establish the diagnosis and find out incidence of CHDs in various age group.
- 2) To study various mode of presentation of various CHDs.
- 3) To study morbidity and mortality in various CHDs In children.

II. Methodology

Study design:- observational study

Sample size:- 60 consecutive cases of CHDs

Study period:- 5 months

Total 60 cases of congenital heart diseases coming to K.T. Children hospital, Rajkot from July 2016 to November 2016 were studied. Informed consent and detailed history were taken followed by thorough clinical examination as per Performa attached. Echocardiography of all patients was done. School health card were prepared for the patients having abnormal echocardiography and referred to higher centre for cardiologist opinion and follows up of those patients were taken.

INCLUSION CRITERIA:

All the patients having symptoms and signs suggestive of CHDs
Recurrent respiratory tract infection, cough, fever, breathlessness, failure to gain weight
Cyanosis, feeding difficulty, sweating on forehead
Grade III or more murmur

EXCLUSION CRITERIA:

Patients having normal echocardiography
 Patent Foramen ovale
 Preterm infant with PDA

III. Results And Discussion

TABLE I:- Correlation Of Congenital Heart Diseases With Age & Sex

AGE GROUP	MALE	FEMALE
0-1 MONTH	2	3
1MONTH-1 YEAR	14	10
1-5 YEAR	13	9
>5 YEAR	5	4
	34	26

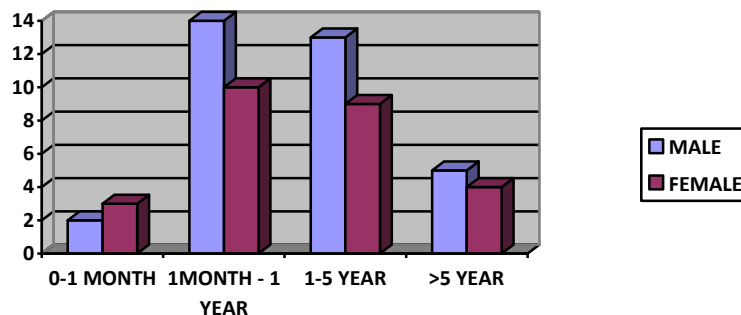


Table and chart suggest that out of 60 cases, 48.8% (29) presented in first year of life and male predominance with ratio of 1.3:1. Fontana and Edward in their study of 357 cases have also reported maximum incidence in infancy⁽³⁾.

TABLE II:- Presenting Symptoms of Individual CHDS

ECHOCARDIOGRAPHY	COUGH	FEVER	BREATHLESSNESS	REFUSAL TO FEED	CYANOSIS	FAILURE TO GAIN WEIGHT
VSD	20	15	16	13	0	18
ASD	8	7	6	3	0	4
VSD + ASD	4	2	3	2	0	3
TOF	6	1	7	8	10	7
VSD + PDA	2	1	2	0	0	2
DORV	-	0	1	1	1	0
COARCTATION OF AORTA	-	1	0	0	0	0
TGA	1	2	2	2	2	0
TRICUSPID ATRESIA	1	0	1	1	1	0
TOTAL	42(60%)	29(48.3%)	38(56.6%)	30(33.3%)	14(21.6%)	34(43.3%)

- Cough (60%) followed by breathlessness (56.6%) were observed to be most common presenting symptoms of CHDs. Keith⁽⁴⁾ and Nada's⁽¹⁾ in their study, cough and breathlessness were observed to be common clinical features.
- Acyanotic CHDs more prevalent and presented with cough, fever and breathlessness and failure to gain weight.
- TGA, DORV and TA presented at birth with severe cyanosis.
- All the patients with TOF presented with cyanosis.

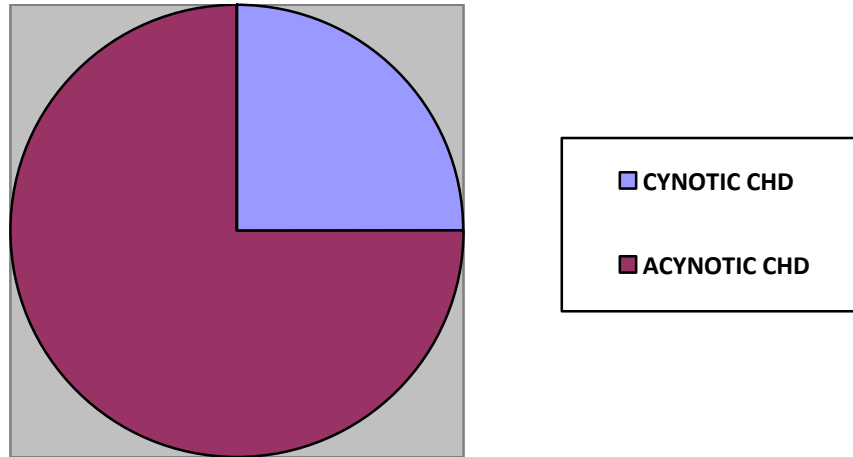
TABLE III:- Echocardiography Diagnosis

ECHOCARDIOGRAPHY	NO. OF PATIENT	FREQUENCY
VSD	28	46.6%
ASD	7	11.67%
ASD & VSD	7	11.67%
TOF	10	16.7%
VSD & PDA	3	5%
DORV	1	0.017%
COARCTATION OF AORTA	1	0.034%
TGA	2	0.017%
TA	1	0.017%
TOTAL	60	100%

Most common acyanotic CHD is ventricular septal defect (46%) and most common prevalence of cyanotic CHD is tetralogy of fallots (16.7%). Nada's⁽¹⁾ and paulwood⁽⁵⁾ also noted VSD as common congenital cardiac defect in their study.

TABLE IV:- Relative Incidence of Acyanotic And Cyanotic CHDs

	NO. OF PATIENTS	PERCENTAGE
ACYANOTIC CHDs	45	75%
CYANOTIC CHDs	15	25%
TOTAL	60	100%

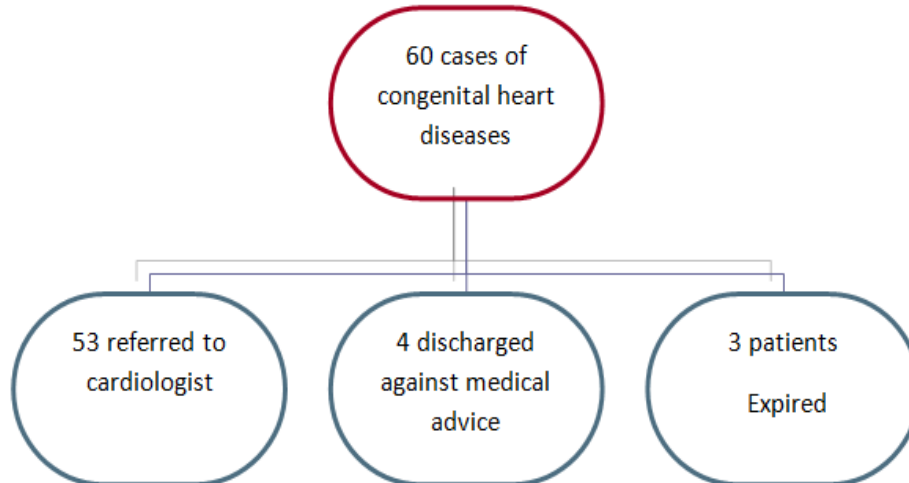


Comparison between acynotic and cyanotic CHD

Table and chart suggest that acyanotic congenital heart diseases (75%) are more common than cyanotic congenital heart diseases (25%).

Other study	Acyanotic (%)	Cyanotic (%)
Joshi ⁽⁶⁾	83.3%	16.7%
Bhatt ⁽⁷⁾	78.8%	21.2%

Outcome of congenital heart diseases



From 60 cases 3 expired, 4 took DAMA and 53 referred to cardiologist, from which 67.3 % (36) managed medically and 30.1 % (16) managed surgically.

IV. Conclusion

Correct diagnosis can be made with help of thorough history and clinical examination especially in acynotic congenital heart diseases. Early diagnosis and timely referral of patient can greatly improve outcome of patients with CHDs.

References

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