



Congenital heart disease: role of RBSK in reduction of morbidity & mortality in children in Kolhapur

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ABSTRACT

Background:

Congenital heart disease is the second leading cause of morbidity & mortality in infancy and childhood. But difficulties in early diagnosis of congenital heart disease due to unavailability of timely diagnostic facilities as well as prompt treatment interventions as per diagnosis may delay the early diagnosis & unsatisfactory outcome in children. Especially children from rural & underprivileged class are likely to get deprived of healthcare facilities & delayed diagnosis & delayed treatment may worsen the morbidity pattern & mortality in these children.

Objectives:

To study the impact of screening programme implemented under RBSK run by government in early diagnosis & prompt treatment of congenital heart diseases in children in Kolhapur district

Methods:

Screening of all children under age of 18 years in Kolhapur district is done under RBSK programme by ASHA workers, Anganwadi workers, by medical officers in school health programme & all children with suspected congenital heart disease after available history & clinical examination were called for further evaluation at Cardiology department at CPR Hospital, Kolhapur in the form of ECG, SiO₂, 2D Echo examination. A cross-sectional study was conducted on 23/02/2018. Total 255 children included in study who were beneficiaries of RBSK.

Results:

The majority of children were diagnosed to have congenital heart disease in the age group of 3-6 years (25.9%). Total 70.2% of children were diagnosed to have structural heart diseases in the screening & evaluation programme under RBSK. Most common CHD seen was VSD in 36.3% (65) children. Other congenital heart diseases diagnosed are ASD, TOF, PDA, pulmonary valvular diseases, bivalved aortic valves, Complex heart diseases, RVHD etc.

Conclusion:

Screening of children for early detection of congenital heart diseases and encouraging early treatment in the form of intervention services or surgical treatment are most beneficial for improvement in overall health status of children & reducing morbidity & mortality in children and RBSK playing important role in it.

Keywords: RBSK (Rashtriya Bal Swasthya Karyakram), CHD (Congenital Heart Disease), Early Intervention

INTRODUCTION

Heart defects are among the most common congenital defects in neonates ^[1-2]. The incidence of congenital heart defects is estimated at 4-8 per 1000 births ^[3-5]. CHDs require medical and sometimes surgical intervention early in life and early detection and

quality care can improve health outcomes ^[2]. The occurrence of CHD in developing country like ours would be much higher despite the fact that most of the cases in our setup are missed due to lack of

proper facilities, detection modalities and diagnostic techniques^[4].

Rashtriya Bal Swasthya Karyakram (RBSK), a Screening and early intervention services programme to all the children in the community. The objective of RBSK is to improve the quality of life of children through early detection of birth defects, diseases, deficiencies, development delays and disability. The high burden of these ill health contributes significantly to child mortality, morbidity and out of pocket expenditure of the poor families. This initiative ensures covers of all expenditures of the eligible families related to child health right from birth^[6].

Aims and Objectives-

To study the impact of screening programme implemented under RBSK run by government in early diagnosis & prompt treatment of congenital heart diseases in children in Kolhapur district.

Material and Methods-

Study design- Cross sectional observational study

Place- RBSK camp in Kolhapur

Duration-23/02/2018 (1 day)

Participants- 255 children who were selected after large scale screening programme in whole district at school health programme, Anganwadi activities & who attended the RBSK evaluation camp at CPR hospital Kolhapur

Statistical Analysis-

Data was collected and recorded on a pre-designed proforma and entered in excel database. Data analysis was performed using Epi info 7 program.

Screening Analysis-

Total no. of child-255

Normal -76

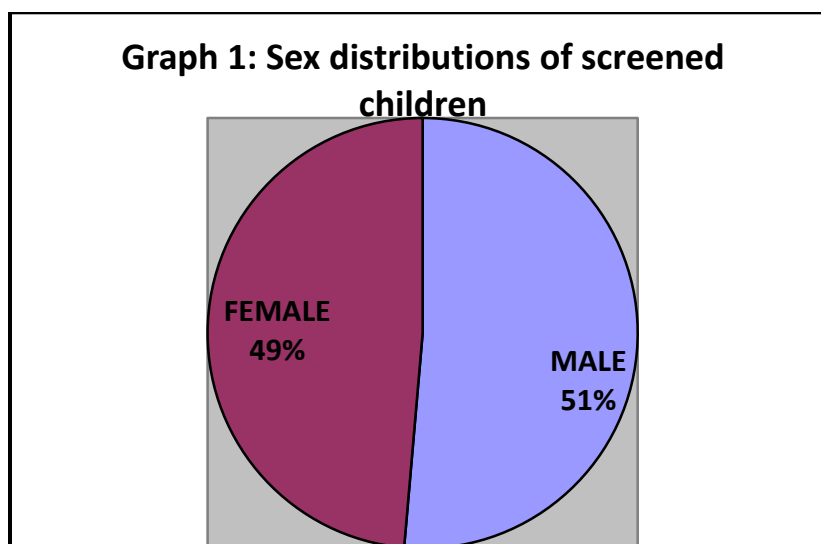
Congenital heart disease-179

Results:

Sex distributions of screened children (**Graph:1**)

No. of male-131 (51%)

No. of female-124 (49%)

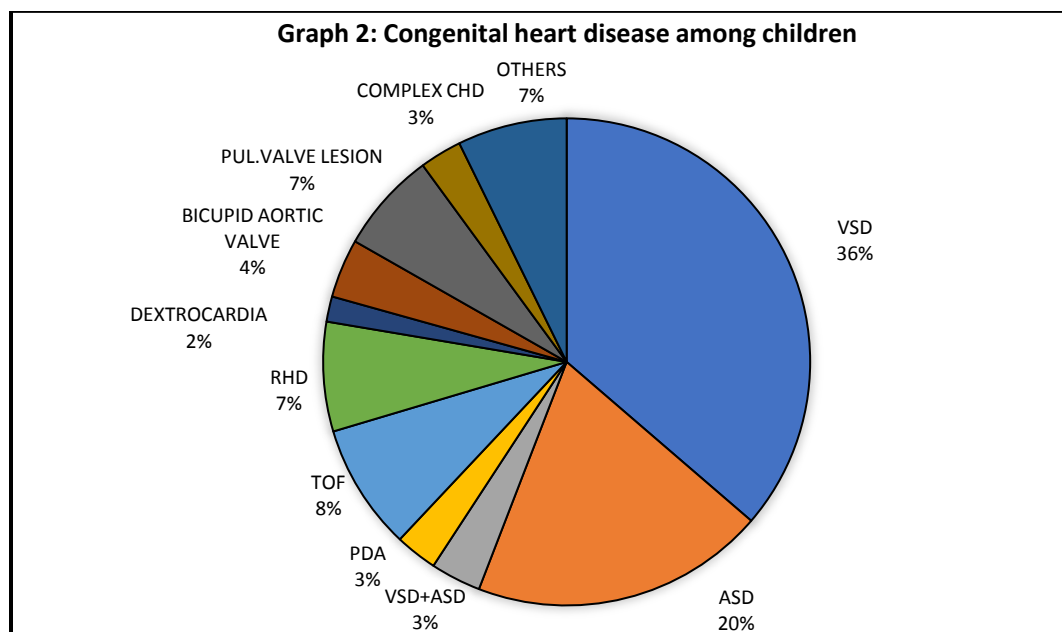


Congenital heart disease among children-

Most common CHD seen was VSD in 36.3% (65) children. Other congenital heart diseases diagnosed are ASD (19.55%), TOF (8.3%), PDA (2.7%), pulmonary valvular diseases (6.7%), bivalved aortic valves(3.9%), complex heart diseases(2.7%) ,RVHD (7.2%), etc. (Table No.1)

Table No.1:

TYPE OF CHD	CHILDREN
VSD	65(36.3%)
ASD	35(19.5%)
VSD+ASD	6(3.3%)
PDA	5(2.8%)
TOF	15(8.3%)
RHD	13(7.2%)
DEXTROCARDIA	3(1.6%)
BICUSPID AORTIC VALVE	7(3.9%)
PULMONARY VALVE LESIONS	12(6.7%)
COMPLEX CHD	5(2.7%)
OTHERS	13(7.2%)
TOTAL	179

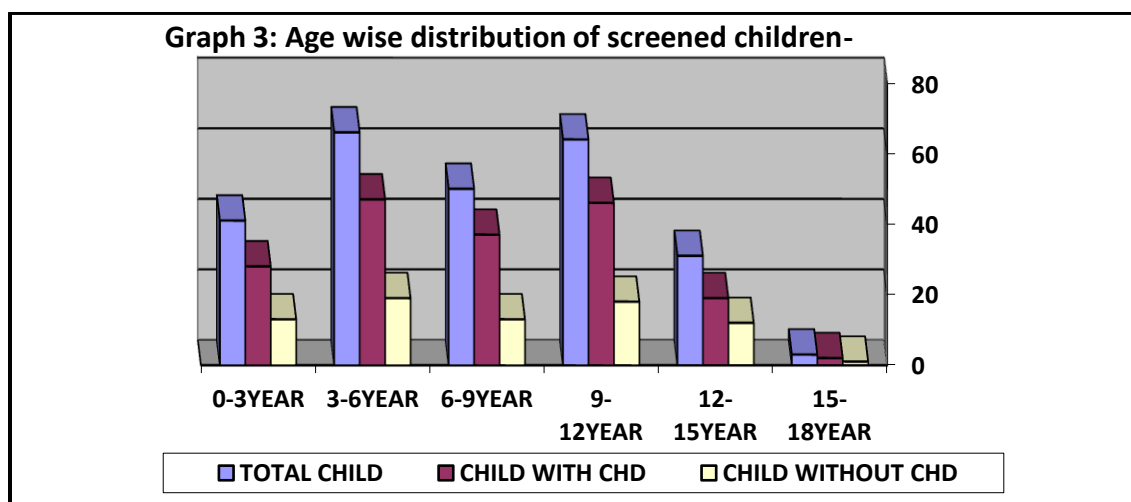


Age wise distribution of screened children-

Table No 2:

Age Of Children (Years)	No. Of Children	Children With CHD	Children Without CHD
0-3	41	28	13
3-6	66	47	19
6-9	50	37	13
9-12	64	46	18
12-15	31	19	12
15-18	3	2	1
Total	255	179	76

The majority of children were diagnosed to have congenital heart disease in the age group of 3-6 years(26.2%).Total 70.2% of children were diagnosed to have structural heart diseases in the screening & evaluation programme under RBSK. (Table No 2)

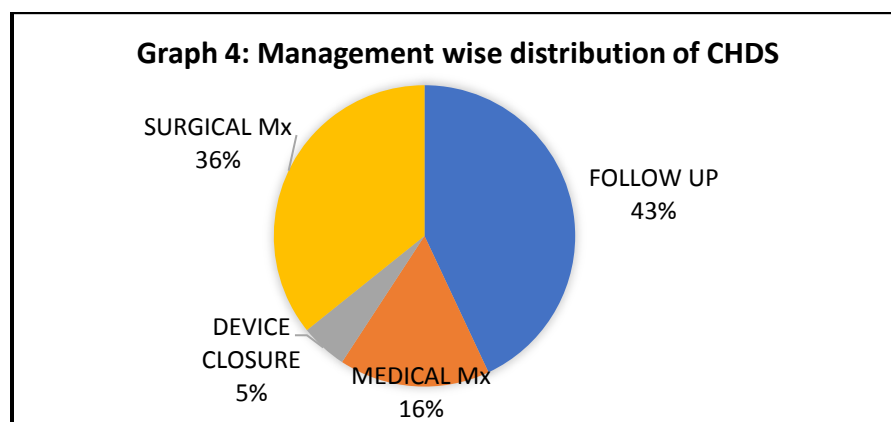


Management wise distribution of CHDS-

Table No. 3:

Management	No Of Patients
Follow Up	77(43%)
Medical Management	29(16.2%)
Device Closure	9(5%)
Surgical Management	64(35.7%)
Total	179

Out of 179 children 77 children with CHDs called for follow up, 29 children with CHDs treated with medication, 9 children with CHDs advised device closure, and 64 children with CHDs advised surgical correction & referred to higher center. (Table No.3)



Conclusion-

With this study we observe that still there are many children are undiagnosed and deprived of treatment for curable heart diseases. And this hidden part of children with heart diseases constitutes a major part in child mortality.

Any effective health intervention will reduce both direct costs and out-of-pocket expenditure and here, Child Health Screening and promotion of Early Intervention Services is more important for improvement in health status of children. It will also be very helpful in reducing the extent of disability, in improving the quality of life and enabling all persons to achieve their full potential.

The beautiful feature of the RBSK Services is the continuum of care extending over different phases of the life of a child over the first 18 years. And in future days we sincerely hope that it will be further extended to cover all the children of the community through NHM.

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