



View Point

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The Burden of Congenital Heart Disease in Libya

By Elhadi H Aburawi

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page
120

Congenital Heart Disease (CHD) is defined as a gross structural abnormality of the heart or intrathoracic great vessels that is actually or potentially of functional significance. It is the most common congenital problem that accounts for up to 25% of all congenital malformations presenting in the neonatal period [1]. The cause of CHD is multifactorial.

Early diagnosis and proper and early medical or surgical intervention for most of the CHD could provide anatomical correction and a normal life expectancy. Patients born with severe forms of CHD are at approximately 12 times higher risk of mortality in the first year of life, particularly if they are missed in the neonatal period. Mortality in the first year of life was 18% for all CHD that are diagnosed in infancy [2]. Cardiac surgery with poor setup could

have a higher mortality than not performing surgery.

Hoffman *et al* reported that, given the causes of variation, there is no evidence for differences in incidence between different countries or times. The general worldwide incidence of CHD is 12-15/1000 live births [3]. Due to lack of reported national epidemiological studies in Libya, it is wise to make some statistical calculations for the incidence and prevalence of CHD.

The birth rate in Libya is 27.6 live births/1000 populations [4]. The total estimated number of live births with CHD is about 2000 per year, which is added every year to the already existing pool. For the details of the different types, incidence and the mathematically calculated actual number of CHD in Libyan population, see table 1. The incidence of moderate to se-

vere forms of CHD, which require urgent cardiac management, is about 4-5/1,000 live births [3]. In Libya there is a total number of at least 400 - 600 live births/year with moderate to severe forms of CHD, who need surgical or medical intervention in the first year of life.

of patent ductus arteriosus, atrial septal defect and ventricular septal defect and balloon dilatation of pulmonary and aortic valve stenosis. Centralization of the paediatric cardiac service improves the results of the treatment of CHD. Sweden and the United Kingdom have turned towards centraliza-

Table 1: Types, incidence and number of newly diagnosed CHDs per year in Libya*

Types of CHD	Incidence	Number/year
Ventricular Septal Defect	25-30%	600
Atrial Septal Defect	5-10%	200
Atrio-Ventricular Septal Defect	5%	100
Coarctation of aorta	5%	100
Patent Ductus Arteriosus	5-10%	200
Tetrology of Fallot	5-10%	200
Transposition of Great Arteries	5%	100
Aortic Stenosis	5%	100
Pulmonary Stenosis	5-10%	200
Others (rare)	10%	200
Total	100%	2000

* This table is based on rough mathematical calculation of the number of newborn babies per year with different types of congenital heart disease in Libya.

Surgery is the treatment of choice for most of CHD, but cardiac catheterization and intervention are becoming a routine treatment for many of CHD such as closure

tion of paediatric cardiac surgery to achieve the best results. In Sweden, the overall 30-days mortality for open-heart surgery was reduced from 9.5% before centralization (1988-1991) to 1.9% (1995-1997) after centralization [5]. In 2002 the total mortality for both closed and open heart surgery was 0.0 % (personal communication).

RECOMMENDATIONS

1. Paediatric cardiology should be given prime importance in the basic, specialty and subspecialty training programs in paediatrics; especially for neonatologists.
2. Paediatricians/neonatologists should be made aware to have a high index of suspicion for diagnosis of CHD.
3. Centralization of paediatric cardiac services in Libya in fully equipped 2-3 tertiary pediatric cardiac centers. Each center needs 6-8 paediatric cardiologists, 4-5 paediatric cardiac anesthetists and 3-4 paediatric cardiac surgeons. These centers should be also equipped with optimal infra-structural and technological tools to achieve the needed optimal results
4. Creation of a national registry program and stratification to be able to develop a good paediatric service in our country.
5. Early referral with a good transportation system to the nearest

paediatric cardiac center for early diagnosis and treatment should improve the outcome.

Elhadi Hussein Aburawi
Consultant Paediatric Cardiologist,
Department of Paediatrics, Division of
Pediatric Cardiology,
University Hospital Lund,
SE-221 85 Lund, Sweden
Elhadi.aburawi@med.lu.se

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