VOLUME-7, ISSUE-7, JULY-2018 • PRINT ISSN No 2277 - 8160

Original Research Paper

General Medicine

STUDY OF THE NUMBERS OF CHILDREN LIVING WITH CHDs IN KUMAON REGION UTTRAKHAND STATE

Dr.Hitten Jangpangi MD(Paediatrics), Base Hospital, Almora,Uttrakhand, PIN-263601.

Dr Brajendra Kumar* Professor (MEDICINE), Base Hospital, Almora,Uttrakhand, PIN-263601. *Corresponding Author

Dr Lakshman Lal Suthar Cardiologist, Base Hospital, ALMORA(NHI, NEW DELHI),PIN-110077,

ABSTRACT The population of childrens with a congenital heart defect (CHD) is increasing, due to improved survival after cardiac surgery. To accommodate the specialised care for these patients, a profound interest in the epidemiology of CHD is required. The exact size of the current population of childrens with CHD is unknown, but the best available evidence suggests that currently overall prevalence of CHD in the children population is about 3000 per million. Regional differences in CHD prevalence have been described, due to both variations in incidence and in mortality. Knowledge of demographic variations of CHD may lead to new aetiological insights and may be useful for preventive therapies. Socioeconomic status, education, urbanisation, climatological factors, ethnicity and patient-related factors, such as comorbidity, lifestyle and healthcare-seeking behaviour, may play a role in CHD incidence and mortality. The higher risk of several major cardiac outcomes in males with CHD might well explain at least partly the increased mortality rate in men. Regional differences in quality of life among CHD patients have been reported and although methodological differences may play a role, sociocultural differences warrant further attention. Socioeconomic outcomes in CHD patients, such as lower education, more unemployment and less relationships, might have a different impact on quality of life in different cultures.We conducted our study in BASE HOSPITAL ALMORA UTTRAKHAND to find out the incidence of CHDs in KUMAON REGION of UTTRAKHAND. To gain more insight into demo graphic differences around the world large international multicentre studies on the epidemiology of CHD are needed.

KEYWORDS : Congenital Heart Disease . Epidemiology . Demography

INTRODUCTION

Childrens with congenital heart disease (CHD) form a steadily growing population. As most heart defects can be operated on in early childhood, over 90 % of children with CHD now survive into childrenhood. To accommodate the specialised care for these patients, a sparked interest in the epidemiology of CHD is required. The exact size of the current population of childrens with CHD is unknown. Moreover, reports on regional variations in prevalence, due to variations of incidence and mortality of CHD, are scarce. Knowledge of demographic variations is not only useful to identify the extent of the global health problem, but also to gain more insight into the underlying mechanisms of CHD.In order to anticipate the future burden of this population on care systems, an increasing number of studies have emerged in order to estimate the size of the children CHD population. However, there is a large heterogeneity in study methodology, definitions of CHD and classifications. Consequently, interpretation can be difficult. In a recent systematic review a comprehensive overview of publications on the prevalence of CHD in childrens was presented.The best available evidence suggests that overall prevalence of CHD in the children population is about 3000 per million . Given a prevalence of 0.3 % within a world population of around 4.4 billion childrens, a total number of 13 million children CHD survivors worldwide can be estimated. These patients are being followed in more than 15,000 hospitals worldwide. However, a large number of them, 30–60 %, are lost to follow-up. Worldwide, an urgent need is felt to identify those lost patients in order to offer them the care they need. A pro-active approach for recruitment is imperative. Obviously, prevalence estimates are not valid for underserved areas, where CHD patients most often do not receive the required healthcare to survive. The differences in mortality between the industrialised and Third World are striking, from 3 % to 20 %, respectively. Furthermore, the mortality from CHD is likely under-reported in Third World nations because access to diagnosis is more difficult, and the great majority of studies only report data from patients in tertiary centres. Birth prevalence of CHD is generally assumed to be around 0.8 %. However, this does not take into consideration regional differences. Bernier et al. described a large regional variety in birth prevalence . The authors report an incidence of CHD varying between 1.2 and 17 per 1000. The incidence in Taiwan and Iceland, for example, was reported to be more than 5 times higher than the incidence in UK, USA, France or Sweden. The study methods (including clinical, echocardiographic, and pathological) and populations (newborns versus school-age children, cohorts born in a hospital versus cases referred to a cardiologist or surgeon) of the reports and the proportions of different defects were variable enough to make it difficult to draw definite conclusions. Differences in mortality may be due to variations in socioeconomic status, education, urbanisation, climatological factors, travel distance, ethnicity and patient-related factors, such as comorbidity, lifestyle and health care-seeking behaviour. Even in a small country as the Netherlands, mortality in the CHD population was shown to be significantly higher in the Northern, more rural, region than in other parts of the country. Gender differences in the incidence of congenital heart defects at birth are very well known. Atrial septal defect, mitral valve prolapse, patent ductus arteriosus and common atrium show a clear female dominance, while transposition of the great arteries, aortic valve stenosis, aortic coarctation and tetralogy of Fallot occur more frequently in males.. A trend was seen with the highest cardiac mortality in the fall (32.7 % versus 22.3 %, 23.2 %, 21.8 % in winter, spring and summertime respectively). Over 25 % of cardiovascular mortality was preceded by infection in the study by Zomer et al. The bulk of the variance in happiness can be explained by nation characteristics such as economic prosperity, social security, political freedom, and social equality. Therefore, socioeconomic outcomes in CHD patients, such as lower education, more unemployment and less relationships, might have a different impact on quality of life in different cultures. Cultural differences affect patients' attitudes about medical care and their ability to understand, manage, and cope with the course of an illness, the meaning of a diagnosis, and the consequences of medical treatment. Unfortunately, the expectation of many healthcare professionals has been that patients will conform to mainstream values.

MATERIAL AND METHOD

We conducted our study in BASE HOSPITAL, ALMORA, UTTRAKHAND, to find out the incidence of CHDs in KUMAON REGION of UTTRAKHAND.All patients visited OPD and IPD since 01 Jan 2017 to 31 Dec 2018 were included and there was no any Exclusion criteria

DISCUSSION

Knowledge of demographic variations is not only useful to identify the extent of the global health problem, but also to gain more insight into the underlying mechanisms of CHD.In order to anticipate the future burden of this population on care systems, an increasing number of studies have emerged in order to estimate the size of the children CHD population. Efforts are being made to improve the level of care to all childrens with CHD worldwide, and recently the International Society of Children Congenital Heart Disease (www.ISACHD.org) initiated an international Working Group with the aim to deliver care in cost effective, logistically acceptable, and socially adequate modalities in regions with specific societal, economic, and political situations. Differences in mortality may be due to variations in socioeconomic status, education, urbanisation, climatological factors, travel distance, ethnicity and patient-related factors, such as comorbidity, lifestyle and health care-seeking behaviour.

RESULT

We got 06(PDA),09(ASD/PFO),16(VSD),03(TOF),01(EBSTEIN ANOMALY),01(ASD WITH VSD),06(PULMONARY STENOSIS),01(AORTIC STENOSIS),01(SINGLE VENTRICLE PHYSIOLOGY),01(DEXTROCARDIA WITH NORMAL PHYSIOLOGY). Gender differences in the incidence of congenital heart defects at birth are very well known. Atrial septal defect, mitral valve prolapse, patent ductus arteriosus and common atrium show a clear female dominance, while transposition of the great arteries, aortic valve stenosis, aortic coarctation and tetralogy of Fallot occur more frequently in males. Birth prevalence of CHD is generally around 0.8 %.

CONCLUSION

Undoubtedly, the greatest challenge of CHD worldwide remains to find ways to improve care globally. Even though major strides have been made, many populations still do not have access to appropriate care. Knowledge of demographic variations of CHD may lead to new aetiological insights and may be useful for preventive therapies. However, geographic studies are associated with major problems of data quality, bias, confounding, and presentation which can seriously complicate their interpretation. Geographical variations in CHD prevalence can be explained by variations in socioeconomic status, education, urbanisation, climatological factors, ethnicity and patient related factors, such as comorbidity, lifestyle and healthcare seeking behaviour. Therefore, using data from multiple sources, with adjustment for the imperfect nature of each, is an important strategy in CHD studies. Ideally, evidence based knowledge on epidemiology of CHD should be obtained from large international multicentre studies.

References

1. Vis JC, van der Velde ET, Schuuring MJ, et al. Wanted! 8000 heart patients: identification of children patients with a congenital heart defect lost to follow-up. Int J Cardiol. 2011;149(2):246–7.
2. Bernier PL, Stefanescu A, Samoukovic G, et al. The challenge of congenital heart disease worldwide: epidemiologic and demographic facts. Semin Thorac Cardiovasc Surg Pediatr Card Surg Annu. 2010;13(1):26–34.
3. Zomer AC, Vaartjes I, Uiterwaal CS, et al. Circumstances of death in children congenital heart disease. Int J Cardiol. 2012;154 (2):168–72.
4. Boneva RS, Botto LD, Moore CA, et al. Mortality associated with congenital heart defects in the United States: trends and racial disparities, 1979–1997. Circulation. 2001;103:2376–81.
5. Jacobs EG, Leung MP, Karlberg J. Distribution of symptomatic congenital heart disease in Hong Kong. Pediatr Cardiol. 2000;21:148–57.
6. Gilboa SM, Salemi JL, Nembhard WN, et al. Mortality resulting from congenital heart disease among children and childrens in the United States, 1999 to 2006. Circulation. 2010;122 (22):2254–63. 8. Perloff JK. Congenital heart disease in childrens: a new cardiovascular subspecialty. Circulation. 1991;84:1881–90.
7. Engelfriet P, Mulder BJM. Gender differences in children congenital heart disease. Neth Heart J. 2009;17(11):414–7.
8. Engelfriet PM, Drenthen W, Pieper PG, et al. Smoking and its effects on mortality in childrens with congenital heart disease. Int J Cardiol. 2008;127(1):93–7. Epub 2007 Aug 10.
9. Verheugt CL, Uiterwaal CS, van der Velde ET, et al. Gender and outcome in children congenital heart disease. Circulation. 2008;118 (1):26–32. Epub 2008 Jun 16.