The Pattern of Congenital Heart Disease among Neonates Referred for Echocardiography

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ABSTRACT

Objective: To define the pattern of congenital heart disease (CHD) among neonates referred for echocardiography.

Setting: Department of Pediatrics, Qatif Central Hospital.

Design: A Prospective longitudinal and hospital based study.

Method: All neonates with suspected CHD referred for echocardiography were reviewed for one year from March 2011.

Result: Echocardiography was requested for 289 (9.5%) neonates, male to female ratio 1:1.1, mean birth weight 2.909 kg (range 0.605-5.150 kg); most of them were full-term (86%). One hundred forty-six (50.5%) neonates underwent echocardiography within the first 24 hours (group I).

Among those neonates referred for echocardiography, 245 (84.8%) had heart murmur, 9 (3.1%) had cyanosis, 5 (1.7%) had questionable cardiomegaly, 13 (4.5%) had congenital anomalies, and 17 (5.9%) had various anomalies. Heart murmur was detected in 257 (88.9%) during routine neonatal examination.

Sixty-four (2.1%) neonates were diagnosed to have CHD, 8 (12.5%) of them have critical congenital heart disease (CCHD). The most common CHD was ventricular septal defect (VSD) 32 (43.2%) followed by secundum atrial septal defect 31 (41.9%). Among 23 neonates with congenital anomalies referred for echocardiography, 10 (43.5%) had Down syndrome. Some neonates had more than one anomaly.

Conclusion: Most neonates suspected to have CHD were referred for echocardiography during the first 24 hours. Heart murmur was the most common indication of referral for echocardiography and most of the cases with CHD and CCHD presented with heart murmur alone. Almost all cases of CCHD were diagnosed within the first 72 hours. The most common CHD was VSD followed by secundum ASD. Down syndrome was the most common congenital anomaly referred for echocardiography and 30% of them have CHD.