RESEARCH LETTERS

acquired infection, is caused by drug resistant organisms. This is probably because of the widespread use of antibiotics in the community. Thus, it is imperative that this irrational use of antibiotics be discouraged not only in the neonatal unit but also in the community. Further, the routine screening for ESBL production should be encouraged.

Shalini Anandan, Niranjan Thomas*, Balaji Veeraraghavan and Atanu K Jana*

From the Departments of Microbiology and *Neonatology, Christian Medical College, Vellore, India. niranjan@cmcvellore.ac.in

REFERENCES

- Jain A, Roy I, Gupta MK, Kumar M, Agarwal SK. Prevalence of extended-spectrum beta-lactamaseproducing gram-negative bacteria in septicaemic neonates in a tertiary care hospital. J Med Microbiol 2003; 52: 421-425.
- 2. Vinodkumar CS, Neelagund YF. Emergence of

- extended spectrum beta lactamase mediated resistance in neonatal septicemia. Indian J Pathol Microbiol 2006; 49: 616-619.
- 3. Sehgal R, Gaind R, Chellani H, Agarwal P. Extended-spectrum beta lactamase-producing gram-negative bacteria: clinical profile and outcome in a neonatal intensive care unit. Ann Trop Paediatr 2007; 27: 45-54.
- 4. Jain, A, Mondal R. Prevalence and antimicrobial resistance pattern of extended spectrum beta-lactamase producing *Klebsiella* spp isolated from cases of neonatal septicaemia. Indian J Med Res 2007; 125: 89-94.
- Bhattacharjee A, Sen MR, Prakash P, Gaur A, Anupurba S. Increased prevalence of extended spectrum beta lactamase producers in neonatal septicaemic cases at a tertiary referral hospital. Indian J Med Microbiol 2008; 26: 356-360.
- 6. Clinical and Laboratory Standards Institute. Performance Standards for Antimicrobial Susceptibility Testing; Approved Standards M2-A7, Eighteenth Informational Supplement. Wayne, PA: CLSI document M100 –S 18; 2008.

Spectrum of Congenital Heart Diseases in Kashmir, India

A retrospective analysis of case-records data of 53,653 patients (0-18 years) over a two and half year period was conducted to ascertain the spectrum of congenital heart diseases. Two hundred and twenty one patients were found having congenital heart diseases; a prevalence of 4.1/1000. Ventricular septal defect (VSD) was the most frequent lesion seen in 69 (31.2%), followed by patent ductus arteriosus (PDA) in 36 (16.3%) children. Tetralogy of Fallot (TOF) was the most frequent cyanotic heart disease seen in 17 (7.8%) patients.

Key words: Congenital heart disease, India, Prevalence.

The prevalence of congenital heart disease (CHD) in India ranges between 3.9-26.4 per 1000 live births,

in hospital based studies(1-3). We conducted this study to ascertain the prevalence and spectrum of CHD in children (aged 0-18 years) including those who were born in or attending our hospital over a two and half year period (Aug 2006–Jan 2009). Care was taken to avoid duplicate recording of the cases.

A total of 53,653 patients (aged 0-18 years) attended our hospital; suspected cases were subjected to detailed clinical examination, *X*-ray chest and ECG. Diagnosis was confirmed by echocardiography, as per standards of the American Society of Echocardiography(4). Echocardiography was performed by senior cardiologists twice in a week. Overall, 221 patients (113 males, 51.1%) were confirmed to have CHD. The CHDs in the order of frequency were; VSD in 69 (31.2%), PDA in 36 (16.3%), complex CHD's in 26 (11.8%), ASD in 25 (11.3%), tetralogy of Fallot (TOF) in 17 (7.8%), pulmonary stenosis (PS) in 15 (6.8%), and

RESEARCH LETTERS

atrioventricular canal malformation in 11 (5%). Aortic stenosis (AS), transposition of great arteries (TGA), corrected TGA, hypoplastic left heart syndrome, total anomalous pulmonary venous connection, and single ventricle were documented in 3 subjects each. Tricuspid atresia, dextrocardia, coarctation of aorta and truncus artriosus were present in 1 patient each. Sixty (27.1%) patients were neonates, 106 (48%) were infants and toddlers, 27 (12.2%) were preschool, 16 (7.2%) school children and 12 (5.4%) were adolescents. Maximum number [166 (75.1%)] comprised of youngsters between the age group of 0-3 years.

Our study findings are similar to those published earlier from other parts of India (5-7). Our study had certain limitations including its retrospective nature, missing cases due to still births, immediate neonatal deaths at home, non availability of autopsy facilities, asymptomatic CHDs and improper follow up. Thus the estimated prevalence might be an underestimate of the true burden of the CHD in community, in particular, Kashmir.

Mohd Ashraf, J Chowdhary, K Khajuria and AM Reyaz

Department of Pediatrics, GBP ant General Hospital, Kashmir, India. aashraf_05@yahoo.co.in

REFERENCES

- 1. Smitha R, Karat SC, Narayanappa D, Krishnamurthy B, Prasanth SN, Ramachandra NB. Prevalence of congenital heart diseases in Mysore. Indian J Hum Genet 2006; 12: 11-16.
- 2. Khalil A, Aggerwal R, Thirupurum S, Arora R. Incidence of congenital heart disease among hospital born live births in India. Indian Pediatr 1994; 31: 519-527.
- 3. Kapoor R, Gupta S. Prevalence of congenital heart diseases, Kanpur India. Indian Pediatr 2008; 45: 309-311.
- Kisslo J, Byrd BF, Greiser EA, Gresser C, Gillam LD, Watkins Ivy, *et al.* Recommendations of continuous quality improvement in echocardiography. J Am Echocardiogr 1995; 8: 1-28.
- 5. Chadha SL, Singh N, Shukla DK. Epidemiological study of congenital heart disease. Indian J Pediatr 2001; 68: 507-510.
- 6. Pai BV, Varkey CC. Spectrum of congenital heart disease in a general hospital study of 200 cases. Indian J Pediatr 1974; 41: 317-321.
- 7. Suresh V, Rao AS, Yavagal ST. Frequency of various congenital heart disease: analysis of 3, 790 consecutively catheterized patients. Indian Heart J 1995; 47: 125-128.