

Incidence of Mitral Valve Prolapse in Children

Gupta *et al.*(1) observed a higher prevalence (13.1%) of mitral valve prolapse (MVP) in children in Jaipur. They have based their results on an echocardiographic study. They have mentioned that studies by McLaren *et al.*(2) and Greenwood(3) used bedside cardiac auscultation for diagnosis of MVP and estimated its prevalence to be about 5%.

Mitral valve prolapse is a clinical diagnosis with ultrasonographic corroboration, not the other way round. If the click and/or murmur is not heard, one should be suspect of all other methods of diagnosis(4). Hugh(4) has aptly mentioned that we do not have a sudden epidemic of a disease, we have an epidemic of overdiagnosis.

Yash Paul,
E-28, Durga Marg,
Bani Park,
Jaipur 302 016.

REFERENCES

1. Gupta R, Jain BK, Gupta HP, *et al.* Mitral valve prolapse: Two dimensional echocardiography reveals a higher prevalence in three to twelve years old children. *Indian Pediatr* 1992, 29: 417-423.
2. McLaren MJ, Hawkins DM, Lachman AT, *et al.* Noninjection systolic click and minimal systolic murmur in black school children of Soweto, Johannesburg. *Br Heart J* 1976, 38: 718-724.
3. Greenwood RD. Mitral valve prolapse: Incidence and clinical course in a pediatric population. *Clin Pediatr* 1984, 23: 318-320.

4. Allen HD. Mitral valve prolapse: Back to the basics. *Am J Dis Child* 1991, 145: 1095-1096.

Reply

We thank Dr Yash Paul for comments on our article about epidemiology of mitral valve prolapse (MVP) in children(1). MVP was initially described as a clinical entity with apical midsystolic click and late systolic murmur. Subsequent studies identified clinical features of this condition, along with echocardiographic and cardiac catheterization features. It was also realized that this condition could lead to disabling symptoms in children and adults, and rarely lead to disabling cardiac arrhythmias, act as focus for infective endocarditis and lead to cerebrovascular accidents(2).

Epidemiologic studies depend upon echocardiography for confirmation of diagnosis of MVP. In earlier years, some confusion about the exact echocardiographic criteria existed and the diagnosis was made by demonstration of billowing of mitral valve cusp(s) in left atrium on either parasternal long axis views or apical views. These criteria resulted in inappropriately high diagnosis of MVP, specially in children(3). However, recently the diagnostic criteria have been revised and MVP is diagnosed only when prolapse is seen in parasternal long axis view and confirmed by both two dimensional and M-mode echocardiography(2). We have used these recently revised criteria and although the

prevalence is high(1), but not as high as 34% described using the older criteria(3).

Clinical diagnosis only leads to suspicion of MVP and confirmation is always by echocardiography. It is not true that one should rely on clinical criteria alone as this would result in both underdiagnosis and overdiagnosis of this condition. Although, MVP is normally a benign condition, it can lead to disabling complications in some in adult life. It has also been shown that MVP corrects itself by adulthood due to changing morphology of mitral annulus with age. How frequent is this process of auto-correction? What are the long term complications of this condition? Is it cost-effective to diagnose MVP at childhood? These are some of the many questions that need to be answered by appropriate long term investigations. The aim of our study was to focus attention to this often neglected condition.

**R. Gupta,
B.K. Jain,
H.P. Gupta,
S.S. Ranawat,
A.K. Sharma,
K.D. Gupta,**
*Monilek Hospital and
Research Centre,
D-29 Shanthipath,
Tilak Nagar,
Jaipur 302 004.*

REFERENCES

1. Gupta R, Jain BK, Gupta HP, Ranawat SS, Sharma AK, Gupta KD. Mitral valve prolapse: Two-dimensional echocardiography reveals a high prevalence in three to twelve years old children. *Indian Pediatr* 1992, 29: 417-423.
2. Devereaux RB, Kramer-Fox R, Kligfield P. Mitral valve prolapse: Causes, clinical manifestations and management. *Ann Intern Med* 1989, 111: 305-317.
3. Warth DC, King ME, Cohen JM, Tesoriero VL, Marcus E, Weyman AE. Prevalence of mitral valve prolapse in normal children. *J Amer Coll Cardiol* 1985, 5: 1173-1177.

Cerebral Symptoms With *P. Vivax* Malaria

Cerebral malaria has been reported to occur on rare occasions in vivax and even quartan malarias(1). *Plasmodium vivax multinucleatum* has been reported to produce cerebral symptoms in China, where there is no falciparum malaria(2). We report two cases in whom the cerebral symptoms may be attributable to *P. vivax* infection.

A three-year old male child was admitted with the history of high grade fever for three days, altered sensorium and generalized tonic-clonic seizures for one day. There was no history of dog-bite, recent vaccination, ear-discharge or head-injury. Physical examination revealed a febrile (38°C) child in Grade II coma, having abnormal movements of all the limbs, generalized hypertonea and brisk tendon reflexes. Plantars were extensors. Fundus was normal. The cardiovascular and respiratory systems were normal. Treatment with injection phenobarbitone, mannitol, crystalline penicillin and intravenous fluids was started. On investigation, hemoglobin was 9.7 g/dl; TLC was 12,200/cu mm; and cerebrospinal fluid was normal. The peripheral smear was positive for *P. vivax*. Serology for Arbo-virus was negative. The child was put on parenteral chloroquine therapy (5 mg/kg over one hour, 12-hourly). Abnormal movements and fever continued on the next day but there was improvement in the general condition. On