Sir,

We read the interesting study by Banoth et al.[1] By using two-dimensional (2D) echocardiography with colour Doppler, Banoth et al.[1] studied the pattern of congenital heart defects (CHDs) amongst Indian paediatric patients with Down’s syndrome (DS). They found that endocardial cushion defects (ECDs) were detected in 29.7% of the patients.[1] The reported figure of 29.7% looks lesser than the near 50% figure reported worldwide.[2] Apart from the limitation of conducting the study in a single centre, we believe that the following two factors could explain the variation in the prevalence of ECDs estimated by Banoth et al.[1] with that reported worldwide.[2]

First, the astute realisation of the basic anatomy and associated lesions in ECDs is a cornerstone to the accurate diagnosis. The major components of ECDs recruit absence of the atrioventricular (AV) septum, inlet outlet disproportion, abnormal location of the left ventricular papillary muscles and abnormal configuration of the AV valves and cleft in the left AV valve. All these components are predicated by a sprung AV junction.[1] Indeed, anatomic varieties in ECDs are being reported increasingly, suggesting that the condition is more prevalent than thought previously.[3] We believe that there are noticeable variations in the awareness of the echocardiographers on the anatomic elements of ECDs, especially the atypical forms. This point is expected to be reflected in their skills in diagnosing ECDs.

Second, 2D echocardiography with colour Doppler was employed in Banoth et al.’s study[1] to diagnose various types of CHD. With the advanced technology and recognition of the anatomic varieties of ECDs, the standard 2D echocardiography is no longer the standard tool for the functional and morphological assessment of this lesion, especially the malformations of AV valve(s). It is expected that by using 2D echocardiography, a good number of ECD cases could be missed. Alternatively, 3D echocardiography offers a unique realistic en-face view of various cardiac valves and septal defects, including ECD, and facilitates accurate assessment of the heart anatomy, dynamics and function.[5]

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Conflicts of interest
There are no conflicts of interest.

Mahmood Dhahir Al-Mendalawi
Department of Paediatrics, Al-Kindy College of Medicine, University of Baghdad, Baghdad, Iraq

Address for correspondence: Dr Mahmood Dhahir Al-Mendalawi, Professor, Department of Paediatrics, Al-Kindy College of Medicine, University of Baghdad, P. O. Box 55302, Baghdad Post Office, Baghdad, Iraq.
E-mail: mdalmendalawi@yahoo.com

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