

The cardiac examination and the cardiac murmurs

Kardiyak muayene ve kalp üfürümleri

Cardiac auscultation is one of the most useful investigative tools that the physician can use at the bedside to detect alterations in cardiovascular anatomy and physiology. Most patients with significant valvular heart disease are first diagnosed based upon the finding of a murmur (1). The 2006 American College of Cardiology/American Heart Association (ACC/AHA) guidelines on the management of patients with valvular heart disease included recommendations for the use of echocardiography in patients with symptomatic and asymptomatic murmurs (2).

In the current issue of AKD, Üner et al. (3) report on the ratio of congenital heart diseases and innocent murmur in children in Van city. In this study, a total of 6035 students from six different schools were examined in detail regarding their cardiovascular system and 243 students with suspected pathology were investigated further. This is the correct approach in the light of the evaluation of the cardiac murmurs. But, the terminology used in this article is inconsistent. Should murmurs be graded as innocent or pathological following physical examination? The ability of the cardiac examination to assess the exact cause of the murmur is limited. The second and fourth references provided by the authors in the references section refer to murmurs as 'heart murmur' or 'cardiac murmur' (4, 5). This is the correct terminology. Although there are some clues to suggest whether a murmur is innocent or not, it is not possible to decide whether they are pathological without further tests such as the gold standard Echocardiography, as also mentioned by the authors. Echocardiography should be performed in patients with murmurs of unknown cause who are suspected of having significant heart disease (6). Auscultation has a reported sensitivity of 70 percent and a specificity of 98 percent for detection of valvular heart disease (1). But, the sensitivity and specificity of auscultation are related fundamentally the skillfulness of the physician.

The early diagnosis of valvular heart disease is extremely important, before the patient has become symptomatic. Üner et al. have suggested evaluation of elementary school children at least once by a cardiologist in its conclusion (3). However, I feel that this suggestion is not appropriate as no screening for murmurs is performed in infants on nursery children. It may be too late regarding cardiac dynamics to catch these children at the elementary school. Pulmonary hypertension may develop much earlier in cases with left-sided atrial-ventricular-valvular cardiac problems.

The article states that 243 children with suspected cardiac pathology were referred for further investigation (echocardiography, telecardiography, complete blood count) at the hospital where the authors are employed. It is interesting that all the children suspected of having cardiac pathology following screening were evaluated at the hospital. This indicates that all families were well motivated and no case went missing. If this is actually the case, I must congratulate the authors and the families. If any cases went missing and some patients with a murmur could not be evaluated, all the percentages in the article will change and the results will be affected.

In the literature, the articles reported on the ratio of congenital heart diseases and innocent murmur in children have been published from Turkey and the others countries (7-12). The Fogel article referred to in the discussion is a study on children presenting to the hospital (7). In contrast, the authors' study is based on school screenings. It is not appropriate to compare the two studies. The subjects of the Yıldırım et al study that are compared with the current study were aged 7 to 18. However, the age range in the current study is 6 to 15. It is not appropriate to compare the two studies due to the different age range. Although the CHD incidence for the Down's syndrome group in article 23 of the references is provided, it is compared with children who did not have Down's syndrome in this study (13).

The difference between the results of reference article 28 and the current study have been explained with early closure of VSD, but such a comparison is inappropriate as the age groups of the two studies are similar (14). It is possible that VSD cases are diagnosed earlier with our healthcare system than in Egypt.

In addition, when talking about referring to a pediatric cardiologist on detection of a murmur, one also needs to discuss the distribution of pediatric cardiologists in Turkey. Referring families to centers in other cities will increase costs. This needs to be taken into account when evaluating cost-effectiveness.

As a conclusion, the authors achieved to the large field study with this study. I congratulate the authors for their distinct effort. But it is important to extend primary care services and provide screening in Turkey in every field including growth, development, dental health, eye health, etc., and not just for heart disease. An increase in such pilot studies will definitely lead to increased awareness among physicians and give them a different point of view.

Semra Çetinkaya
Dr. Sami Ulus Children's Hospital, Ankara, Turkey

Address for Correspondence/Yazışma Adresi: Semra Çetinkaya, MD, Pediatric Endocrinologist Dr. Sami Ulus Children's Hospital, Ankara, Turkey
Phone: +90 312 305 62 54 Fax: +90 312 317 03 53 E-mail: semcetinkaya@gmail.com

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