Cardiac Defects in Mexican Children With Down Syndrome

To the Editor,

It was with great interest that we read the recently published article by de Rubens Figueroa et al in Revista Española de Cardiología. The article contained a report that the most frequently observed isolated cardiac defects in Mexican children with Down syndrome are atrial septal defects and ventricular septal defects. This observation, which has been described previously,2 contrasts with reports of the types of cardiac defect found to be prevalent in Caucasian children with Down syndrome. In these latter children, persistence of the atrioventricular canal is the most common heart malformation.3,5

It is interesting to note that the most frequently occurring cardiac defect in Chinese6 and Japanese7,8 patients with Down syndrome is not persistence of the atrioventricular canal but ventricular septal defect. Perhaps the genetic similarities between oriental and native American populations that have been reported9 could cause the similar prevalence of these different types of cardiac defect.

However, variations in the prevalence of specific cardiac malformations in children with Down syndrome from different ethnic backgrounds have been noted before10,11 and may be explained by heterotrisomy of chromosome 21,12 by genetic variations in some chromosome other than chromosome 21, or by environmental factors.

Nevertheless, de Rubens Figueroa et al’s paper clearly confirms that, even in the presence of a major genetic anomaly, the phenotype can be influenced by numerous genetic and environmental factors.

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REFERENCES