Age related reference ranges of heart rate for Saudi children and adolescents

To the Editor

I appreciate the heavy work by Al-Qurashi et al[1] on the age related reference ranges of heart rate for Saudi children and adolescents. Clinical vital signs in children, including heart rate (HR), are an integral part of clinical assessment of degree of illness or normality. Resting HR is regarded nowadays as a prognostic factor of cardiovascular morbidity and mortality. Truly, pediatricians are confronting puzzling situations during assessing HR in children as the available standards are not applicable in the developing countries due to ethnic, genetic, socioeconomic, nutritional, and cultural discrepancies. Al-Qurashi et al[1] thankfully spent tremendous effort and time in constructing HR reference ranges for Saudi children and adolescents to apply in clinical settings. However, they did not consider the additional important determinants, apart from age and gender, which might affect the precision of that reference. It is well-known that anthropometric indices are closely linked with hemodynamic profiles changes. For instance, it was addressed that resting HR increased with adiposity level in both gender (p<0.0001), which might be explained by impaired autonomic nerve function.[2] However, it was found that in children and adolescents (up to 17 years), HR decreased with increasing body height (p<0.0001) in a similar manner in girls and boys.[3] I, therefore, presume that weight, height, and, hence, body mass index are 3 important determinants that should be taken into consideration during constructing HR reference. Hence, the clinical implication of HR reference constructed by Al-Qurashi et al[1] might be questionable.

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Reply from the Author

No reply was received from the Author.

References

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Erratum

In Saudi Medical Journal 2009; 30 (11): 1390-1394 the address section should have appeared as follows: From the Department of Immunology (Bonyadi), Faculty of Medicine, Department of Physiology (Badalzadeh, Mohammadi), Drug Applied Research Center, Tabriz Young Researchers Club of Islamic Azad University (Badalzadeh), Tabriz Branch, Department of Student Vice Chancellor (Poozesh), Tabriz University of Medical Sciences, Tabriz, and the Department of Physiology (Salehi), Faculty of Medicine, Hamadan University of Medical Sciences, Hamadan, Iran.