

## The prevalence of sickle cell anemia in Saudi children and adolescents. A community-based survey

To the Editor

I read the interesting article by Al-Qurashi et al<sup>1</sup> on the prevalence of sickle cell anemia in Saudi children and adolescents: a community-based survey. The World Health Organization (WHO) has recognized sickle cell anemia (SCA) as a problem of major public-health threat with a significant morbidity and mortality, particularly in developing countries. Saudi Arabia is located within the geographical distribution of SCA genotype that extends throughout sub-Saharan Africa, the Middle East, and parts of the Indian sub-continent, where carrier frequencies range from 5-40% or more of the population.<sup>2</sup> The true prevalence of SCA is variable among these countries. Such variation might disclose variations in the study design, methodology applied during estimation, and ethnicity. Despite that, SCA remains a significant health burden in these countries. Therefore, collaboration among regional countries is needed to focus research and interventions on items that will lead to the maximum benefits with the objective of encircling the magnitude of SCA and jeopardizing its sequelae. A neonatal screening program for SCA has proven to be effective in early detection of potential cases.<sup>3</sup> The authors stated a regional variation of SCA in Saudi Arabia, and advocated selective installation of a neonatal screening program for SCA in regions with higher SCA prevalence. Indeed, I contradict with their advocacy, as consanguineous marriages are common in many Middle Eastern countries, including Saudi Arabia. In a recent survey of a representative sample of Saudi families defined by a multistage random sampling procedure representing both urban and rural settlements, the prevalence of consanguinity was 56% with the first cousin type being the most common (33.6%).<sup>4</sup> Therefore, screening for SCA should form part of basic health services in these countries situated within the geographical basin of SCA genotype, despite

regional variation in the prevalence of SCA within the same country. Such an option will detect early breeding cases.

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### Reply from the Author

I read the valuable comments of Prof. Al-Mendalawi. In fact, the study reflects the prevalence of children with SCA in the community, excluding sickle cell carriers. However, the main finding is the regional variation of the SCA prevalence in the country. The selective installation of a neonatal screening program for SCA was suggested for cost effectiveness of such a program and based not only on the results in our study, but confirming those reported by el-Hazmi et al<sup>5</sup> many years ago. Both studies found no cases in the Northern region in spite of a high rate of consanguinity.

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