Hemoglobin Phenotype and Mean Erythrocyte Volume in Sicilian People

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Table I. Erythrocyte size in nonanemic Sicilian males

Hb phenotype
Number of observations
MCV, **fi** (mean ± SD)
Number of individuals with microcytosis

AA	
500	
AS	
37	
AC	
8	
AD Los Angeles	
8	
AG Copenhagen	
4	
89.1 ± 4.7	85.9 ± 5.4
83.1 ± 7.3	86.0 ± 4.7
86.8 ± 7.3	
2	
13	
3	
3	
1	

1 AAvs. AS: **t** = 2.68, **p** < 0.01; AA vs. AC: **t** = 2.80, **p** < 0.01; AA vs. AD: **t** = 1.54, **p** > 0.1; AA vs. AG: **t** 0.91, **p** > 0.1.

In their very interesting paper Sheehan and Frenkel [1] showed that 26.5% of HbAC and 18.6% of HbAS black males had microcytosis. These data are consistent with the hypothesis that the frequency of microcytosis in their population is related to **α**-thal-assemia and **β**-chain phenotype. We have evaluated erythrocyte size in nonanemic Sicilian males and found 37 HbAS, 8 HbAC, 8 HbAD Los Angeles, 4 HbAG Copenhagen among 10,683 subjects in a screening program [2].

Our results (table I) strengthen these data except for HbAD Los Angeles and HbG Copenhagen, but these cases were few.

As is well known, α -thalassemia is not frequent in our population (3.5%) [3], although there are no studies about its frequency by DNA techniques as in Negroes [4]. It is possible, therefore, that microcytosis in our population essentially reflects the β -chain phenotype.

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