BRIEF NOTE

Hemoglobin J in a Healthy Hawaiian-Chinese-Caucasian Male

By Robert T. S. Jim and Marina T. Yarbro

HEMOGLOBIN J has been reported in Negroes,1 Algerians,2 Indonesians,3,4 a Gujerati Indian,5 a French-Canadian,6 Lohana Indians,7 Chinese in Singapore,8 and in an American Caucasian-Negro.9 In this report the occurrence of hemoglobin J in a healthy, 27-year-old Hawaiian-Chinese-Caucasian male is briefly presented.

CASE REPORT

In a recent paper electrophoretic survey of hemoglobin types of 3000 healthy blood donors conducted in Hawaii, one specimen exhibited a pathologic component migrating faster than normal hemoglobin. Comparison of this specimen with known hemoglobin J* revealed the abnormal hemoglobin to have identical mobility with hemoglobin J in alkaline and acid pH buffers (figs. 1 and 2). In Amberlite IRC-50 chromatography, no separation

Fig. 1.—Paper electrophoretic pattern of hemoglobin from the propositus, 3 affected offspring, known hemoglobin J, and a normal person. Barbital buffer (Veronal), pH 8.8, 0.06 ionic concentration.

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Fig. 2.—Paper electrophoretic pattern of hemoglobin from the propositus, 3 affected offspring, known hemoglobin J and a normal person. Phosphate buffer, pH 6.5.

Fig. 3.—Incidence of hemoglobin J in the F. H. family.

occurred between the hemoglobin A and hemoglobin J, and in carboxymethylcellulose chromatography, the behavior of the fast-moving component was about the same as described for hemoglobin J.* The donor (F. H., the propositus) was a healthy 27 year old Hawaiian-Chinese-Caucasian male. The father of the propositus was pure Hawaiian, and the mother, Hawaiian-Chinese-Caucasian. Study of the family tree disclosed hemoglobin J in 3 offsprings of the propositus, 10 months, 5 and 6 years of age (fig. 3). Physical examination and hematologic findings of the propositus and affected offsprings were normal except for mild iron deficiency anemia in the youngest offspring. Hemoglobin J comprised

*Kindly performed by Dr. T. H. J. Huisman, Department of Pediatrics, State University of Groningen, Groningen, The Netherlands.
42 per cent of the total hemoglobin in the propositus and from 30 to 35 per cent of the total hemoglobin in the offsprings. Fetal hemoglobin was less than 1 per cent in the propositus and offsprings (alkali denaturation method). The red cell survival time of the propositus as determined by following the survival time of his erythrocytes tagged with radioactive chromium in a healthy recipient (M. T. Y.) was normal (half-life, 33 days).

SUMMARY

Hemoglobin J is reported in a 27 year old healthy adult Hawaiian-Chinese-Caucasian male and 3 of his offspring. All were healthy and displayed no hematologic disturbances except for the youngest offspring, who exhibited mild nutritional iron deficiency anemia.

SUMMARIO IN INTERLINGUA

Es reportate le constatation de hemoglobina J in un masculo normal de 27 annos de etate de racion hawaian-chinese-caucasian e 3 de su prole. Omnes esseva in bon stato de sanitate e revelava nulle disturbation hematologic. excepte le plus juvene qui exhibiva leve grados de anemia a deficientia de ferro nutrional.

REFERENCES

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