Clinical Evaluation of Male Bahraini Youths

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ABSTRACT

CLINICAL and Bio-chemical studies were determined in a group of 180 randomly selected Bahraini Youths between the ages 6 and 18 years. The most significant findings were deficiencies in serum, iron & calcium.

MATERIAL

A study was carried out in the spring of 1981 involving one hundred and eighty male Bahraini youths, randomly selected from schools in the urban areas of Manama, Muharraq, Isa Town and Riffa.

Their ages ranged from six to eighteen years, using fifteen boys of each age.

METHODS

Each youth was evaluated as follows : Medical history and clinical examination, anthropometry, pulmonary function tests, electrocardiography, blood chemistry and physical performance using a multistage treadmill.

The anthropometric measurements included skeletal length and breadth, muscle size and lean body mass assessment.

The anthropometric measurements were compared with similar studies of youths in the U.S.A., the results of which shall be published in a specialised journal and therefore will not be discussed further in this paper.

RESULTS

All the youths studied appeared to be well nourished. The only abnormalities found on clinical examination were related to the cardiovascular system.

Table I
CARDIAC ABNORMALITIES

Atrial Septal defect	2
Patent ductus arteriousus	1
Pulmonary Stenosis	1
Rheumatic Heart Disease	1
Hypertraphic Obstructive Cardiopathy	1
TOTAL	7

Electrocardiographic abnormalities were found in seven youths. These abnormalities do not include those associated with the cardiac abnormalities in Table I.

Table II
Electrocardiographic Abnormalities

Partial Right Bundle Branch Block	— 7
Coronary Sinus Rhythum	— 3
First degree Heart Block	— 1
Total	— 11

Table III
HAEMOGLOBIN ESTIMATION
GM./100 ML.

Haemoglobin levels were at the lower limits of the expected ranges for all age groups.

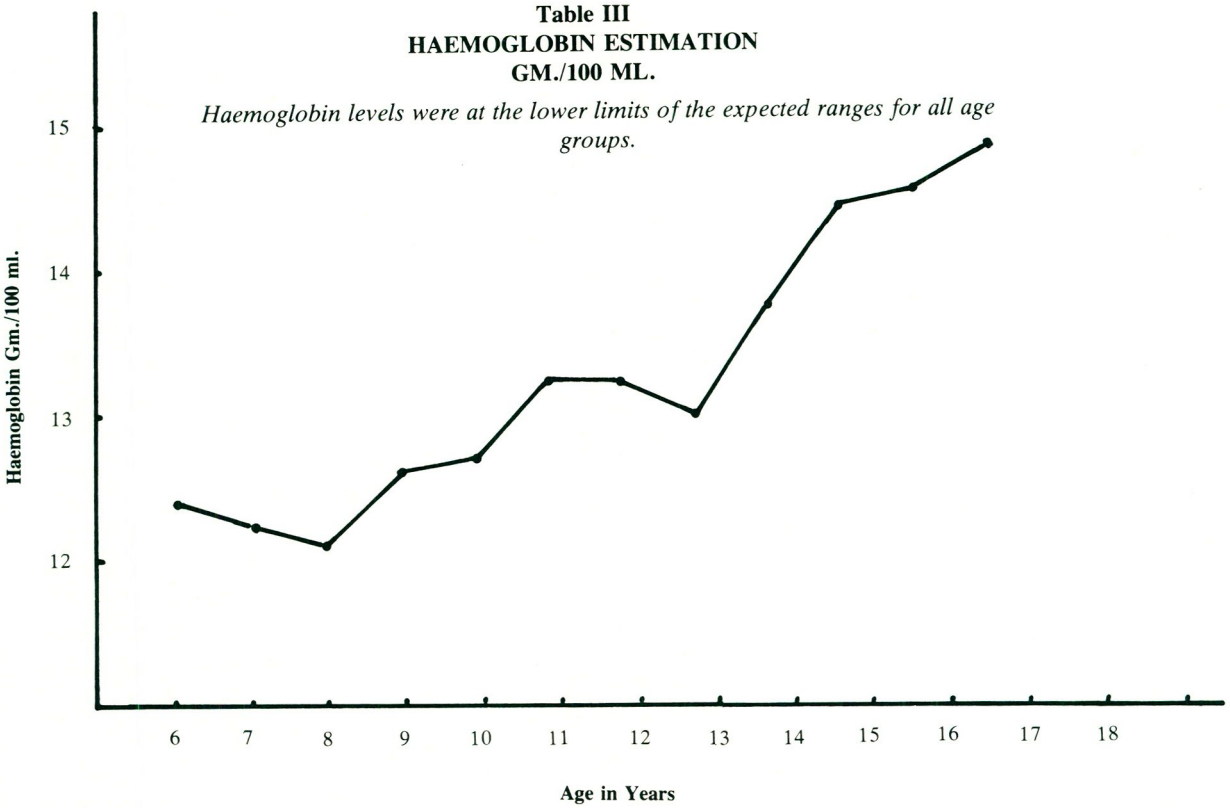
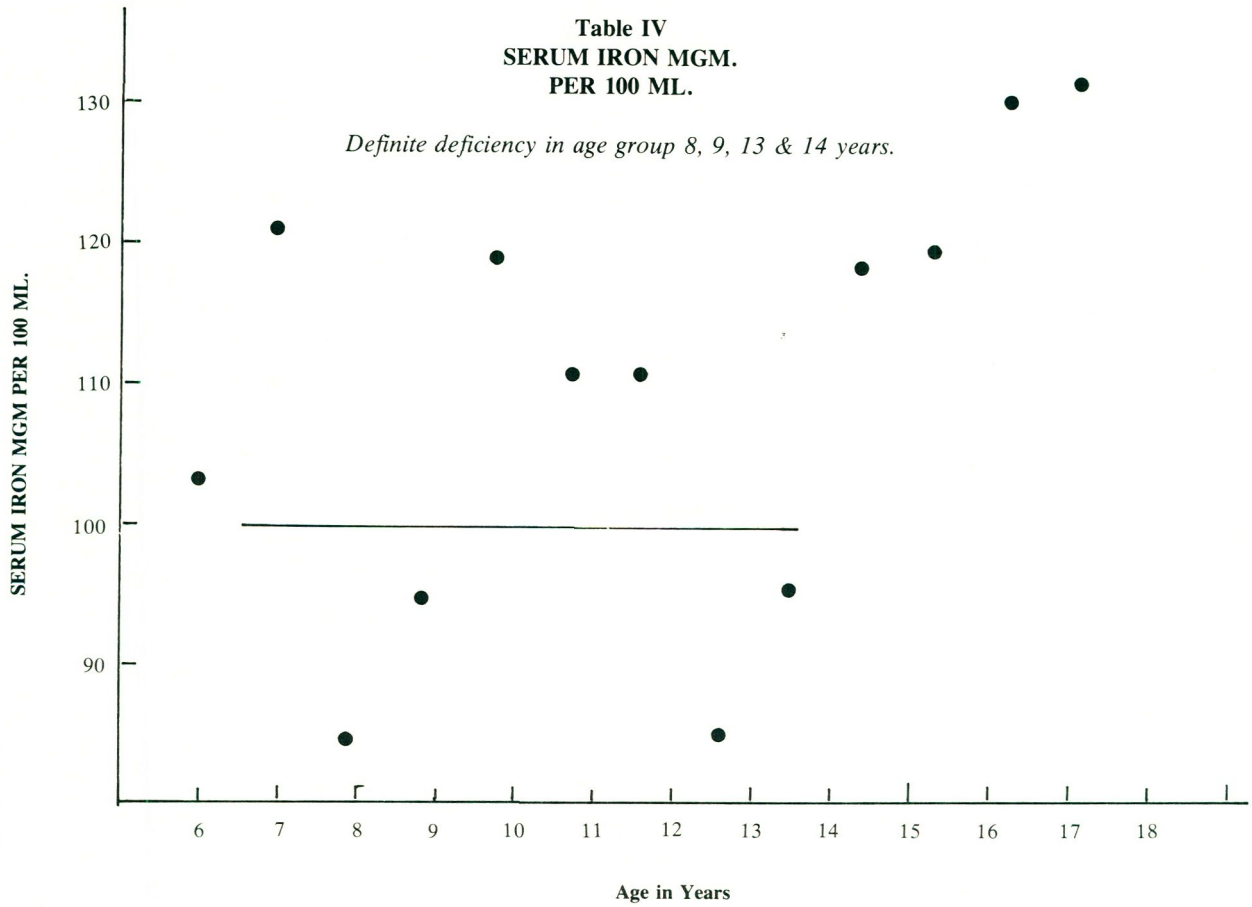


Table IV
SERUM IRON MGM.
PER 100 ML.

Definite deficiency in age group 8, 9, 13 & 14 years.



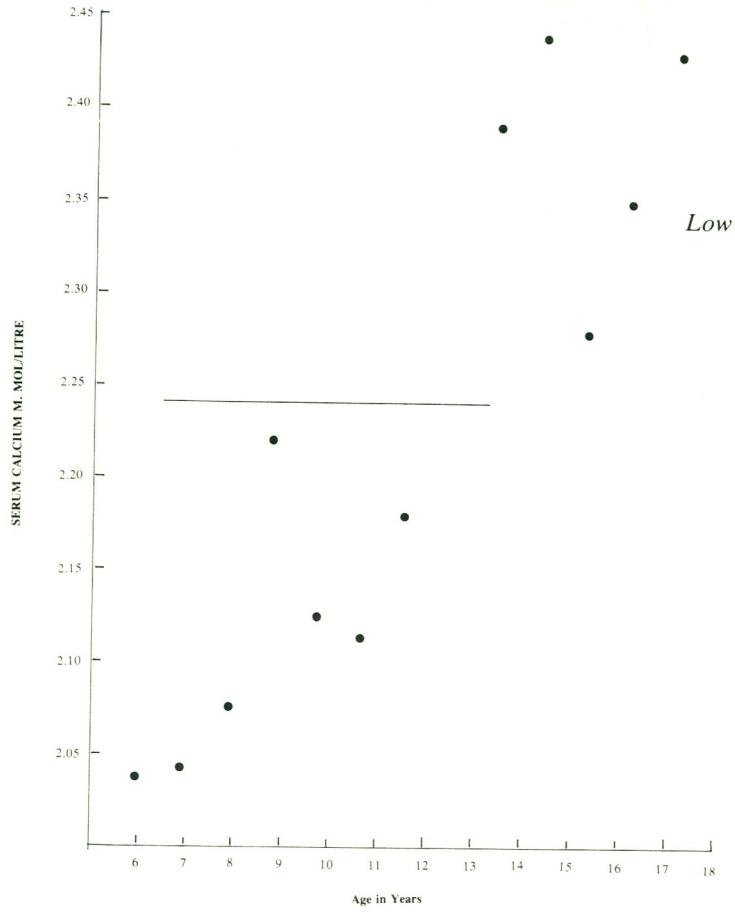


Table V
SERUM CALCIUM M. MOL/LITRE

Low levels found in ages 6 to 14 inclusive.

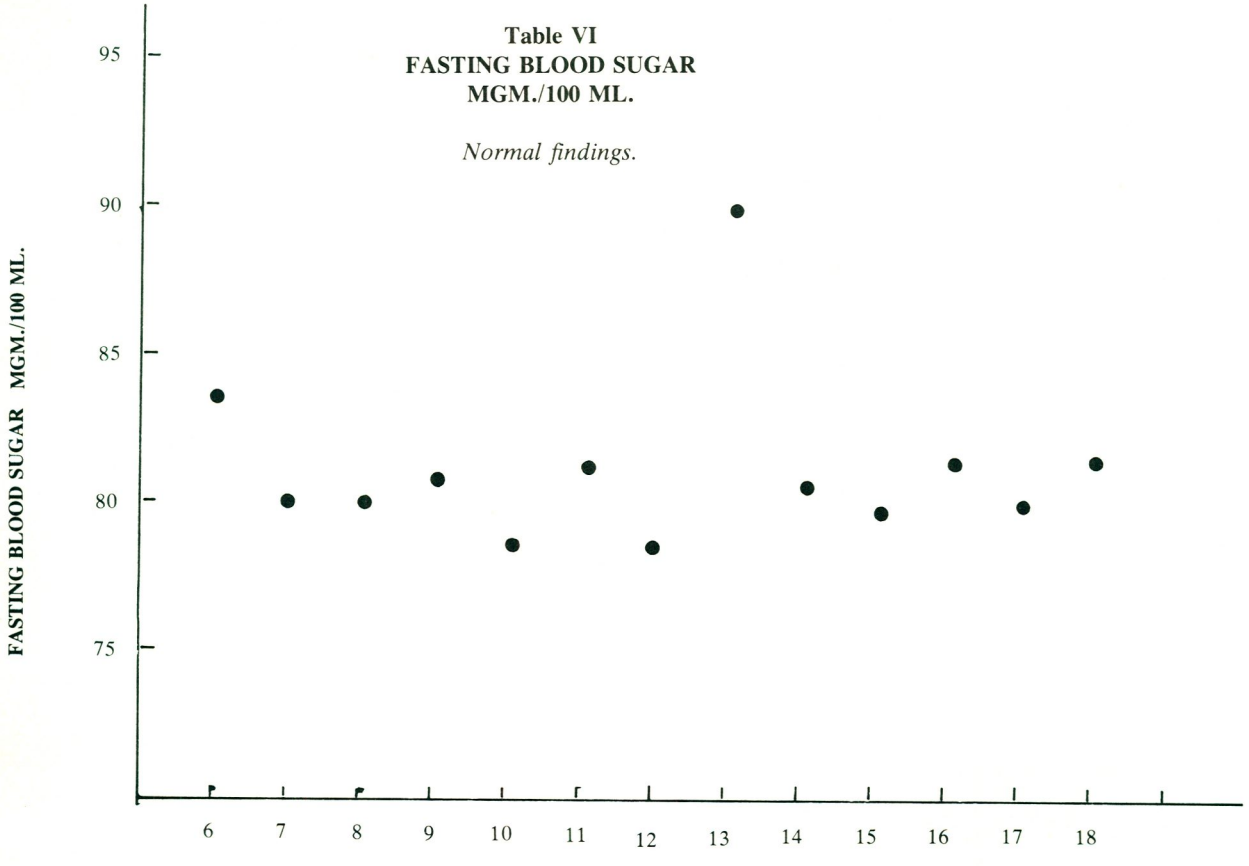


Table VI
FASTING BLOOD SUGAR MGM./100 ML.

Normal findings.

Table VII
Fasting Blood Cholesterol, Triglycerides, High Density Lipoproteins and Low Density Lipoproteins.

Age	*Cholesterol mgm / 100ml.*	*Triglycerides mgm / 100ml.*	*High Density Lipoproteins (H.D.L.)*	*Low Density Lipoproteins (L.D.L.)*
6	159.46	63.30	61.07	85.53
7	152.88	66.33	64.77	73.77
8	171.00	54.90	59.81	100.45
9	160.00	71.53	55.23	90.07
10	166.53	63.38	66.84	86.84
11	172.29	78.46	64.23	87.53
12	176.81	71.69	58.23	91.38
13	165.84	71.63	67.18	95.81
14	150.00	78.11	56.58	78.29
15	138.38	62.44	55.55	67.66
16	134.00	73.25	49.25	69.10
17	148.81	61.87	56.37	79.18
18	142.64	71.00	51.14	73.92

DISCUSSION

It may not be appreciated that 60% of al infants born with cardiac abnormalities fail to reach their first birthday. The fact that this study included children the youngest of which is six years of age, does not give an accurate index as to the incidence of congenital heart disease in Bahrain.

The fact is that only two cases of Rheumatic heart disease are documented bear witness to the recent trends of improved health care of the population in Bahrain.

Since Haemoglobin levels were at the lower limits of expected ranges for all age groups and the sdrum iron showed a definite deficiency at groups aged 8, 9, 13 & 14 years suggests an absence of balanced nutrition during periods of relative increase in growth. This Hypothesis is supported by the low serum calcium in the 6 — 12 year old youths.

It would be reasonable to suggest, there is a need for a more comprehensive study to provide support for the recommendation that calcium supplement should be given to children between the ages of 6 and 14 years.

A determined effort was made to obtain an accurate account of nutritional history of 40 of the youths in the study.

They were interviewed independently from their respective mothers who were also interviewed.

There was a significant discrepancy in the nutritional history obtained from the youths compared to that reported by their mothers.

Sickle cell trait was found to be 6.6%. It is inherited as an autosomal dominant gene.

An incidence of 6.6% is not surprising in view of the high rate of consanguinous marrige in the Society.

ACKNOWLEDGEMENT

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