The extent of problem and causes of short stature in Indian children is not precisely known. A study of child growth included 2,500 consecutive admissions to Bai Jerbai Wadia Hospital for Children in Bombay, India; 140 (5.6%) were considered to be of short stature (less than the 5th percentile of an Indian standard). In a study to evaluate prevalence and etiological profile of short stature in children attending out patient department (OPD) of a community-level hospital, the prevalence of short stature was 13.8%; significantly higher than prevalence reported from tertiary centers. The most common cause of short stature was PEM and chronic diseases occurring in 53.5% cases. Other causes included normal variant short stature 24.4%, endocrine problems 4.7% and miscellaneous 5.8%. Short stature is defined as a height that is two or more standard deviations below the mean for age and gender within a population (below the 2.5th percentile). Growth deceleration is defined as a growth velocity that is below the 5th percentile for age and gender (e.g., <5 cm/year after the age of 5 years), or a height drop across two or more percentiles on the growth chart. Epidemiology. Boys come to medical attention because of short stature more frequently than girls. However, one study found that 38% of boys and 20% of girls who were referred were of normal height, the referral being due to errors in measurement, errors in plotting on the growth chart, or failure to account for the child's genetic height potential. [1] Lifshitz F (ed). Pediatric endocrinology. 5th ed.

Causes of short stature in Iraqi hospital based study patients

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Abstract

Backgrounds: Growth is an important objective parameter of general health of the child. Normal growth requires adequate nutrition along with various hormonal stimuli. Short stature is a common cause of referral to pediatric endocrinologists.

Objectives: To find the causes of short stature in patients referred to pediatric endocrinology clinic of children welfare teaching hospital, the significance of bone age assessment and the variation of growth hormone level in these patients.

Patients and methods: This prospective study was carried out in the endocrine clinic of Children Welfare Teaching Hospital/Medical City over ten months period, included 150 patients. A proper detailed medical history was taken, physical examination performed included growth parameters, and general investigations with bone age, thyroid function test, celiac screening and growth hormone level were done for all patients. Growth hormone stimulation test was done when indicated and phenotype, Karyotyping was done in selected cases.

Result: The total number of patients included in this study was 150, ranging from ≥2 to 16 years old, and the male to female ratio was 1.14:1. The relationship between age and gender is significant(p-value 0.04).The commonest etiology was endocrine causes in 92(61.33%), non-
endocrine causes in 34(22.67%) and normal variant in 24(16%) patients. Bone age was delayed in 86(57.33%) and normal in 6(4%) of endocrine cause which is highly significant (p-value < 0.001), and in non-endocrine causes it was delayed in 24(16%) and not delayed in 10(6.67%) patients which is significant (p-value < 0.01). Growth hormone level was deficient in 80(53.33%) patients of endocrine causes of short stature which is highly significant (p-value < 0.001%), and deficient in 15(10%) patients of non-endocrine causes which is significant (p-value < 0.03%).

Conclusions: Growth hormone deficiency, familial short stature and constitutional growth delay were the leading causes of short stature in patients referred. Growth hormone deficiency is the commonest cause of short stature in those patients, bone age is a cornerstone in evaluating short stature and it gets delayed in some cases with systemic and endocrine causes other than growth hormone deficiency and constitutional growth delay.
The extent of problem and causes of short stature in Indian children is not precisely known. A study of child growth included 2,500 consecutive admissions to Bai Jerbai Wadia Hospital for Children in Bombay, India; 140 (5.6%) were considered to be of short stature (less than the 5th percentile).
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