



Research Paper

## Spectrum of Etiology for children of short stature presented in tertiary care hospital

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### I. Introduction

Short stature is defined as height below third centile or more than 2 standard deviation (SDs) below the median height for age and gender (<2 SD) according to the population standard. 3% of given children in any population will be short. Children whose stature is more than 3 SD below the population mean for age and gender (<3SD) are more likely to be suffering from pathological short stature, as compare to those with short stature between - 2SD and -3SD, who are more likely to be affected by physiological ,i.e. familial or constitutional short stature.

#### Objective

To study the etiology of short stature in Tertiary hospital

#### Methodology

**Study design**—Cross section study

**Study period**—January 2022 to June 2022

**Study area** – Department of Pediatrics of teaching hospital in rural India

**Study population**- Children attending Pediatric OPD and/or admitted to Pediatric ward from 1<sup>st</sup> birthday to 12<sup>th</sup> birthday, will be the population of our study, from which the subjects of study will be drawn by the following inclusion criteria.

**Sample size**—25

#### Inclusion criteria

- 1) Boys and girls attending Pediatric outdoor and indoor from 1<sup>st</sup> to 12<sup>th</sup> birthday
- 2) Height below -2SD (below 3<sup>rd</sup> percentile) for age, growth chart for boy (WHO and IAP)
- 3) Height below -2SD (below 3<sup>rd</sup> percentile) for age, growth chart for girls (WHO and IAP)

#### Exclusion criteria

- 1) Height >3<sup>rd</sup> percentile
- 2) One or both parents are not available/died
- 3) Children who are twins/triplets/multiple gestation

### II. Results

Totally 25 children with short stature were studied in the age group less than 12 years. Demographic characteristics of children with short stature.

Total no. of males = 10 (40%)

Total no. of females = 15 (60%)

Female predilection was observed. The study population comprises 10 (40%) males and 15 (60%) females

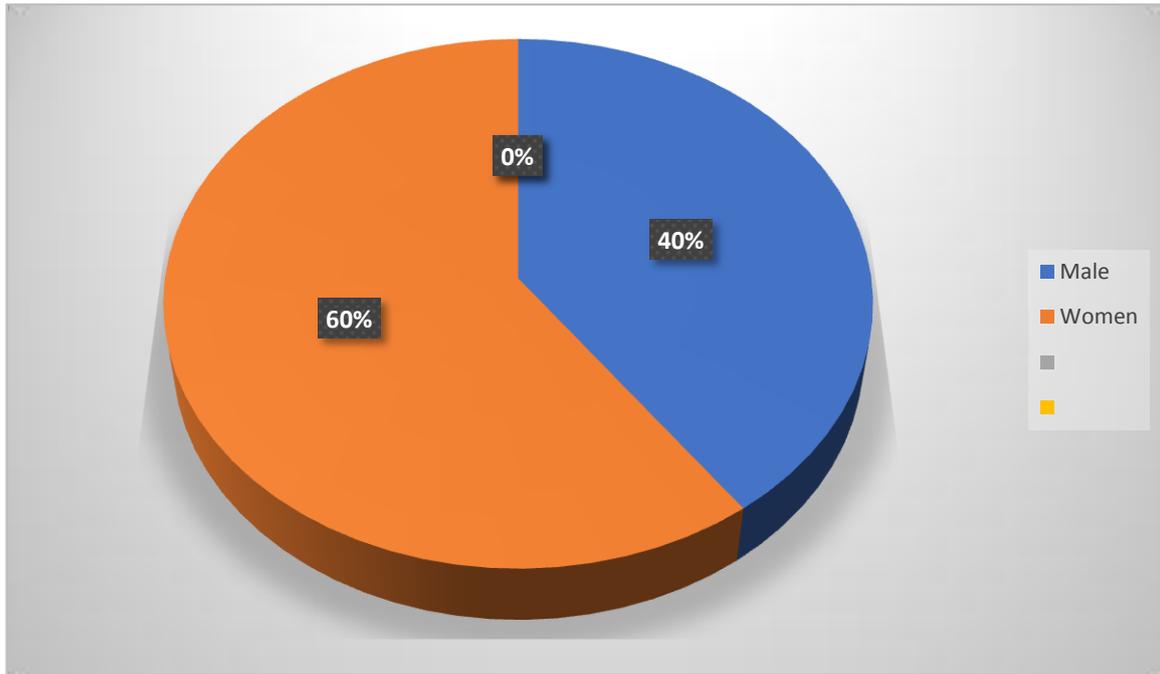


Fig. 1 Sex Distribution among Children with Short Stature

Out of study population of 25 cases, most commonly observed etiology among endocrine 13 (53%) followed by constitutional growth delay 7 (28%)& familial short stature 5 (19%)

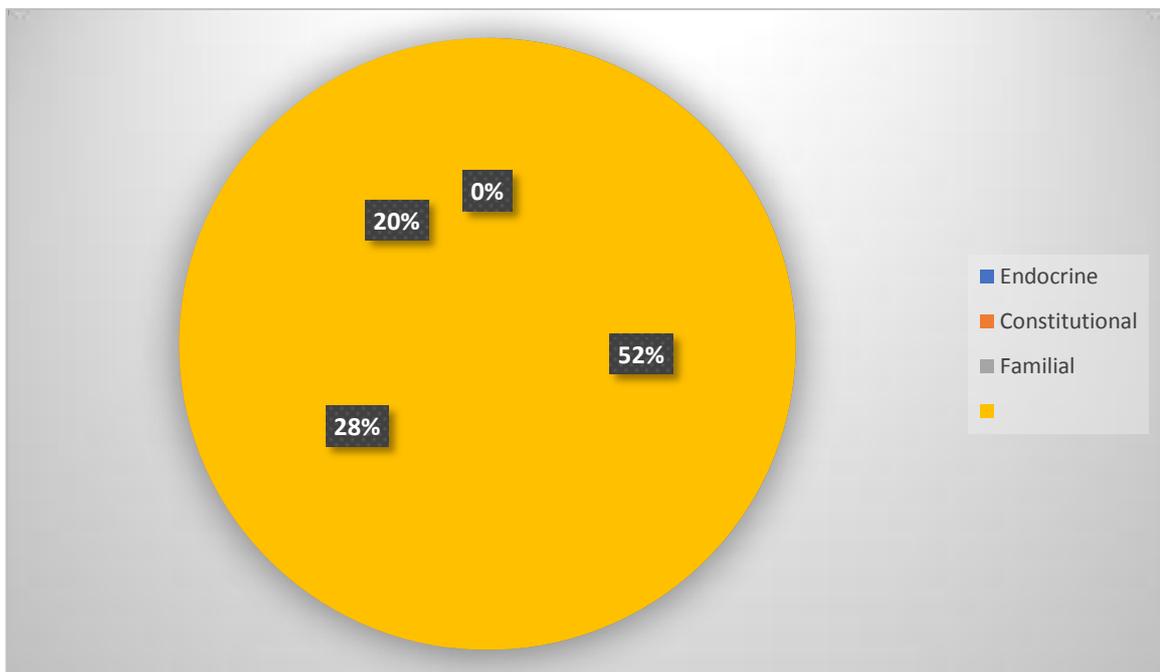


Fig.2 Etiological profile of short stature

### III. Discussion

This cross section study was conducted at Pravara Medical College LONI to find out the clinical and etiological profile of short stature in children between 2 to 12 years of age attending Pediatric OPD. 25 children between 2 to 12 years of age came to OPD who met the inclusion and exclusion criteria were recruited.

Short stature may be a disability and can be a distress to be victimised child or adolescent. So, short stature should be assessed early before the epiphysal fusion to get the opportunity of medical management.

**Limitation**

- 1) The sample size is small.
- 2) The study was done at a tertiary care centre, So the study population does not reflect the general population.

**IV. Summary**

The assessment of linear growth is one of the most sensitive means of evaluating all overall wellbeing of a child because it gives a net expression of genetic makeup, adequacy of nutrition, environment and residual effect of previous disease. Expression of stature in childhood is reinforced by GH, Thyroxine, sex steroids, cortisol and various growth factors.

**V. Conclusion**

In children who attended Pediatric OPD with pathological short stature were analysed for etiological and clinical profile. This study shows thyroid hormone deficiency as the most common cause followed by normal variants of growth delay.

**Reference**

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