

Etiological Profile of Endocrinal Disorders in Children with Short Stature

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Abstract : Background: Short stature in children can be caused by a variety of endocrinal disorders. Identifying the etiological factors behind growth failure is essential for targeted intervention and improved outcomes. This study aimed to examine the etiological profile of endocrinal disorders in children with short stature. Methods: An observational cross-sectional study was conducted over 18 months at the Department of Pediatrics, VMMC and Safdarjung Hospital, New Delhi. A total of 143 children aged 3 to 14 years with short stature were included. Clinical evaluations, laboratory tests, and MRI scans were performed to identify the underlying endocrinal causes. Results: Hypothyroidism was the most prevalent endocrinal disorder, affecting 53.1% of participants, followed by growth hormone deficiency (32.2%) and Type 1 diabetes mellitus (18.2%). Socioeconomic status analysis revealed that 21.7% of children came from lower socioeconomic backgrounds, suggesting a potential link between socioeconomic factors and growth disorders. MRI findings in children diagnosed with growth hormone deficiency revealed that 29.4% had normal results, while 52.9% exhibited pituitary hypoplasia, and 11.8% had craniopharyngioma. A small percentage (5.9%) exhibited empty sella turcica, often associated with hormonal deficiencies. Stimulation testing showed significant changes in growth hormone levels, highlighting the need for routine screening in children with short stature. Conclusions: This study underscores the multifactorial etiology of short stature, with hypothyroidism and growth hormone deficiency being the most common causes. The findings emphasize the importance of early diagnosis, particularly through hormonal screening and imaging, to guide effective treatment. Socioeconomic factors also play a role in the development of growth disorders. Future research should focus on exploring the genetic and environmental factors contributing to these conditions.

Keywords : pediatrics, endocrine, short stature, etiological profile

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