

Incidence of delayed puberty

A population-based study in central Sweden

Rodanaki M.¹, Rask E.², Lodefalk M.^{1,3}

¹Department of Paediatrics, Örebro University Hospital and School of Medical Sciences, Örebro University, Örebro, Sweden

²Department of Internal Medicine, School of Medical Sciences, Örebro University, Örebro, Sweden

³University Health Care Research Center, Faculty of Medicine and Health, Örebro University, Örebro, Sweden

Background

Delayed puberty is defined as the absence of physical signs of puberty, characterized by testicular volume <4ml in boys by the age of 14 years and lack of breast development in girls by the age of 13 years¹⁻⁴. The prevalence or incidence of the disease has not been described before, as far as we know.

Aim

Our aim was to study the incidence of delayed puberty in a Swedish region.

Material and method

This was a population-based, retrospective study. Adolescents with the ICD-10 diagnosis "delayed puberty" in Örebro county during the period 2013-2015 were identified.

Adolescents with other diagnoses potentially related to delayed puberty (e.g. short stature) were also identified to ensure that there were no additional cases.

The medical records of all patients, excepted those not willing to participate, were systematically reviewed.

All new cases were categorized in four groups depending on how accurate we considered the diagnosis, based on Tanner stadium at the age of assessment (certain, possible, wrong diagnosis and unclear cases).

Data on the total numbers of adolescents in eligible ages in Örebro county were obtained from the authority of Statistics in Sweden.

Results

Totally 128 of 180 eligible medical records were reviewed (response rate: 71 %).

Nine boys and one girl were diagnosed with delayed puberty during the study time period and fulfilled our strict criteria for a certain diagnosis and four additional boys were classified as possible new cases.

The total population in Örebro county for boys aged 14-18 years was on average 6,546 each year during the time period.

The minimal annual incidence for boys is presented in table 1. Due to the low number of girls with delayed puberty no incidence for girls was calculated.

Accuracy of diagnosis	Incidence/1000,000	95% CI
Only patients with certain diagnosis	46	15–142
Patients with a certain or possible diagnosis	66	26–170

Discussion

This is, to our knowledge, the first study describing the incidence of delayed puberty in boys.

The presented incidence is the minimum incidence of the disease due to the fact that some patients may not seek medical care.

Because of our small study population, more studies are needed to confirm our findings.



References

1. Marshall WA, Tanner JM. Variations in pattern of pubertal changes in girls. Archives of disease in childhood. 1969;44(235):291-303.
2. Marshall WA, Tanner JM. Variations in the pattern of pubertal changes in boys. Archives of disease in childhood. 1970;45(239):13-23.
3. Dye AM, Nelson GB, Diaz-Thomas A. Delayed Puberty. Pediatric annals. 2018;47(1):e16-e22.
4. Busiah K, Belien V, Dallot N, Fila M, Guilbert J, Harroche A, et al. [Diagnosis of delayed puberty]. Archives de pediatrie : organe officiel de la Societe francaise de pediatrie. 2007;14(9):1101-10.

Contact: maria.rodanaki@regionorebrolan.se

Pituitary, neuroendocrinology and puberty

Maria Rodanaki

Poster presented at:



Poster SessionOnline.com