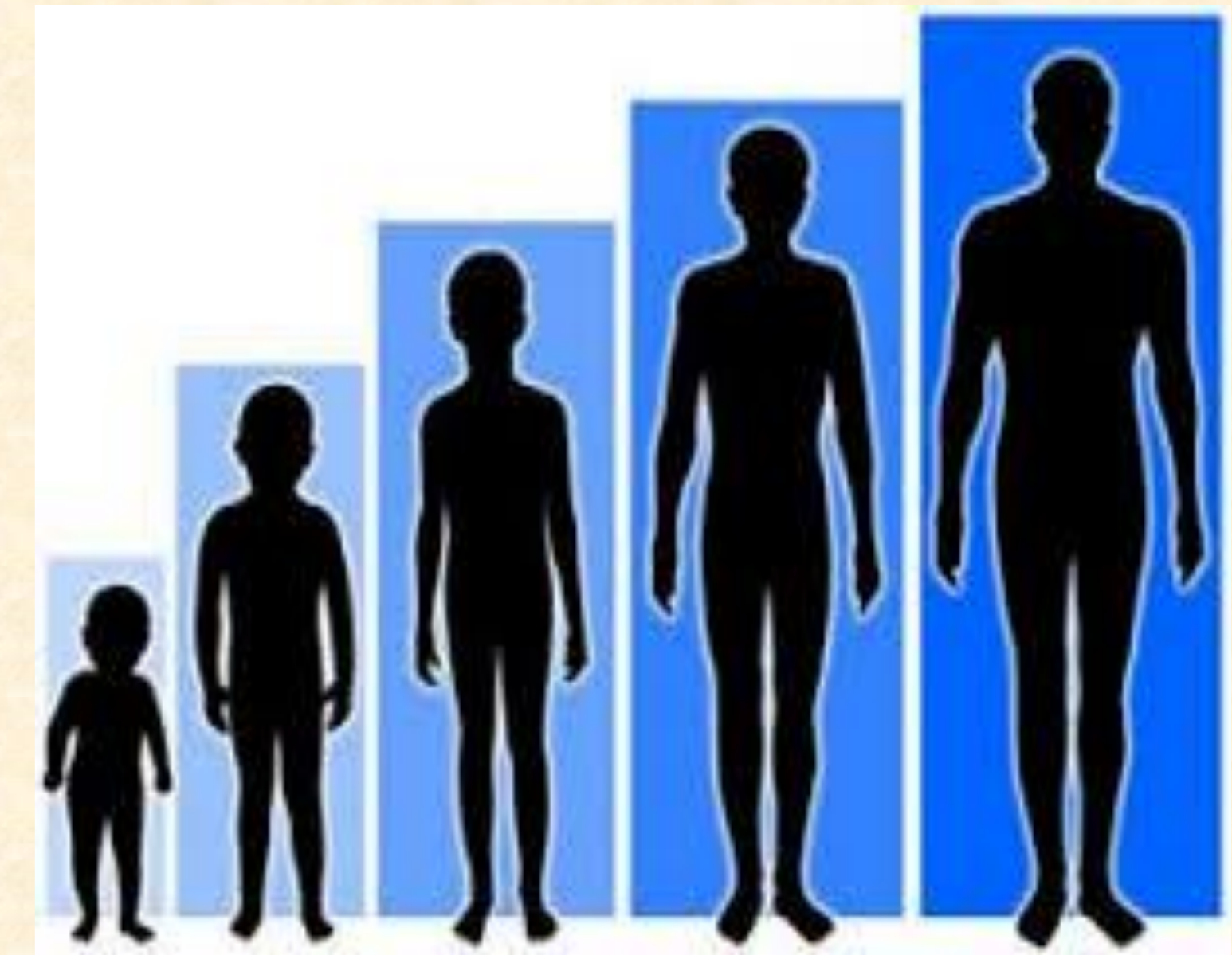


# PECULIARITIES OF CLINICAL OPTIONS FOR DELAYING SEXUAL AGING IN BOYS-ADOLESCENTS

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## Background:

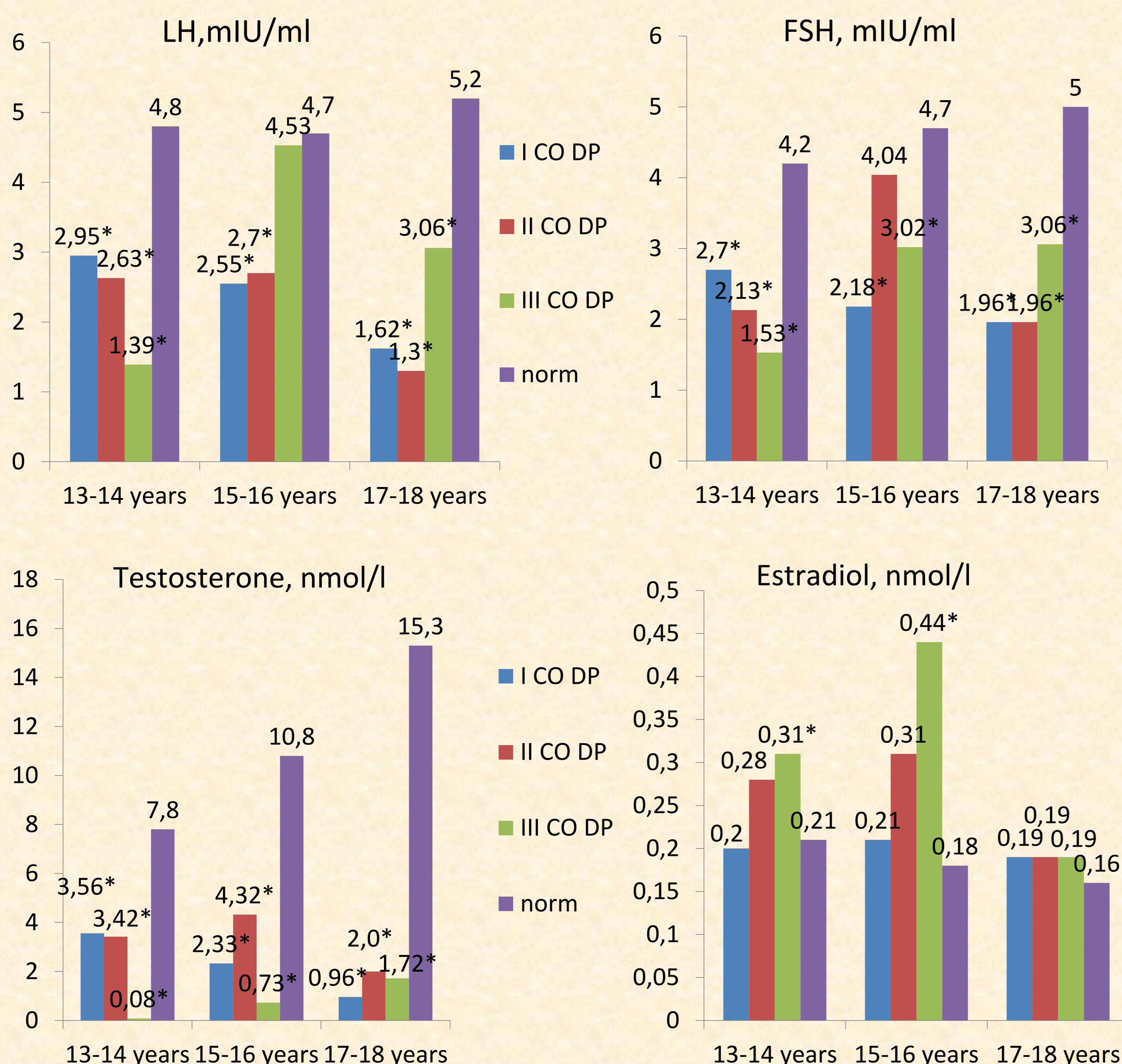
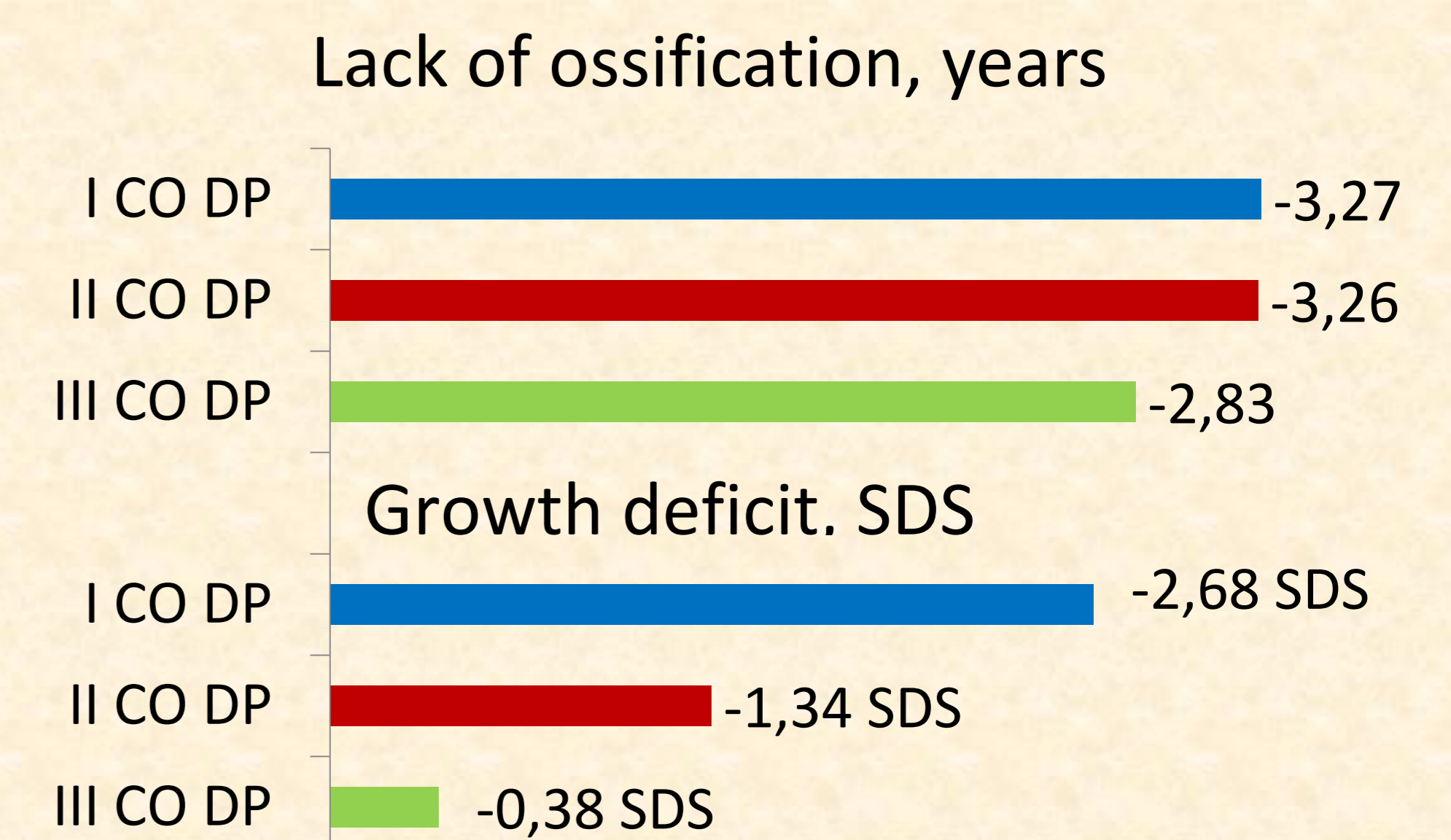
Delayed puberty (DP) in boys is considered the most common hypoandrogenia of puberty. The heterogeneity of the population of adolescents with DP has led to a differentiated approach and the allocation of the following three clinical options (CO) of DP: 1 - DP, accompanied by growth retardation; 2 - DP without significant deviations in physical development; 3 - DP, accompanied by overweight.

**Aim of research:** to study the clinical and hormonal features of clinical variants of DP in boys.



**Materials and methods:** 52 adolescent boys aged 13–18 years old with DP were examined. Evaluated height, SDS height, body mass (BM), with the calculation of body mass index (BMI). The lack of ossification (LO) was established as the difference between the passport and bone age, as determined by X-ray examination of the bones of the right hand. The method of enzyme immunoassay studied the levels of luteinizing (LH) and follicle-stimulating (FSH), sex (estradiol (E2) and testosterone (T)) hormones, which were evaluated taking into account the age group (13-14, 15-16, 17-18 years).

**Results:** The most frequent first CO DP (46.2%), in which adolescents had growth deficit (-2.68 SDS), expressed as LO (-3.27 years). The second CO DP was observed in 36.5% of the examined, while the SDS height was (-1.34) and there was a pronounced LO (-3.26 years). The third CO DP was detected in 17.3% of boys, the SDS height was (-0.38), significant LO (-2.83 years).



All adolescents with DP, regardless of CO, had significant deviations of the hormonal status. The average content of LH and FSH in all age groups was significantly lower than the normative ( $p < 0.05$ ), which indicates a violation of gonadotropic function in all examined, most pronounced in patients 13-14 years old with 3 CO and 17-18 years old with 1 and 2 CO. The majority of the examined patients showed low functional activity of the testicles (reduced T content), most pronounced at 3 CO, as well as among young men of 17-18 years old at 1 and 2 CO. At 3 CO, a regular increase in the level of E2 was noted against the background of excess adipose tissue.

**Conclusion:** The identified clinical and hormonal peculiarities in case of various CO of the DP will help in choosing the optimal treatment tactics and monitoring of such adolescents.

