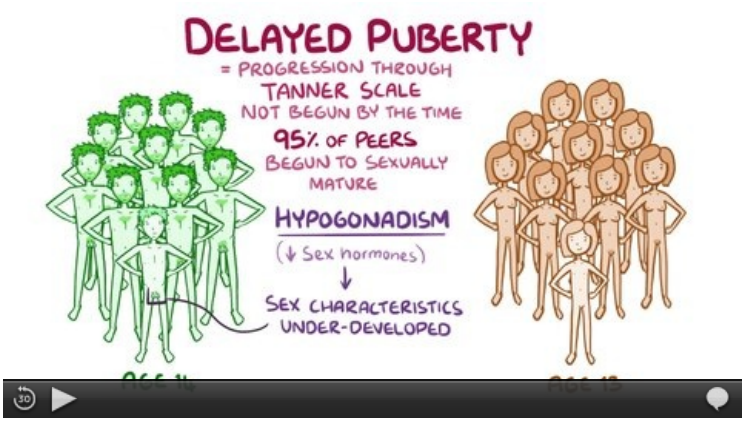
Delayed puberty (puberta tarda)

Delayed puberty is characterised by the absence of somatic signs of adolescence in girls under 13 years of age and in boys under 14 years of age, or if sexual development is not adequate within 5 years of the first signs of puberty, no complete signs of sexual maturity are reached. It is more common in boys and is usually accompanied by retardation of bone maturation and physical growth. In most cases, it is only a physiological delay in sexual development (in 50-60%), but the cause may also be classical hypogonadism due to a congenital or acquired disorder of the hypothalamic-pituitary-gonadal axis.

Symptoms

There are three main causes behind the delay in puberty. The first reason is the difference between the actual (matrix) age and the biological age. It can even be a difference of several years. Another condition, not so much as a cause that should warn us that something is wrong, is the inconsistency of development. E.g. if the boys develop hair, but his testicles do not grow, etc. The third cause is hormonal disorders or disorders of metabolism, nutrition and congenital syndromes.



Video v angličtině, definice, patogeneze, příznaky, komplikace, léčba.

Causes

- **functional hypogonadotropic hypogonadism**: excessive exercise, malnutrition, systemic diseases (cystic fibrosis, bronchial asthma, inflammatory bowel disease, juvenile idiopathic arthritis, [[eating disorders|anorexia nervosa/bulimia), chronic kidney disease, endocrinopathies (diabetes mellitus, hypothyroidism, hyperprolactinemia, growth hormone deficiency, Cushing's syndrome;
- **permanent hypogonadotropic hypogonadism**: CNS tumors, radiotherapy / chemotherapy / surgery, CNS injuries, Kallmann's syndrome, GnRH receptor mutation, Prader-Willi syndrome, septo-optic dysplasia, congenital hypopituitarism;
- **permanent hypergonadotropic hypogonadism**: cryptorchidism, gonadal agenesis / dysgenesis, Klinefelter's syndrome, Turner's syndrome, galactosemia, mucopolysaccharidosis, autoimmune polyglandular syndromes, testicular torsion, gonadal infection (mumps, coxsackie,..);
- **other causes of hypogonadism**: defects in androgen production, androgen insensitivity.[1]

Diagnostics

We use physical examinations for diagnosis. An X-ray will help us detect bone remodelling. We also work with an endocrinologist to determine if it is a hormonal disorder, and we also work with a geneticist to reveal hereditary syndromes.

Treatment

It depends on the cause. Sometimes therapeutic intervention is not even necessary. At other times, the administration of sex hormones and a kind of "induction" of puberty is indicated.

Links

Related articles

- Puberty • Pubertas praecox • Sexual development disorders

References

1. LEBL, J – JANDA, J – POHUNEK, P, et al. *Klinická pediatrie.* 1. edition. Galén, 2012. vol. 698. pp. 177-180. ISBN 978-80-7262-772-1.

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