GYNECOLOGIC PROBLEMS IN CHILDHOOD AND ADOLESCENT PATIENTS

PROBLEMY GINEKOLOGICZNE WIEKU DZIECIĘCEGO I DOROSŁEGO

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ABSTRACT

From an early age girls should be covered gynecological care, taking into account the prevention of gynecological oncology aspect also. The following article outlines the problems of adolescent gynecology, considering these issues.

Keywords: girls, gynecological care, adolescent gynecology, oncology.

STRESZCZENIE

Od najmłodszych lat dziewczęta powinny być objęte opieką ginekologiczną, uwzględniającą profilaktykę ginekologiczną także w aspekcie onkologii. W poniższym artykule przedstawiono zarys problematyki ginekologii wieku rozwojowego, uwzględniając te kwestie.

Słowa kluczowe: dziewczęta, opieka ginekologiczna, wiek rozwojowy, onkologia.

The reproductive tract in children and adolescents is somewhat different in structure, hormonal support, and function from that of adult female, yet many of the same gynecologic disorder occur in both grups [1].

In sexual development of girls following stages can be distinguished:

1. *Neonatal stage* – influence of maternal oestrogens.
2. *Infantile stage* – „hormonal silence" to the age of 9–10 years.
3. *Adolescence*-influence of oestrogens by own ovaries.

Developmental endocrine and physiological changes during Infancy

- Neonatalfollicle-stimulation FSH and luteinizing hormone LH levels rise with the widrawal of maternal oestrogens.
- Some stimulation from maternal placental oestrogen does occur, as a consequence the newborn female may exhibit estrogenic effects with cervical mucos production, maturation of vaginal epithelial cells, breast budding occasionally and rare estrogen with drawal bleeding and follicular cyst development.
- Hymen may appear to be thickened and enlarged because of oestrogen exposure.
- Uterus is palpable not for examination.
- Lactobacilli populate the vaginal mucosa, leads to acidic pH.
- Vaginal discharge or uterine bleeding may occur in the first 2 weeks, because of exposure to and with drawal from placental oestrogens.

Developmental endocrine and physiological changes during early childhood

- Under age 1–7 yrs, changes in the hypothalamus-pituary-gonadal axis with the development of an extremely sensitive feedback system as well as central inhibition of GnRH.
- The pH of the vagina is alkaline, and vaginal irritation is common.
- Uterine corpus to cervix ratio is 2:1.

Developmental endocrine and physiological changes duringlate childhood & adolescence

- Hypothalamic-pituary-ovarian axis, starting of LH peaks at early nighttime.
- Adrenarche (pubarche, axilarche), thelarche, menarche and ovulation occurs (Average menarche is about 13 years).

Puberty is the period of transition between childhood and adulthood, a time of accelereted growth, sexual maturation, and profound psychological changes [1–3].

Menarche

– The median age of menarche is 12.8 years, and the normal menstrual cycle is 21 to 35 days in length. Bleeding normally lasts for 3 to 7 days and consists of 30 to 40 ml of blood. Cycles are abnormal if they are longer than 8 to 10 days or if more than 80 ml of blood loss occurs. Soaking more than 25 pads or 30 tampons during a menstrual period is abnormal.

Menstrual cycles

– Regular ovulatory menstrual cycles often do not develop until 1 to 1.5 years after menarche, and 55–82% of cycles are anovulatory for the first 2 years after menarche. Anovulatory cycles typically cause heavier and longer bleeding.
– Adolescents frequently experience irregular menstrual bleeding patterns, which can include several consecutive months of amenorrhea.

The normal menstrual cycle

– During the follicular phase, release of gonadotropin-releasing hormone (GnRH) from the hypothalamus stimulates the pituitary to secrete luteinizing hormone (LH) and follicle-stimulating hormone (FSH), which then stimulate ovarian estrogen secretion, which induces endometrial proliferation.
– Ovulation occurs 12 hours after the midcycle surge in LH.

The normal menstrual cycle

– Ovulation occurs 12 hours after the midcycle surge in LH.
– The luteal phase follows ovulation, and the corpus luteum secretes progesterone and estrogen. Progesterone inhibits endometrial proliferation and induces glandular changes. Without fertilization, progesterone and estradiol levels decrease, and sloughing of the endometrium occurs 14 days after ovulation.

Amenorrhea

– Primary amenorrhea is defined as the absence of menarche by age 16. Puberty is considered delayed and warrants evaluation if breast development (the initial sign of puberty in girls) does not begin by the age of 13. The mean time between the onset of breast development and menarche is 2 years. Absence of menses within 2 to 2.5 years of the onset of puberty should be evaluated.
– Secondary amenorrhea is defined as the absence of 3 consecutive menstrual cycles or 6 months of amenorrhea in patients who have already established regular menstrual periods [1, 3].

Precious puberty

Early sexual maturation prior to age 8 in girls and age 9 in boys there are two types:

– isosexual praecocity-characteristic are appropriate for the child's genetic and gonadal sex
– heterosexual preciocity-sexual characteristic inappropriate for the genetic sex (feminizing syndrome in boys or virilizing syndrome in girls [1, 2].

Deleyed puberty

Delay of pubertal events beyond age 13 in girls and age 14 in boy's considered abnormal;bone age usually retarded;

– hypothalamic tumors may result in pituary hormone deficienies by interfering with pulsatile secretion of GnRH
– primary gonadal failure and the impaired secretion of gonadal steroids leads to decreased negative feedback and elevated LH and FSH levels (hypergonadotrophic hypogonadism e.g. Turner syndrome [1, 3].

Gynecologic examination of girls

The examination of a child with gynecologic complaints should include a general pediatric assessment of the child's weight and height, head and neck, heart, lungs and abdomen.

Gynecologic examination of girls includes inspection of the external genitalia, visualisation of the vagina and cervix, and rectoabdominal palpation.

This examination is usually possible withouth anesthetic if the child has not been traumatized by previous examinations and if the phisician exam will ot hurt [1–4].

About gynecologic examination of girls:

– A normal clitoral glans in the premenarchal child is on average 3 mm in length and 3 mm in transverse diameter.
– If vaginal discharge is present, samples should be obtained for culture, gram stain, saline and potasium hydroxide preparations.
– The inguinal areas should be carefully palpated for a hernia or gonad; ocasionally, an inguinal gonad is the testis of an undiagnosed male pseudohermaphrodite.

– The vaginal mucosa of the prepubertal child appears thin and red in contrast to the moist, dull pink, estrogenized mucosa of the pubertal child.
– Hymen can be classified as posterior rim (or crescent), annular or redundant.
– Friability of the posterior fourchetee as the labia are separeted can occur in children with vulvitis and/or a history of sexual abuse.
– Congenital abnormalities of the hymen are uncommon, especially unperforate, microperforate and septate hymens.
– Acquired abnormalities of the hymen usually result from sexual abuse, and rarely from accidental trauma.
– Tanner scale considers development of breasts, and pubic hair and axillary hair growth.

Development of sexual organs is closely connected with the hypothalamic – pituary-ovarian activity [1–4].

For bimanual palpation, the examiner places the index or little finger into the rectum and the over handon the abdomen. The rectal examination in the prepubertal child revals only the small „button"of the cervix. Because the ovaries are not palpable, adnexal masses should alert the physician to the possibility of cyst or tumor. As the rectal finger is removed, the vagina should be gently „milked" to promote passage of polypoid tumors or discharge. The physician should note the presence of pubic hair, size of the clitoris, type of hymen, signs of estrogenisation of the vaginal introitus, and perineal hygiene [1].

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