

Gynaecologic Problems in Children and Adolescents

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Abstract

Precocious puberty is the onset of puberty before the age of eight years in girls and nine years in boys. The diagnosis of precocious puberty is based on physical examination and laboratory tests. Physical examination may reveal breast development, pubic hair growth, and vaginal bleeding. Vulvovaginitis is inflammation of the vulva and vagina and is one of the most common gynaecological problems in children. It can be caused by a variety of factors, including poor hygiene, irritants, infections, and allergies.

Keywords: fertility; ovarian; gynaecological problems; adolescents

Introduction

Gynaecological problems in children and adolescents are relatively uncommon, but when they occur, they can have significant consequences on the child's quality of life and future fertility. Early diagnosis and appropriate management are essential to ensure the best possible outcomes. In this article, we will discuss some of the common gynaecological problems in children and adolescents, their diagnosis, and management.

Precocious Puberty

Precocious puberty is the onset of puberty before the age of eight years in girls and nine years in boys [1]. It can be caused by a variety of factors, including central nervous system disorders, ovarian tumours, and adrenal gland disorders. The most common cause of precocious puberty in girls is idiopathic, where no underlying cause can be identified.

The diagnosis of precocious puberty is based on physical examination and laboratory tests. Physical examination may reveal breast development, pubic hair growth, and vaginal bleeding. Laboratory tests may include a bone age assessment, measurement of hormones such as follicle-stimulating hormone (FSH) and luteinizing hormone (LH), and imaging studies such as magnetic resonance imaging (MRI) or computed tomography (CT) scans.

The treatment of precocious puberty depends on the underlying cause. For idiopathic precocious puberty, treatment may include medication to suppress the release of gonadotropins, which stimulate the ovaries. The most commonly used medications are gonadotropin-releasing hormone (GnRH) agonists, such as leuprolide acetate and histrelin acetate. These medications inhibit the release of FSH and LH, thereby delaying puberty [2].

Vulvovaginitis

Vulvovaginitis is inflammation of the vulva and vagina and is one of the most common gynaecological problems in children. It can be caused by a

variety of factors, including poor hygiene, irritants, infections, and allergies. The most common causes of vulvovaginitis in children are bacterial vaginosis and candidiasis [3].

The diagnosis of vulvovaginitis is based on physical examination and laboratory tests. Physical examination may reveal redness and swelling of the vulva and vagina, discharge, and pain with urination or intercourse. Laboratory tests may include a wet mount, which is a microscopic examination of vaginal discharge, and cultures to identify the causative organism.

Treatment of vulvovaginitis depends on the underlying cause. Bacterial vaginosis is treated with antibiotics such as metronidazole, while candidiasis is treated with antifungal medications such as fluconazole. In addition, measures to improve hygiene, such as avoiding irritants and wearing cotton underwear, can help prevent recurrence of vulvovaginitis [3].

Ovarian Cysts

Ovarian cysts are fluid-filled sacs that develop on the ovary. They are relatively common in girls during puberty and are usually benign. However, large or complex cysts can cause pain and may require surgical intervention. The most common type of ovarian cyst in children and adolescents is the functional cyst, which forms during the menstrual cycle [4].

The diagnosis of ovarian cysts is based on physical examination, ultrasound, and laboratory tests. Physical examination may reveal a palpable mass in the abdomen or pelvis. Ultrasound can confirm the presence of a cyst and help distinguish between functional cysts and other types of ovarian cysts, such as dermoid cysts or teratomas. Laboratory tests may include measurement of hormones such as FSH, LH, and oestradiol.

The treatment of ovarian cysts depends on the size and complexity of the cyst. Functional cysts usually resolve spontaneously within a few menstrual

cycles and do not require intervention. However, large or complex cysts may require surgical removal. In addition, if a cyst is causing significant pain or other symptoms, it may be drained or removed surgically.

Polycystic Ovary Syndrome (PCOS)

Polycystic ovary syndrome (PCOS) is a common endocrine disorder that affects up to 20% of women of reproductive age [5]. It is characterized by irregular menstrual cycles, androgen excess, and polycystic ovaries on ultrasound. PCOS can cause a range of symptoms, including acne, hirsutism, and infertility.

The diagnosis of PCOS is based on clinical and laboratory findings. The Rotterdam criteria are widely used to diagnose PCOS and require the presence of at least two of the following: irregular menstrual cycles, androgen excess, and polycystic ovaries on ultrasound [6].

Laboratory tests may include measurement of hormones such as FSH, LH, and testosterone. The management of PCOS depends on the individual's symptoms and goals. Lifestyle modifications, such as weight loss and exercise, can help improve symptoms such as irregular menstrual cycles and insulin resistance. Medications such as oral contraceptives, metformin, and spironolactone can help manage symptoms such as acne, hirsutism, and irregular menstrual cycles. In addition, fertility treatments may be necessary for women with PCOS who are trying to conceive [7].

Congenital Anomalies

Congenital anomalies of the reproductive system are relatively rare but can have significant consequences on fertility and sexual function. Examples of congenital anomalies include vaginal agenesis, Mayer-Rokitansky-Küster-Hauser syndrome, and congenital adrenal hyperplasia.

The diagnosis of congenital anomalies is based on physical examination and imaging studies such as ultrasound and MRI. Treatment depends on the type and severity of the anomaly. In some cases, surgery may be necessary to correct the anomaly and improve sexual function and fertility.

Gynaecological problems in children and adolescents are thus relatively uncommon but can have significant consequences on the child's quality of life and future fertility. Early diagnosis and appropriate management are essential to ensure the best possible outcomes.

Conclusion:

Precocious puberty, vulvovaginitis, ovarian cysts, PCOS, and congenital anomalies are some of the common gynaecological problems in children and adolescents. The diagnosis and management of these conditions require a multidisciplinary approach involving paediatricians, gynaecologists, endocrinologists, and other specialists as necessary.

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