

A Comprehensive Approach for the Initial Adolescent Gynecological Visit

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During the adolescent period of a female, a comprehensive first visit to a gynecologist is critical for future reproductive and non-reproductive health. The American College of Obstetricians and Gynecologists recommends that the first gynecological visit of a female adolescent should be between the ages of 13 and 15 years, with the primary goal of providing preventive health care services.¹ However, according to the study by Yeh et al published in the previous issue of the *Journal of the Chinese Medical Association*, only 5.8% of adolescent girls in Taiwan had consulted obstetricians/gynecologists for the first time in 2006.² Only 0.4% of first gynecological visits of adolescents in Taiwan were for preventive services. Menstrual disorders (46.7%) were the leading reason for the first gynecological visit of adolescents, followed by inflammatory and infectious diseases of genital organs (14.8%). Education about the importance of early reproductive health care should be provided for the parents of adolescent girls and the girls themselves.

A comprehensive screening for weight/height, blood pressure, blood glucose, and cholesterol should be performed. Enquiries should be made about sexual activity, and education should be provided for the prevention of sexually transmitted infections (STIs) and pregnancy. One official survey in 2000 revealed that 13.9% of male adolescents and 10.4% of female adolescents in Taiwan had sexual experience, indicating an emerging need for sex education. A study in the US demonstrated that sex education for adolescent females can reduce chlamydial infections and enhance STI-preventive behaviors.³ The prevalence of STIs, including *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, *Trichomonas vaginalis*, herpes simplex virus type 2, and human papillomavirus (any of 23 high-risk types or type 6 or 11) in 838 adolescent females aged 14–19 years in the US was 24.1%; human papillomavirus was

the most common STI.⁴ Human papillomavirus vaccination is recommended for women aged 9–26 years, regardless of past history of abnormal Pap smears and genital warts. Annual Pap smears should be performed no later than 3 years after first vaginal–penile intercourse or by the age of 21 years.

Prevention of pregnancy is an important issue for adolescents. Oral contraceptives can be prescribed for women aged 18 years or above but are not recommended for female adolescents younger than 18 years old because the hypothalamus–pituitary–ovary axis is not mature enough. In this case, condoms are a better option for pregnancy prevention. However, condom effectiveness varies greatly depending on the correctness of condom use. Key steps for male condom efficacy include condom use for every act of coitus, placing the condom on before vaginal contact, creating a reservoir at the tip, withdrawing while the penis is still erect, and holding the base of the condom during withdrawal. Should the condom break, emergent contraception has to be carried out within 72 hours. In the study by Yeh et al, among the 85 admissions to the obstetric/gynecology ward within 1 year after first visits, 74 admissions were pregnancy-related, highlighting the importance of contraception education for adolescents.² Female adolescents should also be informed of the consequences and complications of pregnancy, including early parenthood disadvantages and risks associated with pregnancy termination, such as intrauterine synechiae and placenta previa/accreta in subsequent pregnancies.

Menstrual disorders are the most frequent presentation at the first gynecological visit by adolescents as shown by Yeh et al.² Menstrual irregularity is common during the first several years after menarche, since the cycles are frequently anovulatory in normal puberty. Female adolescents and their parents should be educated about this issue to avoid unnecessary anxiety.



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Polycystic ovary syndrome (PCOS), a common diagnosis for menstrual disorders in adolescents, is characterized by oligomenorrhea, hyperandrogenism and polycystic ovary morphology on ultrasound. Since adolescents display important differences in the function of the hypothalamus–pituitary–ovary axis compared with adults, special criteria have been proposed for adolescent PCOS.⁵ Sultan and Paris have proposed a definition for PCOS in adolescents in which the combination of 4 from the following criteria leads to diagnosis of the syndrome: (1) oligomenorrhea persisting for 2 years post menarche; (2) clinical hyperandrogenemia with persistent and serious acne and hirsutism; (3) biochemical hyperandrogenemia with serum testosterone levels > 50 ng/dL and a luteinizing hormone/follicle-stimulating hormone ratio > 2; (4) insulin resistance and hyperinsulinemia; and (5) polycystic ovarian morphology on ultrasound.⁶ Treatment of adolescent PCOS targets anovulation, hyperandrogenism and insulin resistance. Diet control and exercise should be advised for obese adolescents with PCOS because a 10% weight loss can improve menstrual function with improvement of insulin resistance and metabolic aberrations. Insulin sensitizers, e.g. metformin, improve insulin resistance, hyperandrogenism and menstrual irregularity. Anti-androgens are beneficial for female adolescents with severe acne, but should be used in conjunction with cyclic estrogen and progesterone to avoid irregular bleeding. Menorrhagia is another presentation of the first adolescent gynecological visit. A vaginal examination can be carried out if indicated. A pregnancy test should be performed to rule out the complications of pregnancy, such as abortion and ectopic pregnancy. Ultrasound should also be performed to detect uterine and ovarian diseases. Endocrine profiles such as estradiol, follicle-stimulating hormone, luteinizing hormone, androgens, prolactin and thyroid function may be examined. For patients with heavy menstrual flow since menarche, coagulation profiles should be checked. Treatment is directed for various causes of abnormal uterine bleeding. For patients with dysfunctional uterine bleeding, high-dose estrogen can be prescribed to stop acute bleeding, followed by progestin treatment.

Female adolescents may first visit the gynecological clinic for symptoms and signs of reproductive tract infection. Increased vaginal discharge and perineal itching are common presenting symptoms. Careful inspection of the vulva can reveal fungal vulvovaginitis. Treatments include a warm sitz bath and oral or topical antifungal drugs. Instructions on appropriate clothing and hygiene should be given to prevent recurrence of fungal vulvovaginitis. Bacterial and trichomonas vaginitis are associated with sexual activity. Metronidazole is the treatment of choice and the partner should also be treated. Patients with pelvic inflammatory disease often present with low abdominal pain and/or fever. Cervical motion tenderness and adnexal tenderness may be present on pelvic examination. Adequate antibiotic treatment is mandatory for cure of pelvic inflammatory disease.

In conclusion, the initial adolescent gynecological visit should provide the adolescent and her parents with preventive health care and appropriate education, in addition to diagnosis and treatment of her presenting complaints. A comprehensive survey and education during the initial visit is crucial for lifetime sexual health of the adolescent.

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