

Common Adolescent Gynecological Condition

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**Case 1**

**15 yo high school student is referred to your office for a LSIL pap smear. She has been sexually active for less than a year and this is her first pap smear. No contraception except occasional condom use. BME 35**

**1) How would you counsel her regarding: incidence in teens, management and follow-up, and natural history of the disease in teens?**

Adolescents have an ASC-US rate of 7-16%, a LSIL rate of 3-13% and a HSIL rate of 0-3%. ACS, ACOG and USPSTF all recommend starting cervical cancer screening within three years of initiating intercourse or by age 21. The guidelines differ on follow up screening: annually vs. every two years before age 30 according to ACOG and ACS. In one study on cervical dysplasia progression in adolescents, LSIL has a 61% regression rate at 12 months and 91% by 24 months. Due to the high rate of regression in adolescents and the low rate of cervical cancer in that population none in girls age 10 to 14 and 1.7/ 100,000 in girls age 15 to 19, the ASCCP guidelines recommends close follow-up with repeat pap smear at 6 and 12 months before moving on to colposcopy for both ACS-US and LSIL. The ASCCP guidelines recommend colposcopy with directed biopsy for HSIL pap. If colposcopy, biopsy and ECC are negative, then adolescents with HSIL pap can be offered close follow-up with colposcopy every 4-6 months for one year.

**2) How do you counsel her about contraception?**

This is a prime opportunity for contraceptive teaching in this patient -remain non-judgmental and to provide information about all contraceptives including the IUD and abstinence. Additionally, help her develop strategies that are going to help her maintain her contraceptive of choice, i.e. ways of remembering to take the pill, etc. Praise her for using condoms and reinforce the need for more consistent condom use.

**3) She inquires about DepoProvera – what risks/benefits do you counsel her about?**

According to a 2002 survey by the National Center for Health Statistics, over 20% of sexually active teenagers use Depo-Provera for contraception. Cundy et colleagues have demonstrated prolonged DMPA use causes transient reversible decrease in BMD. This patient should be informed about the effect of DMPA on BMD as well as the other common side-effects of DMPA which can lead to noncompliance: breakthrough bleeding, weight gain due to increase in appetite (average 2 kg/year), and injection every 12 wks. If she opts for this method, encourage her to take adequate calcium and vitamin D, watch her fat and caloric intake, and increase her exercise habits. Develop a system to reinforce this with her every 12 wks at injection time. Given that she is already obese, address her dietary habits and activities, and consider referral to nutritionist. Address potential body image issues that may be manifested in high-risk behavior (i.e. Smoking, drinking, drugs, sexual promiscuity)

**4) What other issues and tests must be addressed in sexually active teens?**

This patient is at high-risk for contracting an STD and should be tested for all STDs including GC, Chlamydia, syphilis, HIV and hepatitis B & C. Herpes testing should be based on information elicited from the patient. Adolescent women age 15-19 who are sexually active have the highest rates of GC and Chlamydia, 1359/ 100,000 and 5750/ 100,000 respectively.

**5) Why are adolescents at increased risk for STDs, especially Chlamydia?**

Biologic vulnerability (ectopy of their cervical columnar cells, making them vulnerable to Chlamydia), their perceived lack of risk, inconsistent condom use, the age of onset of intercourse, the number of sexual partners, and their inadequate knowledge of STD symptoms and asymptomatic infection. Many engage in serial monogamy and therefore, assessing the number of sexual partners in the past year and how long they have been with the current partner may provide more accurate assessment of risk than asking them if they are monogamous.

## Case 2

16 yo high school student comes to your office complaining of pain with urination.

### 1) What other information is important to obtain in her history?

Determine if she is sexually active and what she uses for contraception. Many adolescents have asymptomatic STD infections or do not recognize the symptoms. These symptoms might be due to gonococcal or Chlamydia urethritis or to peri-ureteral herpetic ulcer. You should also do a thorough pelvic exam looking for any signs of PID, TOA, vulvovaginal ulcers, and avoid empirically treating adolescents for an UTI over the phone or without an exam.

### 2) What tests do you need to order?

In addition to a urine culture for C&S as well as GC/Chlamydia antigen tests, and culture any suspicious lesions.

### 3) How do you treat her?

Best to treat the patient with an antibiotic that will cover GC, Chlamydia as well as an UTI. Ofloxacin 300mg, PO BID for 7 days will address all three pathogens. Rather than wait for her culture results, you want to treat this patient at the time of the visit and ask her to refrain from sexual intercourse until the results are known – give her a return appointment. Also, address her sexual habits with her, this is a prime opportunity for teaching. Ideally you want to bring her back to discuss her results especially if any of the STD cultures comes back positive. The follow-up visit will serve to re-emphasize her sexual habits and teach her about STD prevention

## Case 3

15 yo is brought to your office with a complaint of increasing abdominal girth and a negative pregnancy test?

### 1) What is your differential diagnosis of adnexal masses occur in this population?

In this age group, adnexal masses are usually associated with benign functional ovarian cysts. Your differential should include:

Origin	
Ovary	Physiologic cyst, follicular cysts, corpus luteal cysts, theca lutein cyst, endometrioma and neoplasm (benign and malignant)
Fallopian tubes	Ectopic pregnancy, tubo-ovarian abscess, hydrosalpinx, hydatid cysts
Broad ligament	Para-ovarian cysts, myomas (pedunculated & interligamentous)
Uterus	Uterine anomaly, i.e. functional uterine horn

Most ovarian cysts in this age group occur from failed ovulation or involution after ovulation. They may be associated with menstrual irregularities, pelvic pain and discomfort, rupture and hemorrhage and torsion. They also tend to be asymptomatic unless they are rapidly expanding or cause ovarian torsion.

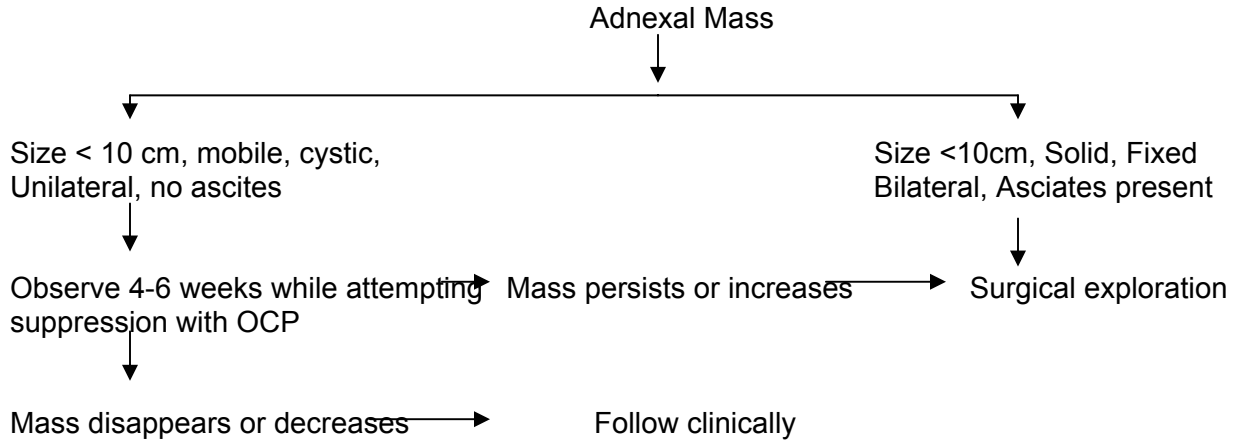
### 2) How do you work the patient up?

Similar to the evaluation of older premenopausal women, your work-up should include a good history and physical with emphasis on any menstrual irregularity or abnormalities. You also want to rule out all other emergencies, including: appendicitis, ovarian torsion. While a pelvic US, with or without color Doppler flow is very useful and if a suspicious ovarian mass is present, consider tumor markers for germ cell tumors in this age group including AFP for endodermal sinus tumors, LDH for dysgerminomas and  $\beta$ -hCG for nongestational choriocarcinomas. Mixed germ cell tumors and embryonal carcinomas may produce all three of these markers.

### 3) What is the best management for this patient?

Conservative management, consisting of observation and analgesia, is often the best approach, depending on symptoms and size of mass. Risk of malignancy is much lower in adolescents and they have a higher incidence of complex benign masses, 70% of these masses will resolve. The biggest risk associated with observation in this population is ovarian torsion due to the size of the

mass. Indication for surgical management includes: suspicion of torsion, solid mass on ultrasound, hemodynamic instability, refractory pain, high suspicion for malignancy and increasing size.



4) **Ultrasound is suspicious for a 8cm multiloculated cyst without ascites. What is the best surgical approach in this patient?** The best approach is by laparoscopy as it offers rapid recovery, improved cosmetic result, and decrease adhesion formation. Surgical techniques include aspiration, cystectomy and oophorectomy. Try to preserve the ovary whenever possible, regardless of the size of the cyst.

5) **Describe how you would perform a laparoscopic ovarian cystectomy.**

When performing your cystectomy:

Incise the ovarian capsule on the antimesenteric side, distal to the hilum

Tease the cyst wall away from the ovarian stroma with a probe or hydrodissection

Use an atraumatic grasper on the stroma

Control all small bleeding points and leave the ovary open

6) **How do you counsel her about future fertility?**

Her future fertility is not affected even if she has an ovarian torsion (as long as it is diagnosed and ovarian tissue is still viable.) Mainstay of ovarian torsion is conservative surgical management consisting of detorsing the ovary, which is accompanied by resumption of ovarian function in 87-95% of the time. While oophorectomy would not decrease this patient's fertility, if oophorectomy is done at such an early age and she develops pathology in the contralateral ovary, it will limit your management options and may compromise the patient fertility at that point.

## References

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