

DISORDERS OF THE OVARY AND FALLOPIAN TUBE

Anatomy and Physiology:

Reproductive age – ovaries measure 1.5 x 2.5 x 4.0 cm

Menopausal age – ovaries measure 2.0 x 2.0 x 1.0 cm

Fallopian Tubes - 7 to 10 cm tubular structure arising from the uterus.

Physiologic Disorders:

Polycystic Ovarian Syndrome: A disorder of androgen metabolism, which results in chronic anovulation. These patients are often obese and frequently have insulin resistance. They usually present with absent or irregular bleeding, mild hirsutism, and frequently infertility. Their physical exam is frequently normal except for having a weight in excess of their ideal body weight, oily skin, and increased body hair growth. The main concern in providing care for these patients is the protection of the endometrium from the effects of unopposed estrogen. These patients frequently develop endometrial hyperplasia and are at much higher risk of the eventual development of endometrial cancer. If the patient has had more than a year of anovulation, office endometrial biopsy should be performed to evaluate for hyperplasia or cancer. The patient with normal pathology should be cycled with monthly progesterone. This can be done with birth control pills or medroxyprogesterone.

Adnexal Masses:

The routine physical examination of all women should include a pelvic examination once the woman has turned 18 or becomes sexually active. This examination should include a careful bimanual palpation of the uterus and ovaries. The presence of a mass on pelvic examination does not ensure that it is gynecologic in origin. Refer to list for other possible explanations for a pelvic mass (34.2). A number of symptoms suggest the presence of a pelvic mass. Unfortunately, many masses including cancer can be asymptomatic. Women who have ovarian cancer often present with feelings of pelvic pressure, bloating, dull pelvic pain or bladder pressure. In most instances the pain begins gradually and progressively increases. Advanced pelvic masses can present with increased abdominal girth; masses that are palpable even to the patient, or obstructed bowel or ureter.

Adnexal Torsion: Adnexal torsion occurs when an ovarian mass rotates on its pedicle, the infundibulopelvic ligament. It can occur at any age, and is more common during pregnancy. It usually requires the presence of a preexisting adnexal mass to incite the torsion. Torsion presents as the sudden onset of severe abdominal pain, often with low-grade fever, nausea and vomiting. Torsion is a surgical emergency and requires immediate laparotomy or laparoscopy. If the ovary is clearly infarcted, it is removed. Conservative therapy is possible in women of reproductive age. The torsion is reduced and a cystectomy is performed if necessary.

Ovarian Cyst Rupture: Any non-solid mass has the potential to rupture and release its contents into the peritoneal cavity. The contents can be very irritating and cause a severe chemical peritonitis. Most cyst rupture occurs in reproductive-age women, and is

usually related to the midcycle of follicular cysts. Patients with cyst rupture often describe the sudden onset of severe abdominal pain, frequently beginning in a single location and gradually spreading. Low-grade fever is very common. Physical examination can be remarkable for signs of peritoneal irritation, adnexal tenderness on pelvic exam, and cervical motion tenderness. Most cyst ruptures can be managed with pain control until the irritating fluid has been resorbed through the peritoneum. Some cysts, especially corpus luteum cyst, can hemorrhage.

Physiologic Cyst: Among reproductive-age women, the overwhelming majority of ovarian cyst is physiologic in nature, related to the normally occurring cysts of the menstrual cycle. During the early part of the menstrual cycle, a single dominant follicle is selected and progressively grows. Under normal circumstances, this cyst grows to 1 to 2 cm in diameter and ruptures approximately 14 days prior to the onset of menses, releasing an egg into the peritoneal cavity. Many women are aware of this happening, and report monthly mid-cycle mild unilateral discomfort as the follicular cyst expands and ruptures, a phenomenon known as “mittelschmerz”. The patient with suspected follicular cyst rupture could be managed conservatively, provided she is hemodynamically stable. The pain from the cyst usually resolves over the course of 48 hours. Cyst, which persists through two menstrual cycles, may require surgical evaluation. The stable patient with the presumed diagnosis of follicular cyst rupture should be reexamined 48h after the initial event, assuming that nothing has occurred to prompt earlier evaluation or intervention. If pain persists or worsens, surgical evaluation may be warranted. A small subset of patients will have recurrent symptomatic cyst rupture. Use of a monophasic oral contraceptive pill containing 35 micrograms of ethinyl estradiol suppresses most ovulation and gives the patients relief. Oral contraceptives do not treat ovarian cyst already present.

Common ultrasound findings more likely characteristic of benign or malignant ovarian cysts are listed below.

Ca-125, a tumor marker, has received much attention. Levels are elevated in many women who have certain histologic types of ovarian cancer, particularly serous cystadenocarcinomas. Ca-125 is also elevated with endometriosis, severe bowel conditions, and varies with the menstrual cycle. It can also be normal in women with early ovarian cancer. It should not be used in the evaluation of premenopausal women with ovarian cyst.

Masses that seem to be neoplastic, and particularly those that are suggestive of malignancy, require immediate attention. The first line of treatment for ovarian cancer is surgical. The ultrasound exam is not completely diagnostic.

Small ovarian cyst in post-menopausal women appears to be quite common. Cyst have been demonstrated in 10 – 15 % of postmenopausal women. Attempting to detect cancer while minimizing surgery on patients with benign lesions remains one of the most challenging problems of gynecology.

List of benign ovarian masses:

Benign Cystic Teratomas
Physiologic Cysts
Cystadenomas
Fibromas
Thecomas
Brenner Tumors
Endometriomas

Benign Disorders of the Fallopian Tubes:

Paratubal cyst are thin-walled, simple, clear, fluid-filled cysts. They are usually small but can grow quite large. They are usually incidental findings on ultrasound or at gynecologic surgery. They are almost without exception benign, and seldom cause problems, except rare torsion and cyst ruptures.

Tubo-ovarian abscess can result in masses that are quite large, as they combine tube, ovary, and a phlegmon of matted bowel. Tubo-ovarian abscess is very rare in postmenopausal women and requires surgical exploration.

Hydrosalpinx is a common sequelae of acute salpingitis. They are usually small but can be as large as 5 to 10 cm and are sometimes incidental findings on pelvic exam. They are formed from the dilated tubes created by tubal abscesses, now filled with sterile serous fluid. They are usually not symptomatic and only need to be removed if necessary to differentiate them from ovarian neoplasms.