

MANAGEMENT OF INCIDENTAL OVARIAN MASS

Introduction

- Found in females of all ages
- 7% of women have ovarian cysts
- Symptomatic or discovered incidently

Risk of malignancy

Characteristics that increase the likelihood of malignancy

- A complex or solid appearing mass on ultrasound
- Ascites
- Presence in a prepubescent or postmenopausal female
 - <15 - 80% malignant
 - 15-50 - 5-18% malignant
 - >50 - 25-60% malignant
- symptoms
 - non-specific
 - lower abdominal discomfort/pressure
 - constipation
 - urinary frequency
 - dyspareunia

DIFFERENTIAL DIAGNOSIS

Prepubertal girls

- Primary ovarian neoplasms are likely to be malignant, germ cell tumors – 80%
- most common are dysgerminoma

Premenopausal women

- Functional/physiologic cysts
 - Follicular cysts
 - <10 cm
 - asymptomatic or pain
 - smooth, thin walled, unilocular and filled with anechoic fluid on ultrasound
 - Corpus luteum cyst
- Polycystic ovary syndrome
 - Multicystic ovaries on utrasounf
 - classic patient is obese, hirsute, infertile and amenorrhea
- Chronic pelvic inflammatory disease
 - Tuboovarian abscess
 - history of STD
 - pain/fever
 - purulent cervical discharge

- Benign neoplasms
 - Endometrioma
 - presence of ectopic endometrial tissue in ovary
 - “chocolate cysts”
 - pelvic pain, dysmenorrhea and dyspareunia
 - complex mass on ultrasound
 - elevated CA125
 - Mature cystic teratoma (dermoid cyst)
 - benign germ cell tumor
 - most common ovarian tumor in 2nd/3rd decades
 - Contain elements from all three germ cell layers
 - teeth/hair/sebaceous gland
 - complex mass on ultrasound
 - calcified components on abdominal x-ray
 - struma ovarii—thyroid tissue
 - carcinoid tumor
 - 30% develop carcinoid syndrome due to systemic venous drainage.
 - Serous and mucinous cystadenomas
 - thin-walled
 - uni-/multilocular
 - Leiomyoma (fibroids)
 - pedunculated mass
 - complex mass on ultrasound
 - elevation in CA125
 - can be confused with an ovarian mass
- Malignant neoplasms
 - incidence is 5-18%
 - Include serous/mucinous cystadenocarcinoma
 - germ cell tumor
 - metastatic from breast
 - krukensberg tumor

Postmenopausal women

25-60% of ovarian mass are malignant,

- primary ovarian carcinoma
 - 90% are derived from the epithelium
 - most common are papillary serous cystadenocarcinoma,
 - mean age of diagnosis 50-60,
 - GI symptoms dyspepsia/early satiety/anorexia/bloating,
 - ultrasound shows complex adnexal mass and ascites
- metastatic tumors from endometrial, breast, upper (80%) GI and colon CA
- simple unilocular cysts in 2.5-18%

DIAGNOSTIC EVALUATION

History and physical exam

Imaging Studies:

- Ultrasound is the most valuable diagnostic study
 - Differentiate simple cysts, hemorrhagic cysts, endometriomas and dermoids
 - Transabdominal ultrasound—better resolutions of pelvic structure
 - Transvaginal ultrasound—better tolerated and abdominal structure
 - Size pre-: 3.5x2x1.5 post-: 1.5x0.7x0.5 size does not correlate with ultrasound features that associated with risk of malignancy: cystic or solid, smooth or containing excrescences, internal septae or papillae if >2-3 mm
- Granberg 1989:
 - 1/296 unilocular cysts was malignant
 - it has papillary vegetation on inside of cyst wall
 - malignancy rates
 - multilocular cysts 8%
 - multilocular solid tumor 36%
 - solid tumor 39%
- Doppler color flow imaging malignancy are rich in neovascularization
- CT and MRI

Fine needle aspiration

- non-diagnostic because aspirates devoid of diagnostic cells
- rupture of cyst
- non-therapeutic because recurrent cyst formation

Laboratory studies

- hCG, CBC
- Tumor markers
 - CA125:
 - elevated in 80% ovarian CA (>65 U/ml)
 - Sensitivity 50% in stage I and 90% in stage II
 - Low specificity: elevated in other benign/malignant conditions and 1% healthy women
 - 97% positive predictive value in postmenopausal women
 - useful in detecting recurrence
- Germ cell tumor
 - AFP — yolk sac tumor
 - LDH — dysgerminoma
 - hCG — choriocarcinoma

Management

- Premenopausal women
 - Cystic mass <10cm
 - followed conservatively with or without OCs
 - 70% will resolve

- surgical exploration for persistent mass
 - Masses larger than 10cm or masses that are solid, fixed or bilateral, CA125 >200, family history of ovarian/breast CA require surgical exploration
- Postmenopausal women—more aggressive
 - Asymptomatic with normal CA125, simple unilateral cyst <3 should be followed with ultrasound and CA125

Open laparotomy vs laparoscopy

- Laparoscopy
 - reduction in recovery time and adhesion formation
 - indicated for benign disease
- Laparotomy
 - malignant tumors
 - prevent rupture of tumor and staging/debulking

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