Ovarian Cyst (Pelvic Mass)

Disclaimer

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Red Flags
- Suspicion of malignancy
- Torsion

Background

About ovarian cyst

- **Common types:**
  - Functional cysts (arise from the follicle or corpus luteum), which shrink over 4 to 6 weeks in women of reproductive age
  - Paratubal and paraovarian cysts – almost always asymptomatic
  - Hydrosalpinx – blocked fallopian tube full of fluid
  - Endometriomas – due to deposits of endometriosis on the ovary
  - Dermoid cysts – often contain hair, skin, teeth, bone, and many other tissues
  - Cystadenomas – mucinous or serous

- **Uncommon and rare types:**
  - Ovarian cancers
  - Borderline ovarian tumours

The overall incidence of a malignant symptomatic ovarian cyst in a premenopausal female is approximately 1:1000, increasing to 3:1000 at the age of 50 years.

Assessment

Practice Point

- **Always arrange pelvic ultrasound**
  Pelvic examination can be unreliable, so arrange a pelvic ultrasound to confirm an ovarian cyst.

1. Assess for clinical presentations of ovarian cyst as symptoms are often non-specific, therefore have a high index of suspicion.

- **Clinical presentations of ovarian cyst**
  - Incidental finding of mass at vaginal examination or pelvic ultrasound
  - Lower abdominal or pelvic pain
  - Menstrual changes
  - Postmenopausal bleeding
  - Pain on intercourse or defecation
  - Weight gain or loss
  - Bloating
  - Infertility
  - Other vague and non-gynaecological symptoms:
    - Increased abdominal girth
    - Indigestion
    - Lack of appetite
    - Feeling full after only a small amount of food
    - Change in bowel habits
    - Fatigue
    - Urinary frequency or incontinence
    - Feeling of pressure in the abdomen
    - Rectal bleeding
2. Ask if patient identifies as Aboriginal and Torres Strait Islander.

3. Ask about high risk factors:
   - Family history of breast or ovarian cancer or Ashkenazi Jewish ethnicity
   - Inherited mutations of BRCA1 or BRCA2

4. Perform:
   - abdominal examination, including looking for signs of ascites and lymphadenopathy.
   - pelvic examination (not required for patients who have not had vaginal intercourse).

5. Consider differential diagnosis if acute pain:
   - Acute appendicitis or other surgical emergency if severe pain.
   - Possible ovarian torsion if there is sudden onset of severe pelvic pain.
   - Ectopic pregnancy.
   - Pelvic inflammatory disease (PID).

6. Arrange pelvic ultrasound:
   - Trans-vaginal in adult women.
   - Trans-abdominal in pre-pubertal or young women not yet sexually active.

   Ultrasound is the first-line investigation for ovarian cyst as pelvic examination can be unreliable. CT scans are not recommended for examination of the pelvis. See Diagnostic Imaging Pathways – Adnexal Masses (Incidental).

7. Consider using a risk of malignancy index or other algorithms such as the ADNEX risk model.

**Management**

1. Arrange immediate gynaecology referral if:
   - suspected torsion of ovary.
   - suspected ectopic pregnancy.
   - suspected pelvic sepsis.
   - acute, severe pelvic or abdominal pain or haemodynamic instability.

2. If suspected malignancy identified on clinical examination or imaging, arrange gynaecological oncology referral.

3. For pre-pubertal patients, if a pelvic ultrasound confirms a cyst of any size or type, seek paediatric medical advice.

4. For premenopausal patients, if a pelvic ultrasound confirms a:
   - simple cyst < 5 cm, repeat scan in 3 months to ensure resolution. If persistent or enlarging cyst, refer for urgent or routine gynaecology referral.
   - simple cyst > 5 cm, refer for urgent or routine gynaecology referral.
   - complex cyst (i.e. any cyst that is not simple, dermoid, endometrioma, haemorrhagic cyst, or hydrosalpinx), refer for gynaecology assessment. Ultrasound is not perfect at differentiating between types of pathological cysts.
5. For postmenopausal patient if:
   - a cyst is found, organise CA 125.

   **CA 125 can be:**
   - normal in up to 50% of early ovarian cancers.
   - elevated by other factors in many situations.

   **CA 125 elevated by other factors**

   - Gynaecological:
     - Ovarian cancer
     - Acute PID
     - Uterine fibroids
     - Uterine adenomyosis
     - Benign ovarian neoplasm
     - Endometriosis
     - Functional ovarian cyst
     - Meigs’ syndrome
     - Ovarian hyperstimulation
     - Menstruation

   - Non-gynaecological:
     - Active hepatitis
     - Acute pancreatitis
     - Chronic disease of the liver
     - Cirrhosis of the liver
     - Congestive heart failure
     - Diverticulitis
     - Non-malignant ascites
     - Pericarditis
     - Pneumonia
     - Polyarteritis nodosa
     - Systemic lupus erythematosus
     - Renal disease

   - Other malignant conditions:
     - Any disseminated intra-abdominal cancer
     - Any gastrointestinal cancer
     - Breast cancer, especially metastatic
     - Mesothelioma

   For more information, see Cancer Australia – *Assessment of Symptoms That May Be Ovarian Cancer: A Guide for GPs*.

   - simple, unilateral, unilocular cysts < 5 cm diameter (low risk of malignancy), and in the presence of a normal **CA 125**:
     - arrange a repeat scan and CA 125 in 3 to 4 months.
     - and cyst is reducing in size, no further follow-up is needed.
     - and cyst remains unchanged, increases in size, or develops suspicious features after 3 months surveillance, refer to a gynaecologist for further surveillance with or without laparoscopy.

   - **CA 125 > 30 units/ml, RMI 25 to 200, or complex/mixed solid and cystic, or solid features on ultrasound**, arrange gynaecological oncology review.

6. **Do not routinely perform** aspiration of ovarian cysts.
   - Neoplastic cysts will recur.
   - Malignant cysts will be upstaged.
   - Image guided aspiration can be considered if significant medical comorbidities contraindicating surgery.
   - **Do not send the cyst aspirate for cytology as sensitivity and specificity are so poor as to render results meaningless.**

**Referral**

   - Arrange immediate gynaecology referral if:
     - suspected torsion of ovary.
     - suspected ectopic pregnancy.
     - suspected pelvic sepsis.
     - acute, severe pelvic or abdominal pain, or haemodynamic instability.
• Seek **paediatric medical advice in** pre-pubertal patients, if a pelvic ultrasound confirms a cyst of any size or type.

• Refer for **gynaecological oncology referral** if:
  o suspected malignancy identified on clinical examination or imaging.
  o premenopausal patient with:
    ▪ cyst persistent on repeat ultrasound.
    ▪ dermoid or endometrioma, haemorrhagic cyst, or hydrosalpinx.
  o postmenopausal patient with:
    ▪ simple, unilateral, unilocular cysts < 5 cm diameter, a normal CA 125, and cyst remains unchanged, increases in size, or develops suspicious features after 3 months surveillance.
    ▪ CA 125 > 30 units/ml, RMI 25 to 200, or complex/mixed solid and cystic, or solid features on ultrasound.

**Information**

**For health professionals**

- Cancer Australia:
  - Assessment of Symptoms That May be Ovarian Cancer: A Guide for GPs
  - Testing for Ovarian Cancer in Asymptomatic Women

- RCOG:
  - Ovarian Masses in Premenopausal Women, Management of Suspected (Green-top Guideline No. 62)
  - The Management of Ovarian Cysts in Postmenopausal Women (Green-top Guideline No. 34)
  - The Women’s – Managing Women at High Inherited Risk of Ovarian Cancer

**For patients**

- Cancer Australia – **What are Gynaecological Cancers?**
- Office of Women’s Health – **Ovarian Cysts**

**References**


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