Notes on Ovarian Tumours

Ovarian Tumours
Functional ovarian cysts
Benign ovarian cysts and tumours
Ovarian cancer

Functional cysts include follicular cysts and corpus luteum cysts- part of the normal process of ovulation. These can be as large as 3cm in diameter and a few are 4-5cm in diameter. If a cyst is 5cm or more in size, further investigation is indicated. Functional cysts should disappear within a month or two. A persistent cyst on serial ultrasound may need to be investigated even if smaller than 5cm in diameter.

Other non-neoplastic cysts
Polycystic ovarian disease- thickened white ovarian capsule with multiple cysts of usually less than 1cm diameter
Endometriosis- “chocolate cysts” (contain altered blood in thick walled cysts)

These are sometimes grouped with the "functional" cysts.

Ovarian Cancer
Often presents late- hence generally poor prognosis overall
Commoner than endometrial and cervical carcinoma
No good screening method
May be associated with high serum CA125 levels- but very poor sensitivity and specificity. A normal level certainly does not exclude ovarian cancer.
If raised, levels can be used to monitor response to treatment.
Secondaries from GI tract and breast relatively common
Krukenberg- ovarian secondary deposits from stomach primary

Presentations of benign and malignant ovarian tumours
Often asymptomatic- hence late presentation of both benign and malignant tumours
May be found as incidental finding- eg adnexal mass during cervical screening
Swelling- cyst, solid mass, ascites
Local pressure effects- frequency micturition, constipation
Discomfort- low abdomen and pelvis
Weight loss and malaise due to carcinoma
Pain (due to expanding mass, haemorrhage into cyst or torsion of cyst)
Post menopausal bleeding- if oestrogen secreting

Complications of ovarian cysts
Torsion- emergency with acute abdominal pain
Haemorrhage
Rupture

Classification of tumours
Is complex
But most tumours, whether benign or malignant, arise from surrounding epithelium of ovary
Some are “borderline”- with neoplastic appearance of cells but no evidence of stromal invasion.
## Simplified classification with examples

<table>
<thead>
<tr>
<th>Origin</th>
<th>Example of benign tumour</th>
<th>Example- malignant</th>
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<tbody>
<tr>
<td>Epithelium</td>
<td>Cystadenoma</td>
<td>Adenocarcinoma (serous, endometrioid, mucinous and clear cell types)</td>
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<td>Germ cell</td>
<td>Dermoid cyst</td>
<td>Dysgerminoma (equiv. of male seminoma)</td>
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<td>Or “mature teratoma” (may contain- hair, teeth)</td>
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<td>Sex cord- stromal</td>
<td>Fibroma (may cause Meig’s syndrome)</td>
<td>Fibrosarcoma</td>
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<td>Granulosa cell tumour (often secrete oestrogen; may cause post menopausal bleeding)</td>
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## Factors suggesting malignancy
- Rapid growth (though very large sized cysts are often benign)
- Post menopausal
- Ascites
- Solid tumour rather than simple cyst
- Multilocular with thick septae on U/S
- High CA125 (or other markers- AFP etc)

## Staging
- Stage 1- confined to ovary
- Stage 2- confined to pelvis
- Stage3- confined to abdomen
- Stage 4- distant metastases eg lung or liver secondaries

Spread is usually by local infiltration, transcoelomic spread and via lymphatics. Blood-borne spread to liver and lungs may also occur.

## Investigations
- Full blood count, urea and electrolytes, liver function- usually normal
- U/S- more than 5cm means not a functional cyst; solid or with septae worrying
- CA125- if high suggests carcinoma (but poor sensitivity and specificity)- most useful in monitoring effects of treatment rather than making diagnosis
- CXR, CT for nodes- of malignancy suspected

## Surgery
Benign lesions are usually removed laparoscopically. Where malignancy is suspected, laparotomy with total abdominal hysterectomy and bilateral salpingo-oophorectomy (TAH+BSO) would usually be performed.

In order to stage the lesion precisely, omentectomy performed. Peritoneal washings, peritoneal biopsies and ascitic fluid are also taken.
Chemotherapy
Adjuvant chemotherapy offers benefit
Germ cell tumours particularly sensitive
Usual regime is combination of taxol and cisplatin or carboplatin

Radiotherapy not generally used (contrast with cervical cancer where radiotherapy useful and chemotherapy not used).