

Pathology of the Ovaries

Dr Rodney Itaki

Lecturer

Anatomical Pathology Discipline



University of Papua New Guinea
School of Medicine & Health Sciences
Division of Pathology

Pathology

2 common encountered in clinical practice

- Benign cysts
- Malignant Tumors

Benign Cysts

- Follicular & Luteal Cysts
 - cystic follicles very common
 - Originate from graafian follicles or sealed follicles that close immediately after rapture.
- Polycystic Ovaries
 - numerous cystic follicles
 - when associated with oligomenorrhagia is termed Stein-Leventhal syndrome
 - persistent anoulation, obesity (40%), hirsutism (50%) and virilism (rare)

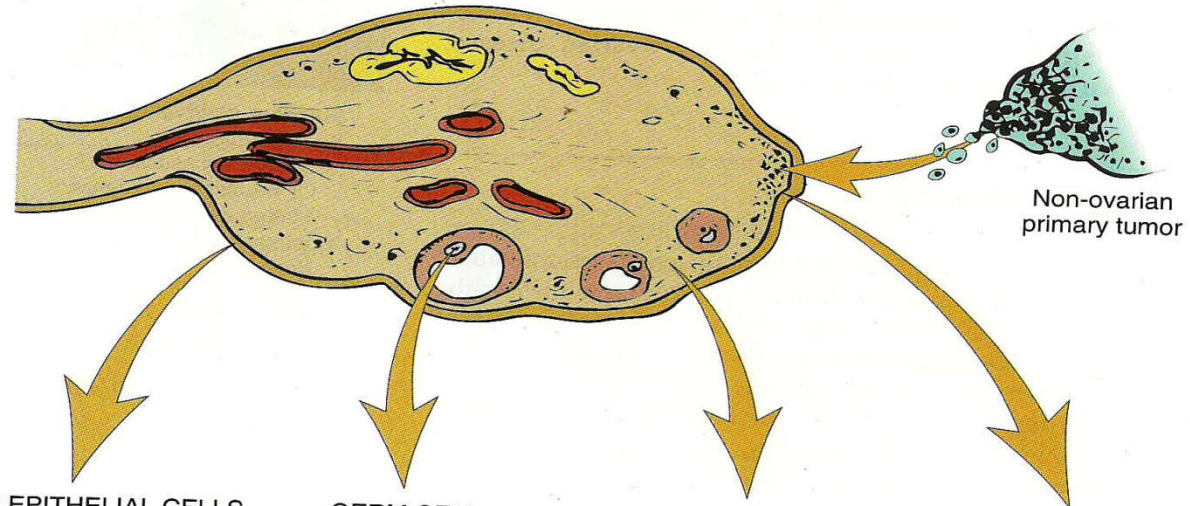
Study Guide

- Describe and list the gross anatomical features of ovarian cysts.
- Describe and list the microscopic features of ovarian cysts.
- What is difference between a follicular cyst and a luteal cyst? Describe and list the macroscopic and microscopic features that differentiate the two.
- What are the complications of an enlarged ovarian cyst? How would you diagnose it (clinical signs and symptoms)?

Ovarian Tumors

- Surface epithelial tumors (coelomic). 3 types
 - Serous
 - Mucinous
 - Endometrioid
 - Clear cell tumor
 - Brenner tumor
 - Cystadenofibroma

Tumors of ovaries



ORIGIN	SURFACE EPITHELIAL CELLS (Surface epithelial-stromal cell tumors)	GERM CELL	SEX CORD-STROMA	METASTASIS TO OVARIES
Overall frequency	65%-70%	15%-20%	5%-10%	5%
Proportion of malignant ovarian tumors	90%	3%-5%	2%-3%	5%
Age group affected	20+ years	0-25+ years	All ages	Variable
Types	<ul style="list-style-type: none"> • Serous tumor • Mucinous tumor • Endometrioid tumor • Clear cell tumor • Brenner tumor • Cystadenofibroma 	<ul style="list-style-type: none"> • Teratoma • Dysgerminoma • Endodermal sinus tumor • Choriocarcinoma 	<ul style="list-style-type: none"> • Fibroma • Granulosa-theca cell tumor • Sertoli-Leydig cell tumor 	

REF: Robins Pathological Basis of Diseases, 6th Ed.

Classification of Ovarian Tumors

Table 24-3. OVARIAN NEOPLASMS (1993 WHO CLASSIFICATION)

Surface epithelial-stromal tumors

Serous tumors

- Benign (cystadenoma)
- Of borderline malignancy
- Malignant (serous cystadenocarcinoma)

Mucinous tumors, endocervical-like and intestinal type

- Benign
- Of borderline malignancy
- Malignant

Endometrioid tumors

- Benign
- Of borderline malignancy
- Malignant

Epithelial-stromal

- Adenosarcoma
- Mesodermal (müllerian) mixed tumor

Clear cell tumors

- Benign
- Of borderline malignancy
- Malignant

Transitional cell tumors

- Brenner tumor
- Brenner tumor of borderline malignancy
- Malignant Brenner tumor
- Transitional cell carcinoma (non-Brenner type)

Sex cord-stromal tumors

Granulosa-stromal cell tumors

- Granulosa cell tumors
- Tumors of the thecoma-fibroma group
- Sertoli-stromal cell tumors; androblastomas
- Sex cord tumor with annular tubules
- Gynandroblastoma
- Steroid (lipid) cell tumors

Germ cell tumors

Teratoma

- Immature
- Mature (adult)
- Solid
- Cystic (dermoid cyst)
- Monodermal (e.g., struma ovarii, carcinoid)
- Dysgerminoma
- Yolk sac tumor (endodermal sinus tumor)
- Mixed germ cell tumors

Malignant, not otherwise specified

Metastatic nonovarian cancer (from nonovarian primary)

REF: Robins Pathological Basis of Diseases, 6th Ed.

Study Guide

- List the surface epithelial tumors of the ovary in order of frequency of occurrence, from most common to least common.
- Describe and list macroscopic and microscopic features of each type of tumor.

Germ cell tumors

- Teratomas – 3 categories
 - Mature benign (common). Also called dermoid cyst
 - immature (malignant)
 - Monodermal/highly specialised
- Dysgerminoma (ovarian counterpart of seminoma)
- Endodermal sinus (yolk sac tumor)
- Choriocarcinoma

Study Guide

- List the germ cell tumors in order of frequency of occurrence, from most common to least common.
- Describe and list the macroscopic and microscopic features of each of the germ cell tumors.
- Differentiate the benign from the malignant germ cell tumors.

Sex Cord-Stromal Tumors

- Granulosa-theca cell tumors
- Thecoma-fibromas
- Sertoli-leydig cell tumors (androblastomas)

Study Guide

- Describe and list the macroscopic and microscopic features of each of the sex cord tumors.

Metastatic Tumors

- Uterus
- Fallopian tube
- Contralateral ovary
- Pelvic peritoneum
- Breast
- GIT (including biliary tract & pancreas)
- Krukenberg tumor

Study Guide

- What are the common malignant tumors that metastasize to the ovaries?
- What is a Krukenberg tumor? Describe the macroscopic and microscopic features of this tumor.

End

- Robins Pathological Basis of Diseases – what ever edition you have.
- PDF format of presentation & study guides will be available on:

www.pathologyatsmhs.wordpress.com