Long natural history of recurrent granulosa cell tumor of the ovary 14 years after initial diagnosis: a case report

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In 2004 a 58 year-old G1P1 white woman presents to our emergency room with abdominal pain, which has been progressive over the last 3 days.

Physical examination reveals right lower pelvic palpable mass with a diameter of approximately 6-7 cm.

Her past medical history was significant for a total hysterectomy, bilateral salpingoophorectomy, infracolic omentectomy, and multiple biopsies of peritoneum in February 1990 for a 15 cm solid ovarian mass.

Pathology evaluation revealed a stage IIB granulosa cell tumor of the ovary (positive biopsy on pelvic peritoneum)

She received 6 cycles with PAC scheme as adjuvant therapy

Her follow up consisted of annual pelvic examination by her gynecologist, and annual total abdominal US scan.
Transavaginal pelvic sonography confirmed a solid pelvic mass measuring 6.2 x 5.2 x 5.5 cm, and no evidence of ascites.

Barium enema was unremarkable.

At abdominal US scan retroperitoneum, liver, kidneys, ureters, and pancreas were normal in appearance.

CA-125 level was 6 U/mL, 17ß-estradiol level was 14 pg/mL, free testosterone level was 0.9 pg/mL.
At laparotomy a 8 cm partially solid pelvic mass adherent to sigma was found.

The liver, hemidiaphragms, pancreas, intestines, abdomen, and retroperitoneum well all normal.

Peritoneal lavage for cytology, debulking surgery with rectosigmoidectomy with colo-rectal termino-terminal anastomosis and pelvic lymphonodal sampling were performed.

Intraoperative histology revealed granulosa cell ovarian tumor relapse

No residual tumor remained following surgery
Grossly this was a **6 x 8 cm solid mass**. The cut surface was lobulated and showed multiple foci of hemorrhage and cystic degeneration.

Microscopic examination revealed mostly a microfollicular pattern of growth with Call – Exner bodies and occasional areas of diffuse and trabecular patterns. Mitotic figures were rare, reaching 4/10 HPF.

Infiltration of sigma peritoneal surface was detected, sigmoid mucosa and surgical margins were negative.

Cytopathologic examination of the peritoneal washing was negative
Postoperative recovery was uncomplicated.

Adjuvant cytotoxic chemotherapy with bleomicin, etoposide and cisplatin (PEB) was prescribed for 6 cycles.

The patient is actually NED (60 months after recurrence)
Natural history: indolent course, propensity for late recurrence.

Median time to relapse is 4-6 years after initial diagnosis although disease has recurred as late as 37 years.

Necessity for lifetime follow up.


R.G. 58 aa, recurrent Granulosa Cell Tumor of the Ovary

DISCUSSION FOLLOW UP

TUMOR MARKERS IN FOLLOW UP

Serum estradiol
Testosteron
Inhibin
Mullerian inhibitory substance (MIS)

MANAGEMENT OF RECURRENT GCTs

(LACK OF STANDARD APPROACH)

REPEAT SURGICAL RESECTION FOR OPTIMAL CYTOREDUCTION
(TUMOR'S LACK OF INVASION AND INDOLENT GROWTH)

RADIATION TREATMENT

CHEMOTHERAPY

HORMONAL THERAPIES
Limited series of patients
Platinum based containing regimens
Need for alternative treatment after PVB/PEB failure
Thank you