CMJ - March 1997 (Volume 38, Number 1)

Clinical Significance of Serum CA 125 for Ovarian Carcinoma in Patients Presenting with Pelvic Masses

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Aim. To assess the importance of the ovarian carcinoma antigen (CA 125) serum concentration in the identification of tumor masses in the small pelvis and estimation of the predictive value of serum CA 125 for the therapeutic success and probability of relapse in patients with ovarian carcinoma.

Methods. Concentration of CA 125 was determined in 227 patients with the initial diagnosis of tumor mass in the small pelvis: 89 patients had benign gynecological disease or condition, 23 malignant tumors of non-ovarian origin, and 115 ovarian cancers of epithelial origin. In the last, CA 125 concentration was determined preoperatively in 43 patients, and in 72 before the second-look surgery.

Results. Positive CA 125 findings (³35 IU/mL) were recorded preoperatively in 33.3% of the patients with endometriosis, 88.9% of the patients with pelvic inflammatory disease, 40.0% with endometrial cancer, 40.0% with fallopian tube cancer, 87.5% with metastatic ovarian cancer, 76.9% with serous ovarian cystadenocarcinoma, 80.0% with endometroid ovarian carcinoma, and in 28.5% of the patients with mucinous ovarian cystadenocarcinoma. In the group of patients with tumor masses in the small pelvis, the sensitivity of the test for ovarian carcinoma of epithelial origin was 69.8%, specificity 72.3%, positive predictive value 49.2% and negative predictive value 86.2%. Low serum concentration of CA 125 was found after the third course of chemotherapy in all patients with epithelial ovarian carcinoma without evident disease. In patients with progressive disease, positive CA 125 findings were found in 72.2% of the patients after the third, and in 100.0% after the sixth course of chemotherapy. In the patients without tumor at the second-look surgery, positive CA 125 findings were recorded in 5.1% of the patients initially staged I and II, and in 18.2% of the patients staged III and IV (not significant). CA 125 concentration was elevated in all patients staged I and II with positive tumor finding at the second-look surgery. False negative CA 125 findings were found in 30.0% of the patients with the stages III and IV of the disease.

Conclusions. Second-look surgery is not necessary for the patients initially staged I and II, provided that the concentration of CA 125 is £35 IU/mL before the planned control surgery. This type of surgical procedure, along with the serial determinations of CA 125, is optional for the control of the patients with the stages III and IV of disease.

Key words: *ovarian carcinoma antigen; ovarian neoplasms; pelvic neoplasms*

Received: May 5,1995
Accepted: August 15,1996

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