Serum CA125 in patients with endometrial cancer.

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Background

There are no potential tumor markers validated for prognosis of endometrial cancer. Although CA125 expression in endometrial cancer has been investigated, its prognostic value remains controversial. We investigated diagnostic and prognostic applications of serum CA125 levels for endometrial cancer.

Methods

This study was approved by Osaka City University Graduate School of Medicine Institutional Review Board. Available electronic medical records from January 2006 to December 2012 were reviewed, and serum CA125 levels and clinicopathological features were analyzed in patients with endometrial cancer. Serum CA125 levels were measured before therapy during pre-treatment examinations. A lower level of 35 U/ml was used as the cut-off for normal values of serum CA125 levels. In patients with elevated baseline serum CA125 levels, these were measured again during treatment and at scheduled follow-up examinations.

Clinical management

All management was performed by gynecologic oncologists. Diagnosis was established by curettage. All patients were clinically and/or surgically classified according to the International Federation of Gynecology and Obstetrics (FIGO) surgical staging system (2008). In operable cases, patients underwent a total abdominal hysterectomy plus bilateral salpingo-oophorectomy. In most cases, systemic pelvic lymphadenectomy was performed. Para-aortic lymph node sampling was performed in patients with intermediate risk or high risk disease. After surgery, adjuvant chemotherapy was provided in patients with intermediate risk or high risk disease.

Clinical characteristics

During this period, a total of 215 patients (stage I: 142; stage II: 19; stage III: 32; stage IV: 22) were administrated. The median age was 60 years (28-85). Surgery was performed as primary therapy in 212 cases (98.6%) and chemotherapy was performed in three inoperable cases (1.4%). Surgery included total abdominal or radical hysterectomy plus bilateral salpingo-oophorectomy in 210 patients (97.7%) and additional lymphadenectomy was performed in 194 patients (90.2%). Two patients (0.9%) underwent tumor biopsy because of advanced disease. Chemotherapy was provided for 101 patients (47.0%) with intermediate or high risk disease, and included paclitaxel and carboplatin therapy (TC) in 86 patients, docetaxel and carboplatin therapy (DC) in 10 patients, and docetaxel and cisplatin therapy (DP) in five patients. TC therapy was provided for three inoperable cases. Fifty-two patients (24.2%) had relapse of disease at the time of the last follow-up. The median follow-up time for all patients was 91 months (1-143).

Age (years)	60 (28–85)
Histology	
endometrioid	191
carcinosarcoma	7
serous	5
adenosquamous	5
muconous	3
clear	2
small	1
undifferentiated	1
Stage	
1	142
2	19
3	32
4	22
Histological grade	
1	71
2	83
3	61

Results

- (1) Elevated serum CA125 levels were identified in 69 patients (32.1%).
- (2) Elevated serum CA125 levels were associated with relapse of disease (p=0.005).
- (3) Among the 69 patients with elevated serum CA125 levels, 56 (81.2%) achieved remission and serum CA125 levels returned to the normal range in all cases.
- (4) There is no statistically significant relationship between an elevated CA125 levels and OS (p=0.06).

Discussions

- (1) In our study, elevated serum CA125 levels were identified in 32.1% of patients with endometrial cancer. Elevated serum CA125 levels were not found so frequently.
- (2) In general, 15% to 25% of patients with disease that is clinically confined to the uterus have elevated serum CA125 levels, and 65% to 90% of patients with stage IV disease indicates elevated serum CA125 levels. Our data is similar with previous reports.
- (3) Fifty-six of 69 patients (81.2%) with elevated serum CA125 levels specifically achieved remission, and serum CA125 levels fell below the normal range in all cases, indicating that CA125 levels may reflect disease status.

Conclusions

CA125 level seemed to be a potential prognostic indicator for endometrial cancer in clinical practice.