The Induction of Multidrug Resistance in Human Cervical Carcinoma Cell Lines by Estrogenic Hormones

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Multidrug resistance (MDR) refers to a complex phenotype that describes a number of features characterized primarily by resistance to a wide range of structurally unrelated drugs. In this report we investigated the relationship between the estrogenic hormones and the expression of mdr-1 gene. The mdr-1 gene expression was found in SiHa cell line, but not in Caski cells. After the cell stimulated with estradiol or diethylstilbestrol (DES), the mdr-1 gene was over - expressed in SiHa cells, but not in Caski cells. In the same conditions, the p-glycoprotein (p-170) encoded by mdr-1 gene were increased in SiHa cells, but not in Caski cells. After the cells were treated with estradiol or DES in various dosage of adriamycin, the survival rate were examined by MTT test. In the same conditions, the intracellular accumulation doses of adriamycin were evaluated by flow cytometry. The results indicated that after the cells were treated with estrogenic hormones, the accumulation doses of adriamycin were declined. The results were correlated to the resistance to the adriamycin treatment. Therefore, we believe that the mdr-1 gene may contain estrogenic responsive element (ERE) in their promoter region.

Carboplatin plus Cisplatin chemotherapy (JP) for ovarian cancer

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Purpose: To evaluate the efficacy of the combination chemotherapy of Carboplatin and Cisplatin (JP) in ovarian cancer patients.

Patients and Methods: We treated 34 ovarian cancer patients (Fifteen patients were previously treated with platinum based chemotherapy and 19 patients were previously untreated) in 1991 and 1992 with JP. The regimen consisted of Carboplatin 250 to 450mg/m² in Day 1 and Cisplatin 50 to 80mg/m² in Day 3 every 4 weeks. Antiemetics and diuretics were administered prophylactically.

Results: In 6 patients with refractory disease to previous platinum based chemotherapy, only one patient showed PR. In 6 patients with recurrence disease after first-line chemotherapy, 2 patients responded. In 3 patients with small volume of positive finding in the second look operation, 2 showed CR in the third look operation. Of the previously treated 15 patients, median interval between previous chemotherapy and JP was 8 months in responder and 2.5 months in non-responder. In 19 patients who had no previous treatment, after JP as the first-line chemotherapy, 15 patients with evaluable disease showed CR in 7 patients and PR in 4.(Response Rate:11/15) In 10 patients with stage III and IV disease, 4 showed CR and 4 showed PR.

Conclusion: Combining carboplatin and cisplatin was found to represent a efficacious therapeutic strategy to increase platinum dose intensity for advanced ovarian cancer patients and recurred patients with a prolonged disease-free interval after first-line cisplatin-based chemotherapy.