OVARIAN CARCINOMA TREATED WITH CYCLOPHOSPHAMIDE (ENDOXAN)

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The therapy for advanced ovarian carcinoma by surgery and radiotherapy has been naturally disappointing. In 1957, Munnell, Jacox and Taylor reported that thio-peta produced remissions in advanced carcinoma of the ovary. Since then various workers using other cytotoxic agents, like chlorambucil or nitrogen mustard, have reported encouraging results. In 1961, Decker and his colleagues embarked upon a treatment programme of combined surgery, cobalt radiation and cyclophosphamide, and reported remissions in a number of cases. Cyclophosphamide has been widely used in the therapy of various malignant tumours, and in an extensive review of the literature, Dick and Philips (1961) noted that advanced carcinoma of the ovary was the most responsive.

MATERIAL AND METHOD

All the patients treated in this series were referred from the Kandang Kerbau Maternity Hospital between the period 1960-1965. They were regarded as unsuitable for surgical intervention or radiotherapy; others were recurrences after such treatment.

There were 19 patients, 14 of whom were diagnosed at laparotomy and the remaining 5 had pathognomonic clinical features.

Their ages ranged from 31 to 70 years. All had obvious infiltrative pelvic masses and 7 had massive ascites. 15 of them were anaemic with Hb. less than 10 gm. %. 4 of them had pleural effusion.

Of the series, 4 patients had previous surgical extirpation, 4 surgery followed by deep X-ray therapy and 1 had radiation treatment only. All these 9 patients had recurrence. 5 others were deemed inoperable at explorative laparotomy. It was obvious that these 14 patients were already severely affected and represented "salvage" problems.

Cyclophosphamide was given intravenously in the dose of 1 gm. initially. After an interval of 10 days, it was administered thereafter 400 mgm every week. The drug was also given intraperitoneally in cases of tense, malignant ascites which required periodic paracenteses. The drug was omitted if the total white cell count fell below 3,000/c.mm. Supportive measures like blood transfusion, analgesics and diuretics were instituted whenever necessary.

RESULTS

The interpretation and assessment of results in a study of this type is always difficult. It is not always possible to accurately measure the tumour size. The following points were taken as parameters in assessment:

1. general well-being of the patient.
2. period of survival after chemotherapy.
3. decrease in ascites and size of the tumour.

After assessment patients were placed in the following categories:

0 — Early death.
Clinical deterioration.
Treatment abandoned.

1 — Brief but significant improvement.
Death within six months.

2 — Return to gainful employment or household duties.
Survival more than six months.

In summary, results of treatment are presented in Table I.

Of the 19 cases, 6 showed good improvement. 3 who had massive ascites improved considerably with intraperitoneal instillation of the drug. 2 of them who had pleural effusion also improved. The size of tumour was noted to diminish in 3 patients. The rest had subjective

TABLE I

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Case No.	Previous Treatment	Pathology	Dose: Cyclophosphamide i/v (mgm)	i/p (mgm)	Result 0	1	2
1	—	—	1400		+		
2	—	—	8000	7000			+
3	—	—	12300			+	
4	—	—	7200		+		
5	—	—	1400		+		
6	Surgery	Solid adenocarcinoma	600		+		
7	,,	—	17200			+	
8	,,	Papillary adenocarcinoma	20600	3800			+
9	,,	adenocarcinoma	7000		+		
10	DXT	Serous Cystadenocarcinoma	28200	6000			+
11	Surgery + DXT	—	2000		+		
12	,,	Papillary cystadenocarcinoma	11000				+
13	,,	—	1000		+		
14	,,	—	5800			+	
15	Explorative Laparotomy	—	9000		+		
16	,,	Adenocarcinoma	9200			+	
17	,,	Adenocarcinoma	32000	6000			+
18	,,	Adenocarcinoma	9200			+	
19	,,	Ovarian cyst with sarcomatous change	40000				+

improvement to the extent that they were able to do their household work. They survived from 1 year to 2½ years after beginning therapy. 5 in the group improved initially but died within six months from onset of treatment. In 8 others treatment was abandoned because of rapid onset of terminal stage.

COMMENTS

This study was undertaken in an attempt to obtain symptomatic relief in a group of patients whose prognosis was already extremely poor. With the above dosage used no severe toxic effects were noted. Minor side-effects like nausea and vomiting were rapidly controlled with oral anti-emetics and leucopenia and thrombocytopenia were only transient. This occurred only in a few cases which interrupted treatment for 1-2 weeks only.

Excluding those in terminal stages, it can be observed that 6 out of 11 patients, made satisfactory improvement with treatment.

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