

Chemotherapy in The Management of Ovarian Cancer And The Use of Tumors Marker

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Ovarian carcinoma is one of the rare forms of gynaecological malignancies yet it is responsible for more deaths per year than carcinoma of cervix or endometrium. This is related to delay in diagnosis as patients commonly present with painless abdominal mass.

Despite recent advances in all fields of treatment including surgery, radiation, chemotherapy there are still a lot of controversial issues are present. Chemotherapy is basically for treatment of micrometastasis after the major bulk of tumor has been removed. The five important factors which determine the prognosis to treatment are:-

- * Histology.
- * Degree of differentiation of tumor. The less differentiated the tumor is, the less it is likely to respond to chemotherapy.
- * Presence of surface implants in the abdomen. The size of implants should be less than 2 cms to predict a good response to chemotherapy.
- * Extent of spread.
- * Size of tumor left behind after surgery. Maximum tumors debulking should be attempted.

Management of early diseases

- Early disease is generally less common.
- All patients should have bilateral salpingoophorectomy and hysterectomy.
- Sampling of Peritoneal fluid is very important for malignant cells.
- Omentectomy and samples from omentum.
- Random sampling especially from the undersurface of diaphragm, liver and retroperitoneal lymph nodes.
- All patients having stage I & II ovarian carcinoma can be divided after surgery into two groups.

Low Risk Group

- * Included in this are stage with IA, and IB according to FIGO classification.

- * There are no surface implants.
- * Patients with well differentiated tumors or tumors of borderline malignancy .
- * Cytology of peritoneal fluid is negative.
- * Disease free survival is greater 5 years in 90% of these patients with out further treatment.

High Risk Group:

- Included in this group are all other patients who can not be put in stage I & II.
- These patients have a high risk of recurrence with out treatment. The approximate risk of occurrence is 50%.
- treatment approximately 50%.
- These patients need adjuvant chemotherapy either as
 - a) Systemic chemotherapy.
 - b) Abdominal and pelvic radiation.

Management of Advanced Disease.

Stage III and IV:

- * Maximum Surgical debulking is done.
- * Tumors 2 cm or less are associated with a better disease free survival.
- * Ovarian cancer is a very chemosensitive tumor with a number of drugs showing high degree of activity.
- * Chemotherapy is superior as regards.
 - a. Frequency of objective response.
 - b. Complete response.
 - c. Median survival

Combination chemotherapy is superior as regards to singles agent therapy as for as duration of response and number of responses are concerned provided the maximum tumor size left behind after surgeery is less than 2cms. The response to second line treatment after initial treatment has failed is poor with median duration ranging from four to six months.

Combination	Response	Disease free
chemotherapy	Rate	survival
PAC (cytophosphamide adriamycin cisplatinum)	77%	15 Months-24Months
Hexa CAF(hexamethy -lamine methotrexate)	76%	29 Months.
cyclophosphamide)		
CHAD (5 flouracil	63%	17 months-19Months

Hexamethylamine has been removed from market because of its toxicity. which is mainly neurological. Second look surgery is usually performed at six, twelve and eighty months interval or when treatment has to be changed.

Intra-peritoneal chemotherapy or (belly bath)Rationale of this approach is based on the following:

The disease remains confined to abdomen throughout its natural history. Fifty percent of patients in clinical remissions have residual disease confined to the abdomen.

The drugs used in intra peritoneal chemotherapy should produce acceptable peritoneal irritation as seen with cisplatinum.

The concentration of drug in peritoneal cavity should be cytotoxic to cancer cells.

The major disadvantage in using this is that cancer can spread elsewhere in the body.

Tumor Markers

Definition

These are substance in the form of antigen, antibody and antigen antibody complexes or enzymes

that are produce or secreted by tumor cell structures and release into circulation

Applications

These are very helpful in monitoring tumor activity.

They also help us to evaluate effectiveness of treatment or for early detection of relapse when patient seems to be in clinical remission.

Measurements should be made.

Before and after surgery.

During active chemotherapy and radiations therapy and for follow up for recurrence.

There are a few tumors markers in clinical use for ovarian carcinoma.

- 1) CA: - 125: is a new tumor marker.
- * Ovarian cancer cells produce a distinct surface membrane antigen called CA 125.
- * It is formed in celomic epithelium during embryonic development. This antigen is not found in normal tissues.
- * Eighty percent patients having this antigen react with rising and falling activity depending on disease activity.
- * Persistent elevation of the antigen is associated with residual disease and careful reassessment of patient is necessary for

C E A:(carcinoma embryonic antigen)

Measurable levels are seen in 60% of patients with stage III & IV disease.

Levels are increased with advancing stage. Fall in marker levels are seen when patient responds to treatment.