TREATMENT OF DISTANT METASTASES OF CANCER CERVIX

(Clinical Experience)

by

T. B. L. JAISWAL*
PREM NARAYAN**
and
T. N. EDOLIYA***

Introduction

In spite of modern surgical and radiotherapy treatment of the primary site, the patients of cancer cervix develop indirect metastases through blood and Lymphatics. Though indirect metastases are usually fatal but the results obtained after modern treatment of radiation, chemotherapy or combination of both are encouraging and raises the survival rate.

Material and Methods

The present study consists of a total of 96 patients of carcinoma cervix who were treated previously by radiation for the primary site at J. K. Cancer Institute, Kanpur (India) in between Jan. 1971 to Dec. 1976. These patients were diagnosed for distant metastases in follow-up clinic. These patients were having the history of cough dyspnoea pain in the bony region or history of epileptic fits.

Complete blood, urine and other necessary investigations were done on these cases. Certain patients having poor general condition were not treated and they have not been included in the series.

The patients having different site of metastases are shown in Table I. These patients were treated either by radiotherapy or chemotherapy or combination of both and accordingly they had been classified as Group A, Group B. Group C and Group D.

Group A patients were treated exclusively by radiation by using telecobalt unit either by single field or by two portals, antero-posterior and postero-anterior in chest conditions to cover the metastatic lesion. In this group single lesion of bones, one-sided lung lesion, mediastinum, lymphnodes (supraclavicular, axillary, and neck) and metastatic lesion of breast and muscles are included. The tumour dose was delivered 2000 Rad-in one week in bone, breast muscle conditions while 3000—3500 Rad in 4 week time were delivered to other remaining condition.

Group B cases were treated identically as Group A, but the doses were limited to 2000-2500 Rad in 2 to 3 weeks alongwith intravenous infusion of cyclophosphamide in the dose of 1 gm/week upto a total of 3 gm. Detailed haemotological examination were carried out per week prior to start the 2nd week treatment. In these only those cases of the lungs are in-

*Lecturer in Radiotherapy.
**Reader in Radiotherapy.
***Professor in Radiotherapy.
J.K. Cancer Institute, Kanpur 208 002, India.
Accepted for publication on 23-10-80.

TABLE I

Different Sites of Metastases, Treatment and its Response in Carcinoma Cervix

	No. of Cases	Response		
		Complete a	Moderate b	No. c
Group A				
(i) *Bones*—(Single involvement)	18	16	2	-
(ii) *Lungs*—(Single lobe involvement)	18	11	4	3
(iii) *Mediastinum*	2	1	1	-
(iv) *Lymph Nodes*				
Supraclavicular				
Right	4	3	1	-
Left	6	4	2	-
Both	2	-	1	1
Axillary	1	1	-	-
Neck				
One side	2	1	1	-
Both sides	3	2	1	-
(v) *Others*				
Breast	1	-	1	-
Muscle	1	-	1	-
Group B				
Lungs—(Both sides limited to one Zone)	4	2	1	1
Group C				
(i) *Lungs*—(Both sides and all Zones)	6	4	1	1
(ii) *Bones*—(Multiple involvement)	6	3	3	-
(iii) *Skull*	8	2	3	3
Group D				
Pleural Effusion	4	1	1	2
Total	86	51	24	11

cluded which were having lesions on both sides limited to one zone.

Group C cases were treated exclusively by chemotherapy. In these, injection cyclophosphamide in a dose of 1 gm/week were given intravenously for consecutive 4 weeks. Haemotological examination were carried out weekly for total leucocyte count, platelet count and haemoglobin contents. The drug Cyclophosphamide 500 mg. (Endoxan$^{(R)}$) was dissolved in 40 ml. of distilled water and was administered Intravenously. Drug therapy was discontinued at onset of complications such as leucopaenia (below 4000/cumm). anaemia and diarrhoea. Following recovery from complications, drug therapy was again undertaken. In this multiple metastases on both lungs in all zones, skull and multiple involvement of bones were included.

Group D cases were treated by giving injection cyclophosphamide 1 gm. Intrapleural after thoracocentesis alongwith corticosteroid and streptomycin. The objective response of intrapleural therapy was assessed on the basis of radiographic chest survey, in which there was diminition of fluid level in skiagrams taken fortnightly and this was persisted for a

period of 2 months. Two types of the result were obtained—

(a) There was no increase in fluid level in the pleural cavity. Such type of cases were supplemented further by telecobalt radiation 2000-2500 rad in 3 weeks times.

(b) There was again refilling of the fluid in the pleural cavity. Such type of the cases were treated symptomatically explaining the prognosis of the disease process to their relations.

Response and Survival

After the completion of treatment all the patients were encouraged to attent in follow-up clinic regularly, but many of them failed to attend. Such cases were further communicated by postal reminders. The untraced cases were presumed dead, only when definite reply was not received after 3 self addressed postal reminders.

Survival time in this study was determined from the first day when treatment was started, until the day when death occurred.

On follow-up, every case were examined. Skiagram of chest was taken to compare with the previous lesion. Any complications or toxicity were found they were also recorded.

Complications and Toxicity

Nausea and vomiting were the common symptoms which were noticed the first and second day of the radiation treatment, and during chemotherapeutic treatment. These were relieved by antiemetics. No other major complications were noticed during radiation treatment. Certain gastrointestinal and haemotological complications developed during intravenous chemotherapy treatment. These were leucopaenia, thrombocytoponea anaemia, and diarrhoea. These abnormal conditions returned to normal after discontinuation of the therapy. None of these patients developed fatal complications, either immediately or following intravenous chemotherapy.

Results

The results of treatment are shown in Table 1.

In these patients, objective response were noticed in 75 cases as shown in Table I. In these, 51 cases showed complete regression of the metastatic lesion after completion of treatment, while 24 cases showed moderate regression, of the size and shape of the lesion. Eleven cases were having no response of the treatment.

Follow-up Results

These cases were followed up to the last attendance. Maximum cases of Group A shows complete regression of the lesion, while other group also showed regression. Maximum number of cases were seen for longer period in follow-up clinic in group A patient.

Discussion

With the advent of Super-voltage radiotherapy and the improvement of radiotherapeutic techniques, local control of the primary carcinoma cervix has improved significantly. Subsequently, more distant metastasis are being seen, Ward *et al* (1952) cited a 32.9% incidence for distant metastases in 70 autopsies and 14.1% in clinically diagnosed distant metastases in 178 non-autopsy instances with the highest incidence in the lungs, liver and bones. Few instances of unusual metastases of cancer cervix have recently been reported after the improved local control.

Radiotherapy is considered to be the choice of treatment even in distant metastases, except in the liver. Information gained from various radiotherapeutic Centres show that the results of treatment is more or less the same, irrespective of the mode of radiotherapy applied, as in the primary site. On this basis, the same schedule of treatment has been applied to see the result of treatment in distant metastases, like bone, chest and skull.

The results obtained are encouraging which were observed in Group A. patients. Chemotherapy was another choice of treatment in the matastases. Though Chemotherapy has been tried to treat primary site of treatment by various authors, in the present series chemotherapy was tried exclusively alone in Group C and Group D and with combination of radiotherapy in Group B patients. These are our personal experiences which has been tried. In the published series, chemotherapy are tried after radiotherapy. But there are certain difinite disadvantages in this schedule, because the radiation reduces the vascularity of the tumour but if the chemotherapeutic drugs are given along with radiation, it potentiates the action of the radiation and drugs reaches upto the malignant cells. On the other hand, if the vascularity will be poor and the chemotherapeutic drugs will be of no use. This has been observed in certain patients of Group C who has not been irradiated due to multiple metastases in whole lungs, and due to non availability of the larger portals, possibilities of radiation fibrosis and bone depression. The present work is still going on.

From this study and the foregoing discussion it has been oncluded that the prognosis is grave in patients having distent metastases. But, the life of the patient can be prolonged without any hazardous effect, by the above treatment. In these series, only cyclophosphamide has been tried for chemotherapy treatment and higher doses of any anticancer drug is likely to produce immune suppression. In this series we feel higher doses of external radiation are needed alongwith some other chemotherapeutic drug available in the market to improve the survival rate for which the work in still going on.

Summary

Eighty-six patients of carcinoma cervix having metastases in various regions (bones, lungs, skull etc) were treated by radiotherapy, chemotherapy and combination of both. The primary site of these patients were not having any abnormal finding. The patients having metastasis in the liver are not icluded in the series and they have not been treated during this period. In the series, good response were seen in 51 cases, 24 cases showed moderate response and there were no response in 11 cases. Our personal experiences which has been observed are presented in this article. The results obtained are encouraging and the work is still continuing.