

DISTANT METASTASES IN CARCINOMA OF CERVIX

by

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Radiation therapy has improved the prognostic value of the carcinoma of the cervix in all the stages of the disease, for which more and more metastatic lesions are encountered with longer survivals. Various routes of spread have been observed in this disease. On many occasions such deposits may remain undetected. Review of literature shows wide variations in their incidences and few publications are available regarding the incidence. Hence this study is undertaken.

Material and Methods

The study comprises of 98 cases of distant metastasis, out of 1938 cases of carcinoma of cervix followed up in Eden Tumor Clinic, Calcutta. These patients were treated from 1969 to 1979. This work was mainly based upon clinical and radio-

logical findings according to the symptoms complained of by the patients. Detailed general examination of the cases, X-ray examinations of the chest, skull, pelvis and other skeletal system of the body were done according to the individual complaints.

Observations

TABLE I
Clinical Stages Where Distant Metastases Were Observed

Stages	No. of patients	No. of cases with meta-stasis	%
I	186	2	1
II	492	17	3.4
III	951	40	4.2
IV	218	39	7.8

TABLE II
Period of Appearance of Distant Metastases After Treatment (96 cases)

Time period	Stage-I	Stage-II	Stage-III	Stage-IV	Total
Within 6 months	—	—	4	4	8
6 months—1 year	—	5	9	8	22
1 to 1½ years	1	4	11	12	28
1½—2 years	1	8	15*	14*	38

* One each presented with secondary deposits.

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Amongst these 98 cases, only 2 patients initially presented with secondary deposits in the spine. In the remaining 96 cases, metastases appeared in different periods.

TABLE III
Structure Involved

Site	No. of cases	%
Lymph nodes	43	43.8
Lungs and pleura	19	19.2
Skeletal system	21	21.5
Liver	8	8.3
Peritoneum	7	7.2
Total	98	100%

TABLE IV
Group of Lymph Nodes Involved

Group of nodes	No. of cases	%
Lt. supra clavi- cular	8	18.6
Rt. Supra- clavicular	6	14.3
Both supra clavicular	1	2.3
Axillary	2	4.6
Cervical	3	6.9
Mediastinal	3	6.9
Para-aortic	20	46.4
Total	43	100

TABLE V
Involvement of Different Skeletal System

Types of bones	No. of cases	%
Symphysis pubis	2	9.6
Ischium	2	9.6
Sacrum	2	9.6
Vertebrae	11	52
Skull	1	4.8
Long bones	3	14.4

Thus it has been observed from above mentioned Tables that long bones were affected in 3 cases, vertebrae in 13 cases and flat bones in 5 cases. Amongst these 21 cases of bony metastases, 4 showed multiple secondaries and 17 solitary bony deposits. One case with vertebral involvement showed paresis of legs.

Amongst 19 cases of pulmonary metastases, 6 showed multiple typical secondary deposits.

Discussion

With the introduction of newer techniques for treatment of carcinoma of cervix, the prognostic results have improved with the result that more and more distant metastases are seen. Their incidences showed a wide variation. Carleson *et al* (1967) published an exhaustive paper on distant metastases on carcinoma of uterine cervix. In the present series, the incidence was 4% as observed clinically. Pearson (1936), Brunchwig and Pierce (1948) and Graham *et al* (1962) quoted the incidences of distant metastasis as 25, 50 and 80% respectively when autopsy was undertaken. Ward *et al* (1952) reported 14.1% incidence detected clinically while autopsy incidence was 39.2% and thus in about half of the instances, distant metastasis are detected by clinical examination only. Nayak and Pradhan (1979) reported the incidences clinically as 11.3% and Carleson (1968) as 15.3%. Shrivastava *et al* (1978) reported osseous and pulmonary metastases as 2.2% on clinical grounds.

The maximum involvement was in para-aortic group of lymph nodes in the present series, which was also observed by Pearson *et al* (1967), Jaiswal and Mathur (1976) and Nayak and Pradhan (1979). Supraclavicular and cervical node involvements were not unusual as observed in the current series and also reported by Graham *et al* (1962), Carleson *et al* (1967), Sharma and Sanyal (1969), Pant and Sanyal (1972), Jaiswal and Mathur (1976) and Nayak and Pradhan (1979).

According to Willis (1952), tumor emboli pass through small veins to larger veins, where they enter thoracic duct,

cysterna chyli and thus enter the lungs. As a result, intrapulmonary metastases is not uncommon. In the present series, there were 19 cases of lung and pleural involvements. Shrivastava *et al* (1978) reported 9 cases out of 27 (33.3%) cases of total secondary metastases. Other workers (Chawla and Berry, 1967. Sharma *et al*, 1970; Jaiswal and Mathur, 1976; Nawalkha *et al*, 1977; Graham *et al*, 1962 and Carleson *et al*, 1967) also reported pulmonary involvements.

Willis (1952) further postulated that tumor emboli spread to bones and other organs of the body through blood stream. According to him skeletal metastases were 5%. In the present series, there were 21 cases amongst total 98 cases of secondary metastases. Pearson (1936) reported the incidence 7% and Carleson *et al* (1968) as 3.8%. Pant and Sanyal (1972) also reported similar incidences.

Peritoneal involvement was seen in 7 cases in the current series. The present result corresponded to that of Carleson *et al* (1968) and Nayak and Pradhan (1979). The patients gave symptoms of intestinal obstruction and fluid in the peritoneal cavity. Nawalkha *et al* (1977) reported 21 cases of liver metastasis and Nayak and Pradhan in 2 cases. In the present series there were only 8 cases.

The incidence of secondary metastases was low for early lesions but increased as the clinical stages of the disease become more advanced. The time of period of appearance of metastases also varied in this series from few months to 2 years. The longevity of the patients decreased as the metastases was evident and most of the patients died within few months. Carleson *et al* (1968) reported that half of the patients died within 6 months.

In all the cases of the present series, a

course of palliative radiotherapy and/or chemotherapy was advised to relieve the symptoms.

As far as clinical staging and secondary deposits are concerned maximum cases were in stage III and IV in the present series.

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