A CLINICAL STUDY OF DOUBLE PRIMARY MALIGNANCIES

KATAKI A. C. ● GOSWAMI B.C. ● GOGOI U. C. ● SHARMA C. N.

SUMMARY

From January 1988 to December 1991, 649 newly registered cases of carcinoma cervix were seen at Dr. B. Barooah Cancer Institute, Guwahati. Two hundred thirty three patients received radical radiation therapy and 53 were treated with surgery and radiation therapy. Out of 286 completely treated cases, 12 had second primary cancers. Four cases were synchronous and were metachronous. Out of 8 cases of metachronous lesions, 4 patients had their primary lesion in cervix and in the remaining 4 cases cancer cervix was the second lesion.

INTRODUCTION

The occurence of multiple primary malignant neoplasms in an individual patient was first described by Billroth approximately 100 years ago. Since then there have been numerous reports concerning the occurence, aetiology and clinical relevance of multiple primary malignant neoplasms in individual patients. Physician fascinated and perturbed by patients with multiple malignancies have to find answers to the following questions : (1) Is the patient cancer prone ? (2) Is there a genetic, immunologic or environmental factor responsible for multiple primary cancers? (3) Is the prognosis for the patient altered by multiple malignancies ? (4) What alterations in management are needed ?

Dr. B. Barooach Cancer Institute, Guwahati.
Accepted for Publication on 14.12.94

MATERIALS AND METHODS

From January 1988 to December 1991, 649 newly registered cases of carcinoma cervix were seen at Dr. B. Borooah Cancer Institute, Guwahati. Out of 649

cases, 286 (44%) patients completed prescribed treatment. Two hundred thirty three patients received radical radiation therapy by telecobalt followed by simple insertion of remote control after loading brachytherapy (MDR). Fifty three patients were treated with surgery and radiation therapy. Out of these 286 completely treated cases, 12 had second primary cancer either synchronous (4 cases) or metachronous (8 cases) Moertal (1964) defines lesions appearing 6 months apart as "metachronous" while those diagnosed within 6 months as "synchronous". The criteria for multiple primary cancers as proposed by Warner & Gates (1932) were followed in this study which are as follows : (a) Each lesion should be distinct, (b) there must be histological documentation for each lesion and (c) possibility of metastasis should be excluded.

RESULTS AND OBSERVATIONS

Pattern of gynaecological malignancies at Dr. D. Barooah Cancer

Table I

Dr. B. Borooach Cancer Institute
1984-1991

No. of Malignant Cases	-	14,461	
No. of Female Patients	-	4,080	
No. of Gynaecological Ca	-	1,201	
Ca Cervix	-	1,022	(25% of Female Ca)
Ca Body Uterus	-	28	
Ca Ovary	-	113	
Others	-	38	

Table II

Radical radiation therapy - 233 cases (Jan '88 - Dec '91)

Stage	Total	No disease	Fail	Recurrence	Mets	Lost to Follow up
I_B	17	12	-	-	1	4
II_A	21	10	3	1	2	5
II_B	59	34	7	2	3	13
III	136	59	30	7	5	35
Total	233	115	40	10	11	57

Institute, Guwahati, during the period from 1984 to 1991 are shown in Table I.

From January 1988 to December 1991, 649 newly registered cases of carcinoma cervix were seen of which only 286 patients completed prescribed treatment. Results of radical radiation therapy in 233 cases are shown in Table II. The response to treatment with surgery and radiation therapy are shown in Table III.

Within a relatively shorter duration of our study with 286 completely treated patients of cancer cervix, 12 had second primary cancer either synchronous (4 cases) or metachronous (8 cases). Out of 8 cases of metachronous lesions, 4 had their primary lesion in cervix and in the remaining 4 Ca cervix was the second lesion. Details of synchronous and metachronous lesions are shown in Table IV & V respectively.

Table III

Surgery + Radiationtherapy - 53 cases (Jan '88-Dec '91)

	Total	No disease	Fail	Recurrence	Lost to Follow up
Post-Surgery immediate	38	31	-	3	4
Post Surgery with recurrence	15	8	4	2	1
Total	53	39	4	5	5

Table IV

Synchronous Lesions

	Site	Site	Treatment
1.	Ca Cx IIIB Epi Ca Gr. II	Ca Oesophagus Epi. Ca Gr. III	Not completed
2.	Ca Cx IIIB Epi Ca Gr. II	Ca Oesophagus Epi. Ca Gr. I	Not completed
3.	Ca Cx IIIB Epi. Ca Gr. III	Ca Oesophagus Epi. Ca. Gr. I	Immediate response post treatment good then lost to follow up
4.	Ca Cx IIB Epi. Ca Gr. I	Ca Thyroid Follicular Ca.	Completed treatment for Ca Cx but refuses surgery for Ca Thyroid-lost to follow-up

Table V

Metachronous Lesions

	1st Primary	Treatment	2nd Primary	Interval
1.	Ca Cx IB	Telecobalt alone	Ca Lung Small Cell Ca	38 months
2.	Ca Cx IB	Surgery + Telecobalt	Ca Oesophagus Epi Ca	44 months
3.	Ca Cx IIIB Epi Ca Gr III	Rad RT	Sarcoma subcutenus multiple nodes with liver & abdominal nodes	14 months
4.	Ca Cx IIIB Epi Ca Gr II	Rad. Rt	Ca Thyroid Undiff. Ca	7 months
5.	Ca Larynx $T_3N_1M_0$ Epi Ca Gr II	RT	Ca Cx IIIB Epi Ca Gr III	34 months
6.	Ca Larynx $T_3N_0M_0$ Epi Ca Gr III	RT	Ca Cx IB Epi Ca	26 months
7.	Ca Vulva verrucous Ca	Surgery	Ca Cx IIIB Epi Ca Gr II	11 months
8.	Sarcoma Chest wall	Surgery	Ca Cx IIIB Epi Ca	21 months

DISCUSSION

Multiple primary cancers have not been a medical or clinical curiosity, since as early as 1869 Billroth reported two patients who developed more than one malignant lesion. Marcus (1960) and Axelrod et al (1984) have reported multiple malignancies of the female genital tract. The correlation between cancer of the cervix and cancer of the oral cavity, lung and bladder have been evaluated by Newell et al (1975). The risk of a second malignancy of the lower genital tract is related to an environmental factor affecting a field of squamous epithelium as theorized by Newman and Cramer in 1959 and Marcus in 1960. Lancaster et al (1986) have suggested human papilloma virus as a carcinogenic environmental factor for multicentric origin.

The reason for two or more tumours in the same individual is poorly defined. When tumours occur closely in time, a

common aetilogy such as exposure to same hormone or carcinogen is often postulated. However when a new tumour arises several years after the first, the previously administered radiotherapy or chemotherapy is considered a possible carcinogen (Zippen 1981). Kapp et al (1982) showed an increased risk of lower genital tract, lung, oesophageal and bone malignancies. Multiple primaries account for 0.38% of all cases in Singapore Cancer Registry. From Bombay, Vyas et al (1983) reported 117 cases of multiple primaries in a retrospective study over a period of 40 years. Czesnin and Wronkowski (1978) noted statistically increased incidence of uterine sarcoma and cutaneous malignancies.

CONCLUSION

The study of multiple primary malignant neoplasms deserves careful consideration to determine the causes and to develop better treatment. With improved method of diagnosis and the greater longevity of the population one can expect more patients with multiple tumours.

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