Pattern of Malignant Neoplasms in Bhagalpur

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Malignant neoplasms have always posed to be one of the chief surgical problems. Successful removal of the neoplasm, besides other factors, also depends upon its anatomical sites. The present study is aimed at finding out the distribution of malignant neoplasms in the various anatomical sites.

Material and methods

The subjects included in the present study have been taken from those treated at Bhagalpur Medical College Hospital during the period 1974 to 1983. Clinically frank cases of malignancies as well as those confirmed by histopathological examinations have been included in the present study. Histological studies were carried out in the department of Pathology of Bhagalpur Medical College. The cases of leukaemias have not been included in the present study. No attempt has been made to collect the data in relation to the two sexes and in relation to the different age groups.

Observations

It is evident from table I that 0.51 to 1.29% of the total admissions in the hospital were malignant neoplasms. Table II shows the distribution of malignant neoplasms of gastrointestinal tract including hepatobiliary systems during the period of study (1974 to 1983). The incidence at various anatomical sites were high in liver, large intestine, oral cavity and stomach in that order. Malignant neoplasms of anorectal region and gall bladder including bile duct were least common (0.009% of total admissions). A look

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at table III clearly indicates that cancer of cervix formed the highest incidence (0.11% of total admissions) among the malignant neoplasms of various anatomical sites of urogenital systems. Malignant neoplasms of placenta and scrotum were rarest (0.001%). Table IV shows that among other anatomical sites malignant neoplasms of the lymphnode showed the highest incidence (0.09% of total admissions). This included both primary as well as secondary neoplasms. The malignancies of breast, bones, skin and thyroid were next to those of lymphnodes in that order. Malignant neoplasms of blood vessels, ears and joints were rarest (0.001%).

Discussion

In the present series 0.78% of the total admissions had malignant neoplasms. This figure is quite low as compared to the incidence of 13.3 in the series of Kandamuthan (1933) at Medical College and Hospital Trivandrum.

Highest incidence of cancer of cervix uteri as observed in the present study has also been reported by Kandamuthan (loc-cit).

Malignant neoplasms of gastrointestinal system was found to be quite common. This finding is not in conformity with the report of Desai et al (1969) which indicates that gastrointestinal cancers are less common in India except oesophageal cancer. The low incidence of cancer of oesophagus in the present study is in conformity with the finding of Kandamuthan. The incidence of malignant neoplasms of trachea, bronchi and lungs in the present series is very low (0.22%) as compared to the findings of other workers. Rao and Shivde (1975) reported an incidence of 2.5% from Nagpur in females. Kandamuthan has quoted the incidence 16.9% from Japan, 39.4% from Hongkong, 33.7 from Singapore, 36.4 from U. S. A., 49.9% from England and Wales and 5.5% in his own series.

As regards the malignant neoplasms of breast the incidence in the present study is only 5.89% as against 18.0% in Bombay, 13% in Maharashtra, 15% among Hindus of Gujrat, 49% among Parsis in Gujrat (Paymaster and Gangadharan, 1971) and 13.1% in Trivandrum (Kandamuthan). The low incidence of breast cancer among the women in Bhagalpur may be due to the practice of breast feeding by the majority of mothers for a minimum period of one year after the delivery.

Malignant Neoplasms of the cervix uteri formed the highest incidence forming 14.57% of the total neoplasms. This is in conformity with the observations of Kandamuthan with an incidence of 38% in females of Trivandrum. Paymaster and Gangadharan reported the incidence of cancer cervix - 39% in Bombay, 48% in Maharashtra and 37% among Hindus of Gujrat. From Nagpur Rao and Shivde. Reported that the cancer of the cervix uteri constituted for a maximum frequency of 43.6% of the total female cancers.

Summary

Pattern of malignant neoplasms in the Bhagalpur Medical College Hospital from 1974 to 1983 was studied. Of the total admissions 0.78% had malignant neoplasms. Malignant neoplasms of the cervix uteri accounted for the highest incidence and next to that was the incidence of malignant neoplasms of lymphnodes including both primary as well as secondary tumours. The incidence of malignant neoplasms of liver, large intestine, oral cavity and stomach was also significantly high observed in 101, 100, 80 and 77 out of a total of 457 cases. The incidence of cancer breast was also significantly high as observed in 77 out of 363 cases.

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TABLE-I

Showing number of cases of malignant neoplasms in Bhagalpur Medical College Hospital from 1974 to 1983 in relation to total admissions.

Year	Total number of admission	Total number of biopsies	Number of cases showing malignant neoplasms.	Percentage of total admission.
1974	17214	135	97	0.62%
1975	13726	286	145	0.72%
1976	16093	507	169	1.29%
1977	14862	325	160	1.15%
1978	19653	270	154	0.51%
1979	18140	185	135	0.78%
1980	17562	128	96	0.55%
1981	17827	135	104	0.53%
1982	17281	210	121	0.71%
1983	17296	180	143	0.88%
Mean	16776.4	243.2	132.4	0.78%

TABLE-II

Showing incidence of malignant neoplasms among the various sites of Gastrointestinal system including hepatobiliary systems.

Site of malignant neoplasms	Total number of malignant neoplasms	Incidence		
		% of malignant neoplasms of GIT including hepato biliary systems.	% of total neoplasms	% of total admissions
1. Oral cavity	40	17.50%	5.04%	0.050%
2. Oesophagus	27	5.60%	0.04%	0.016%
3. Stomach	77	16.80%	0.81%	0.040%
4. Large intestine	100	21.90%	7.55%	0.060%
5. Anorectal region	14	3.00%	1.05%	0.009%
6. Liver	101	22.10%	7.62%	0.060%
7. Gall bladder and bile duct	14	1.00%	1.05%	0.009%
8. Pancreas	44	9.80%	3.32%	0.002%

TABLE-III

Showing incidence of malignant neoplasms among the various sites of urogenital systems.

Sites of malignant neoplasms	Total number of malignant neoplasms	Incidence		
		% of malignant neoplasms of urogenital systems.	% of total neoplasms	% of total admissions
1. Vulva and Vagina	43	8.50%	3.25%	0.020%
2. Cervix	193	38.20%	14.57%	0.110%
3. Uterus	50	9.90%	3.77%	0.030%
4. Ovaries	67	13.30%	5.06%	0.040%
5. Placenta	1	0.20%	0.07%	0.001%
6. Testis	23	4.50%	1.72%	0.010%
7. Prostate	38	7.60%	2.87%	0.020%
8. Penis	54	10.80%	4.15%	0.030%
9. Scrotum	1	0.20%	0.07%	0.001%
10. Kidney and Ureter	16	3.20%	1.20%	0.010%
11. Urinary bladder	16	3.20%	1.20%	0.010%
12. Others	2	0.40%	1.51%	0.001%

TABLE-IV

Showing incidence of malignant neoplasms among other sites.

Site of malignant neoplasms	Total number of malignant neoplasms	Incidence		
		% of malignant neoplasms of other sites	% of total neoplasms	% of total admissions
1. Larynx	5	1.35%	0.88%	0.003%
2. Trachea, bronchi and lungs	3	0.83%	0.22%	0.002%
3. Blood vessels	1	0.27%	0.07%	0.001%
4. Bones	47	12.95%	3.54%	0.028%
5. Joints	1	0.27%	0.07%	0.001%
6. Thyroid	22	6.06%	1.66%	0.014%
7. Soft Tissue	5	1.38%	0.38%	0.003%
8. Breast	77	21.21%	5.89%	0.046%
9. Skin	37	10.19%	2.79%	0.022%
10. Eye	3	0.8%	0.22%	0.002%
11. Ear	1	0.27%	0.07%	0.001%
12. Ascitic fluid	4	1.10%	0.30%	0.002%
13. Omentum	4	1.10%	0.30%	0.002%
14. Lymphnode	153	42.16%	11.55%	0.090%

References

1. DESAI, P. B. - BORGES, E. J. VOHRO, V. G. and PAYMASTER, J. C. - 1969 *Cancer*, 23, 979.
2. KANDAMUTHAN, J., 1983 - *J Indian M. A.* 81:194.
3. PAYMASTER, J. C. and GANGADHARAN, P. - 1971 - *J. Indian M. A.* 57:63
4. RAO, G. R. and SHIVDE, A. V. - 1976 - *Indian J. Cancer*, 13:1