Pattern of Pediatric Malignancies in Rajasthan

N. Mangal
N. Miglani

Various welfare programmes for children in our country, aimed at reducing morbidity and mortality due to communicable and nutritional diseases, are bound to draw pediatrician's attention to the problem of childhood cancer(1). There is a lack of authentic data about incidence, relative distribution and survival rates of childhood cancer, from our country(2). We are presenting pattern of childhood malignancies in Rajasthan because of paucity of such reports in literature.

Material and Methods

The present study is a retrospective analysis of 245 cases of proven childhood malignancies in the age group of 0-14 years admitted during January, 1987 to December, 1989 in SPM Child Health Institute, SMS Medical College, Jaipur. The diagnosis was based on clinical manifestations along with Hematological, Radiological and Histopathological studies.

Results

Of 39,724 admissions during this specific period; 245 (0.6%) had malignancy. On analysis, it was found that cases were maximum under five years of age and prevalence was equal in both sexes (M : F). The commonest malignancy observed was lymphoma followed by leukemias, Wilm's tumor, neuroblastoma, and gonadal tumors in descending order (*Table I*). Of 78 cases of lymphoma, 53 (67.9%) were Hodgkins and 25 (32.1%) non-Hodgkins. Acute lymphoblastic leukemia was diagnosed in 56 (87.7%) of 64 cases of leukemias, acute myeloblastic leukemia in 5 (7.9%), chronic myeloid leukemia in 2 (3%) and erythroleukemia in 1 (1.4%) case.

TABLE I—*Pattern of Pediatric (n = 245) Malignancies*

Malignancy	No	%
Lymphoma	78	33.2
Leukemia	64	27.2
Wilm's tumor	39	16.6
Neuroblastoma	32	13.6
Gonadal tumor	14	5.9
Brain tumor	04	1.7
Retinoblastoma	03	1.3
Miscellaneous (Soft tissue tumors, epithelial carcinomas)	11	4.7

Discussion

Considering that a child has 1 : 595 chance of developing cancer during first 14 years of life in USA(3), and their being a lack of authenticated, scientific reliable pediatric malignancy registry in our country(2), it became important to compare incidence of various childhood malignancies in various regions of the country.

After analysis of 245 cases of childhood malignancies, reticuloendothelial malignancies were present in 62.1% of cases,

From the Department of Pediatric Medicine, SPMCHI, SMS Medical College, Jaipur.

Reprint requests: Dr. Narendra Mangal, C-145, Dayanand Marg, Tilak Nagar, Jaipur 302 004.

Received for publication July 19, 1990; Accepted October 11, 1990

while others(4-7) reported incidence ranging from 33.6-38.1%. After lumping Wilm's tumors and neuroblastoma together, in a group of abdominal tumors it came at second place and recorded an incidence of 30.2% in our study. A similar observation was reported by Paul *et al.*(5) (35.6%), while Nair *et al.*(4) and Pathak *et al.*(7) reported a lower incidence of 20.4 and 13.5%, respectively. Retinoblastoma was present only in 1.3% in this study, while a high incidence of 17.2% reported by Thaper *et al.*(6). CNS tumors were present only in 1.7% of cases in the present study. Thaper *et al.*(6) reported similar observation (2.5%) while higher incidence was recorded by others 12.1-14.4%0(4,5,7). The miscellaneous group had soft tissue tumors and epithelial carcinomas.

Our study reaffirms the view expressed by reports from other regions of India(4-7) that the incidence of reticuloendothelial malignancies is highest in distribution of childhood cancer, and in our country we have a pattern of increasing trend of leukemia, medium glioma and medium lymphoma(7).

REFERENCES

1. Venugopal KV, Joseph TP, Verma KK. Solid malignant tumors of infancy and childhood. A clinicopathological study. Indian Pediatr 1981, 18: 365-368.
2. Gandhi RK. Cancer in childhood, need for planned approach. Indian Pediatr 1981, 18: 363-364.
3. U.S. Department of Health Education and Welfare. Vital Statistics of United States, Volume II. Mortality, Deaths from Selected Cause, 1964.
4. Nair NS, Nair Raman R, Mathew O. Neoplasm in children. Indian Pediatr 1964, 1: 26-32.
5. Paul SS, Shagurin O, Modi S, Kabra S, Singh G. Malignant neoplasm in childhood. Indian Pediatr 1967, 4: 309-313.
6. Thaper RK, Gupta MC, Verma JK, Srivastav CP, Dayal RS, Mittal UP. Malignancy in childhood. Arch Child Hlth 1971, 13: 57-68.
7. Pathak IC, Datta BN, Aikat RK, Reddy MM, Bhattacharjee N. Pattern of neoplastic diseases in children with special reference to malignant tumors. Indian J Cancer 1975, 12: 46-55.

Hypophosphatasia

R.P. Agarwal
D.K. Sharma
V.K. Upadhyay
S.P. Goel
P. Gupta
R. Singh

Hypophosphatasia is an autosomal recessive disease characterized by skeletal abnormalities, premature cranial synostosis, defective bone mineralization with low serum alkaline phosphatase and elevated excretion of phosphoethanolamine. There is defective regulation of alkaline phosphatase isoenzyme causing abnormal bone mineralization of growing bones. Severity of disease is variable. It may be congenital or develop later (hypophosphatasia tarda). The condition seems to be extremely rare in our subcontinent.

From the Departments of Orthopedics and Pediatrics, L.L.R.M. Medical College, Meerut, U.P.

Reprint requests: Dr. R.P. Agarwal, L-5, L.L.R.M. Medical College, Meerut, U.P.

Received for publication May 10, 1990; Accepted March 14, 1991