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"A STUDY ON RELATION BETWEEN VARIOUS PROGNOSTIC FACTORS AND SURVIVAL OUTCOMES OF RETINOBLASTOMA PATIENTS"

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ABSTRACT The objective is to study the impact of various factors on survival of retinoblastoma patients. The study was conducted in patients attending a tertiary eye care centre during a period from January 2016 to June 2018, who are diagnosed with retinoblastoma.

Data about their ocular manifestations, age, sex, time lag between onset and consultation, family history, metastasis, recurrence and treatment were collected and analysed. Out of 40 cases, 16 cases showed optic nerve involvement, of which two patients had distant metastasis and both couldn't survive after treatment.

The time lag between onset and consultation was between 12-24 months for both, and they also showed high risk characteristics and optic nerve infiltration.

Thus the survival rate of retinoblastoma decreases with increasing time lag between onset of symptoms and consultation, metastasis and high risk histopathological features, so a timely diagnosis with intervention is essential in management of retinoblastoma.

KEYWORDS : survival, time lag, metastasis, optic nerve involvement.

INTRODUCTION

Retinoblastoma is the commonest intraocular malignancy in childhood, which has an excellent survival rate with early diagnosis and localised growth, but exceedingly poor prognosis if extra ocular extension is present.

So, knowledge of various prognostic factors and their impact on survival outcomes may help in initiating early detection and prompt referral, which when combined with various treatment modalities, helps in achieving better survival outcomes and globe salvage.

MATERIAL AND METHODS

Study was done in patients attending a tertiary eye care centre during a period from January 2016 to June 2018, who are diagnosed with retinoblastoma.

During the period from January 2016 to January 2017, a total of 45 patients were enrolled for the study, which were diagnosed and treated at the same centre. An informed consent was obtained in each case.

In each case, a detailed history was taken, followed by thorough examination of anterior and posterior segments of both eyes under anesthesia. Routine blood investigations and radiological investigations (B Scan, CT scan, MRI, Chest X ray, USG Abdomen and Pelvis) were carried out.

Histopathological examination of enucleated globe along with optic nerve was done to assess the status of optic nerve and degree of differentiation along with high risk features.

The period from February 2017 to June 2018 was assigned for followup of cases, during which 5 cases lost follow up. So the data about 40 patients is presented here.

Those surviving at the end of 1 year of initiation of treatment were designated as 'survived'

RESULT AND DISCUSSION

In our study, the mean age of presentation was 2.46 years, with most patients presenting in age group of 2-4 years, and one patient of age more than 5 years. All cases were sporadic in nature.

Out of 40 cases, only 1 was bilateral in presentation, which survived well with timely diagnosis and treatment. All patients in our study belonged to group E under ICRB classification, thus indicating advanced age of presentation.

26 cases presented after a time lag of 12-24 months between onset of symptoms and consultation hospital, out of which 2 cases were unable to survive. (Table 1)

Table No. 1

Time lag between onset and presentation	Number of Cases	Survivedcase
<6 months	0	0
6-12 months	14	14
12-24 months	24	23
>24 months	2	1
Total	40	38

Out of 40 cases, 16 cases (40%) showed optic nerve involvement, out of which 2 cases had metastasis, and both couldn't survive after treatment. (Table 2)

Histopathological features	Number of Cases	Survived Cases
Optic nerve infiltration	16	14
Scleral infiltration	1	Nil
Extrascleral extension	Nil	Nil
Anterior chamber seeding	10	10
Uveal infiltration	2	Nil

These 2 cases with metastasis showed high degree of undifferentiated cells and high risk features in histopathological examination viz. scleral and choroidal infiltration.

Out of 40 cases, 18 cases underwent enucleation alone, while 20 cases underwent enucleation with adjuvant chemotherapy. All these cases survived well after 1 year of treatment. Two cases with distant metastasis received enucleation with chemo-radiotherapy.

In our study, 2 cases had metastasis to pre auricular and post auricular lymph nodes, and they survived well after treatment. While 2 cases had metastasis to lymph nodes, central nervous system, liver and spleen, and both could not survive after treatment. (Table 3)

Metastasis	Number of cases	Survived cases
Lymphnode alone	2	2
Hepatomegaly and splenomegaly	0	0
Lymphadenopathy +hepatomegaly+ CNS	2	0
Flat bone and skull	0	0
Lungs	0	0
No metastasis	36	36

The one year survival rate in our study is 95%. The important prognostic factors predicting better survival outcomes were time lag between onset of symptoms and consultation, histopathological features and presence of metastasis.

CONCLUSION

Our study found that delayed presentation due to lack of awareness

was major obstacle in achieving high cure rates in these patients. This needs to be overcome by making efforts towards early diagnosis and avoiding delays in referral system. A nationwide awareness campaign can be conducted to educate public and health care professionals about early signs of retinoblastoma to achieve this goal.

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