ABSTRACT

Title: **Clinical Profile of Children with Extra Cranial Germ Cell Tumors**

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Aim/Objectives:

To assess the clinico-pathological profile and the long term effects of treatment in children, with extracranial germ cell tumors (GCTs).

Materials and Methods:

All children below the age of 16 years who presented to the department of Paediatric Surgery with GCTs between January 2003 and December 2012 were included in this study. This was a retrospective study looking at the patient data base. All eligible patients were informed by mail and phone by the investigator and requested to attend the outpatient department for follow up. Data was analyzed using descriptive statistical methods for continuous and categorical variables. Binary logistic regression was used to look at risk factors, and Kaplan Meier curves for overall survival and event free survival.

Results:

107 children with GCTs were studied for the period between 2003 to 2012, 64% were female and 36% were male, 56% were below 5 years of age. A majority were found to have ovarian GCTs (28%) followed by sacrococcygeal (23%) and testicular (15%) tumors. Malignancy was found in 46%, the commonest being yolk sac tumor. Elevated Alpha feto protein was found in all children with malignancy. Surgery alone or in combination with chemotherapy was used to treat these tumors. Overall survival and event free survival for malignant GCTs was 85.2% and 75.9% respectively. Median survival was 44 months.

Conclusions:

GCTs are rare tumors which occur at many different sites. They are more common in females and have different age peaks for different sites. Non gonadal sites predominate in early childhood, while gonadal GCTs are more common during the later part of childhood and adolescence. Benign tumors are more common. Malignancy can occur, with Yolk Sac tumors being the commonest. Multimodality treatment with surgery and chemotherapy has excellent results in malignant tumors. Long term follow up is advisable for all patients who have GCTs.

Key Words: Extra Cranial Germ Cell Tumors, Children, Clinical Profile, Outcomes