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abstract

Clinical Profile And Survival Outcomes in Pediatric Germ Cell Tumors: Single Centre Experience

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abstract

Clinical Profile And Survival Outcomes in Pediatric Germ Cell Tumors: Single Centre Experience

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Introduction: Germ cell tumors account for 3.5% of all pediatric tumors. This study was designed to assess the clinical features and survival outcomes of pediatric Germ cell tumors (GCTs) in our center.

Methodology: All newly diagnosed cases of GCTs in the pediatric oncology department of Combined Military Hospital (CMH) Rawalpindi, between 1st January 2012 and 31st December 2023 were evaluated retrospectively.

Results: During the study period, the data of 86 cases was analyzed. The median age at presentation was 24 months (IQR: 15 to 66). The male-to-female ratio was 1.5:1. The most common symptom at presentation in males was scrotal swelling (68.4%) while in females it was abdominal pain (55.1%). The most common anatomic site at presentation was gonadal n=57 (66.3% with 46.5% cases in the testis and 19.8% in the ovary). Yolk sac tumor was the commonest type in 51(59.3%) followed by teratoma in 17(19.8%). The disease was metastatic in 29(33.7%) cases and the most frequent site of metastasis was pulmonary 44.8%.

The most common stage at presentation according to COG staging is stage 1(39.5%) followed by stage 4 (32.6%) and upon applying MaGIC risk group

classification Standard Risk 1 was the most common type followed by Low-Risk type in 60.5% and 36% cases respectively. α FP value was raised in 77 (89.5%) cases whereas β HCG was high in 5 cases (5.81%). The Overall Survival and Disease-Free survival in our study was 90.7%.

Conclusion: Our analysis points out age as the most important determinant in the prognosis of pediatric GCT. Although serum AFP greater than 10,000 ng/ml and metastatic disease were associated with poor prognosis, statistical significance could not be proved due to the limited size of study population therefore multicentre prospective collaborative research is needed to ensure early diagnosis and adapt more effective treatment strategies for advanced cases.