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abstract

Navigating the Pediatric Extracranial Germ Cell Tumor Landscape Among Children Less than 13 years of Age: A 16-Years Experience from Oman

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Navigating the Pediatric Extracranial Germ Cell Tumor Landscape Among Children Less than 13 years of Age: A 16-Years Experience from Oman

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Introduction: Extracranial germ cell tumors (EGCT) are a rare entity among childhood cancers, and population-based evidence in Oman is limited. This is the first study from Oman that aims to describe the clinical characteristics and outcome of children with EGCT.

Methodology: A retrospective cohort study included all children who were treated for EGCT, using data that were collected from the Al-Shifa medical record system in the Royal Hospital.

Results: The data of fifty-three (53) children diagnosed with EGCT from 2006 to 2021 were gathered and analyzed. Female to male ratio of (4:1). Teratoma was the most frequent histopathological type, especially in the neonatal period, followed by yolk sac tumor in children 1-4 years of age. Abdominal pain was the presenting complaint. The majority of cases were stage 1 EGCT. The 10-year overall survival (OS) was 93.3%, while event-free survival (EFS) was 86.7%. All children with benign EGCT had 100% OS and EFS.

Conclusion: The clinical characteristics of GCTs in the pediatric population in Oman are comparable to those reported globally, with a significantly good survival outcome. Optimizing customized population-based treatment protocols and implementing fast diagnostic strategies are important possible future research directions for the country.