Clinicopathological pattern and outcome of pediatric malignant ovarian germ cell tumors: South Egypt Cancer Institute experience

Amany Ali, Heba Sayed, Mohamed Salem, Mohamed Hamdy, Amro Farok

Abstract:

Background Malignant ovarian germ cell tumors (MOGCTs) are rare and represent 1–1.5% of all cancers in children and adolescents. The aim of this study is to analyze the clinicopathological pattern at presentation and management and outcome of MOGCTs in children and adolescents. Patients and methods Retrospective study included all girls diagnosed with MOGCTs between January 2005 and January 2015 in Pediatric and Surgical Oncology Departments at South Egypt Cancer Institute, Assiut University. Data were collected from patients’ records including initial presentation, diagnosis (tumor markers and imaging), surgical staging and pathologic types. Management (surgical and chemotherapy details) and outcomes were also analyzed. Results Forty girls aged between 4 to 17 years (mean age of 9.5 years) with diagnosis of MOGCTs during study period were included. The most common presenting symptoms and signs were abdominal swelling, abdominal pain, and pelvic mass. Precocious puberty was noted in two patients. Surgical interventions in most patients were unilateral salpingo-oophorectomy (n = 20). Early stages I and II were reported in 15 and 12 patients respectively, while 10 patients had stage-III disease and 3 patients had stage IV. Yolk sac tumors were reported in 27.5% of patients. All patients were treated with platinum based chemotherapy. The 7-year overall survival was higher for patients with early stages (I and II) compared with advanced stages (III and IV) (100% versus 30.8% respectively. Conclusions Early presentation with appropriate management using fertility sparing surgery and platinum-based chemotherapy provides excellent survival with fertility preservation in children and adolescents. Based on the lower survival of patients with advanced disease, efforts should focus on increasing the awareness in the community of the importance of early diagnosis of ovarian tumors.

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