OVARIAN TUMORS IN CHILDREN: HOW COMMON ARE LESION RECURRENCE(S) AND METACHRONOUS DISEASE? RESULTS OF A NATIONWIDE STUDY

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**Background / Objectives:**

Ovarian tumors in children are rare; incidence depends on tumor biology and patient age. Robust protocol guidelines to aid patient follow-up after tumor excision are distinctly lacking. Published work shows metachronous tumor recurrence(s) can occur in some 2.5%–23% patients. Nevertheless, there are surgeons who recommend that no patient follow-up is required after tumor excision as the outlook for many children is considered excellent. Therefore, we performed a nationwide multicenter study to investigate the incidence of (i)recurrence and (ii)metachronous disease in pediatric patients following ovarian tumor resection.

**Design / Methods:**

Nationwide multicenter voluntary data study registry amongst pediatric oncology centers. Female patients <16years with index diagnosis of ovarian tumor from 2006-2016 were identified. Functional/neonatal ovarian cysts were excluded. ‘Tumor recurrence(s)’ was defined as tumor occurring in the same ovary following primary resection; ‘metachronous disease’ as new tumor occurring in the contralateral ovary after primary operation.

**Results**

271 patients with ovarian tumors from 10 surgical oncology centers were identified. Mean age at surgery was 11years [IQR8-13]. 46% patients presented as surgical emergencies, 51% had elective presentation, unclear history in 3%. 3% children were found to have bilateral tumors at first primary operation. Most common diagnosis were mature teratoma(55%), immature teratoma(12%), serous/mucinous cystadenoma(8.8%) and dysgerminoma(4.1%). 8.5% of females were identified with tumor recurrence(s) or metachronous disease. Majority(78%) of patients with recurrent or metachronous disease were diagnosed from routine clinic follow-up, 4.3% incidentally (‘lesions’ on imaging following road traffic accident), 4.3% due to “new symptoms”, 8.6% unclear. Mean time to detection of recurrent and/or metachronous disease was 13.5 months [IQR8.75-19.75].

**Conclusions:**

This nationwide study clearly shows that ovarian tumor recurrence(s) and metachronous disease occur. The majority of patients with recurrent and/or metachronous disease were detected at routine clinic follow-up. We strongly advocate ALL female pediatric patients should have robust follow-up care plans after diagnosis and resection of ovarian tumor(s).