

Genital tumors during childhood and adolescence. A clinical and pathological study of 71 cases

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Summary

Genital tumors during the first two decades of life are not common and they constitute 5-10% of all tumors. During the period 1993-1997, 71 cases of genital tumors were diagnosed and managed in the Divisions of Pediatric and Adolescent Gynecology of the 1st and 2nd Departments of Obstetrics and Gynecology, University of Athens. Ovarian tumors were found to be the most common uterine tumors -16.9% and cervical -28%. From the ovarian tumors -80.3% of all tumors; -77.2% of cases were found to be benign; 15.8% malignant and 7% borderline. Malignant tumors were found to be germ cell -44.5%, epithelial -22.2%, stromal -11.1%, lymphoma 11.1%, and mixed -11.1%.

Key words: Tumor; Female genital tract; Childhood; Adolescence.

Introduction

Genital tract tumors are rare during childhood and adolescence. Despite their rarity, all varieties are seen and the incidence of malignant or premalignant degeneration of neoplasms is higher than in adult women. Clinical signs and types of tumor often differ from those in adults. The clinical picture of ovarian tumor is atypical. The most frequent symptom is pain in the lower abdomen and palpation can reveal a mass in the pelvis. However, a girl should be subjected to more evaluation if there are symptoms such as vaginal bleeding or discharge, unexplained abdominal pain, abdominal mass or signs of precocious puberty. Sonographic examination is a useful aid in defining the size of the tumor and the consistency of the abdominal or pelvic mass. A large percentage of solid areas increases the chance of malignancy. This atypical picture guides the clinician to carry out a preoperative differential diagnosis. An early diagnosis and proper surgical management are necessary for better and longer survival. Imaging permits early detection of type and size of tumors, offering more appropriate management. The purpose of this study was to analyse the frequency and histopathological diagnosis of the cases identified and treated in our institutions.

Material and methods

Genital tumors seen during childhood and adolescence (age till 19 years), during the period 1993-1997 in the divisions of Pediatric and Adolescent Gynecology and Corrective Surgery of the 1st and 2nd Departments of Obstetrics and Gynecology, University of Athens, were retrospectively studied. During this period 71 cases of genital tumors were diagnosed and managed in our institutions. An analysis of the frequency and histopathological diagnosis of these tumors was carried out.

Results

From the 71 tumors seen during this period, ovarian

tumors were the most common (80.3%), followed by uterine tumors (16.9%) and cervical (2.8%) (Table 1). From the ovarian tumors 77.2% of cases were found to be benign, 15.8% malignant and 7% borderline (Table 2). Malignant tumors of the ovary were found as follows: Germ cell 44.5%, epithelial 22.2%, stromal 11.1%, lymphoma 11.1% and mixed 11.1% (Table 3). The most frequent symptoms of ovarian tumors were abdominal pain and distension 40%, palpable mass 15%, vaginal bleeding and dysfunctional uterine bleeding 12% and precocious puberty 10% (Table 4).

Discussion

Vulvar tumors in children and adolescents are very rare. There are, however, several conditions of the vulva which although benign, can cause anxiety in the parents, patient and physician. It is important to identify the characteristics of the tumor such as mobility, associated systemic signs and probable site of origin of the mass. If there is doubt about the nature of the lesion, biopsy should be done.

Ovarian tumors are now one of the major preoccupations in the every day practice of gynecology. Clinically, they are becoming more and more frequent, because ultrasonography enables increasingly smaller cysts to be identified and the images are becoming clearer all the time.

About one-third of all ovarian tumors in children are malignant and the incidence rises with age. According to Groeber, who summarized 15 series of malignant ovarian

Table 1. – *Localization of genital tumors.*

Localization	No. of cases	%
Vulva	0	0
Cervix	2	12.8
Uterus	12	16.9
Ovary	57	80.3
Total	71	100.0

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Table 2. – Classification of ovarian tumors.

Type of tumor	No. of cases	%
Benign	44	77.2
Malignant	9	15.8
Borderline	4	7.0
Total	57	100.0

Table 3. – Type and frequency of malignant tumors of the ovary.

Type of tumor	No. of cases	%
Germ cell	4	44.5
Epithelial	2	22.2
Stromal	1	11.1
Lymphoma	1	11.1
Mixed tumor	1	11.1
Total	9	100.0

Table 4. – Clinical signs of ovarian tumors.

Symptoms	Frequency (%)
Abdominal pain and distension	40
Palpable mass	15
Vaginal bleeding and dysfunctional uterine bleeding	12
Precocious puberty	10

tumors, 17% were in the age group 0-4 years, 28% were in the age group 5-9 years and 55% were between the ages of 10 and 14 years. Epithelial tumors are very rare in the premenarchal period. Germ cell tumors, on the other hand, composed most of the preadolescent malignant ovarian tumors. It seems that in young females the percentage of malignant epithelial tumors rises with increasing age, while that of germ cell tumors declines. Pure dysgerminoma is a common malignant ovarian germ cell tumor and most cases are discovered in the second and third decade of life. Approximately 10-15% of patients with dysgerminoma have bilateral ovarian involvement. In contrast to surface spread, which is typical of epithelial ovarian tumors, ovarian dysgerminoma has a propensity for early lymphatic spread to the pelvic, para-aortic, mediastinal and supraclavicular lymph nodes. Dysgerminoma may be found in girls with chromosomal abnormalities such as 46XY or 45X/46XY mosaic. Gonadoblastoma tumors are usually found in phenotypically normal individuals. When 46XY karyotype is found, the case has to be operated on as soon as possible to avoid malignant degeneration. Therefore, in case of prepubertal pelvic mass, karyotyping should be carried out. Most often, the women concerned are young and their fertility must be safeguarded. Small benign cysts of the lower genital tract usually do not require surgery as in most cases they retreat. In case of surgery, it is important to keep in mind that continued ovarian function is necessary to complete sexual and somatic maturation in children and to preserve fertility.

Although genital tumors during childhood and adolescence are rare, they should be highly considered because potential malignancy in genital tumors during this age is higher than in adults. Since only small series involving young female patients have been reported, it is important that multicenter studies be encouraged in order to better understand diagnostic procedures, therapeutic options, prognosis and fertility.

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