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Ovarian adenocarcinoma in 14-year-old girl

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Ovarian tumors have an uncommon occurrence in children and adolescent girls compared with adult women. The peak incidence of ovarian tumors is between 15–19 years of age. Malignant ovarian tumors in children and adolescent girls are extremely rare. A case of a 14-year-old girl with ovarian mucinous adenocarcinoma that has probably not been described before in the literature is presented below.

Key words: adolescent gynecology; ovarian tumor; adenocarcinoma

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INTRODUCTION

Ovarian tumors have an uncommon occurrence in children and adolescent girls compared with adult women. The peak incidence of ovarian tumors is between 15–19 years of age. Malignant ovarian tumors in children and adolescent girls are extremely rare. The most common type of pediatric ovarian tumors are ovarian germ cell tumors (GCTs). The GCTs are around 3–6.3% of all malignant tumors of an adolescent age. The most frequently recognized malignant tumor within GCTs is the dysgerminoma type [1, 2].

The most frequently reported clinical manifestations of ovarian tumor are abdominal pain (57%) and a palpable pelvic mass (46%) [2]. The surgical procedure without removing ovaries should only be considered in cases when the mass is not diagnosed as a malignant neoplasm or ovarian torsion. The main purpose of the surgical intervention should be preserving future fertility.

In girls, adenocarcinoma generally does not exist. A case of a 14-year-old girl with ovarian mucinous adenocarcinoma that has probably not been described before in the literature is presented below.

CASE PRESENTATION

A case of a 14-year-old girl with ovarian mucinous adenocarcinoma was reported. The girl was referred to our Department from the Pediatrician Department due to complaints of lower abdominal pain for over three weeks and with suspicion of an 8 cm left ovarian cyst shown by ultrasonographic scan. The patient experienced regular periods since menarche at the age of 12. The patient was diagnosed previously with albinism. A physical examination was unremarkable.

An ultrasound scan examination of the pelvis revealed a cystic mass sized at 7 x 5.5 cm in the left ovary. MRI images of the abdomen and pelvis revealed a left ovarian mass with solid and cystic component measured as 5 x 5 x 7 cm. Preoperative serum levels according to the ROMA test showed elevation of CA-125: 125.7 IU/mL (normal: < 35 IU/mL), but the HE4: 36 pmol/L (normal: < 70 pmol/L) was in the normal range. The remaining tumor markers were as follows: a-fetoprotein (a-FP) 2.68 ng/mL (normal: 0.79–4.69 ng/mL) and human chorionic gonadotropin (HCG) < 0.5 mIU/mL. After examination, it was decided to conduct laparoscopic surgery due to the adolescent age of the patient and to limit invasiveness of the procedure.

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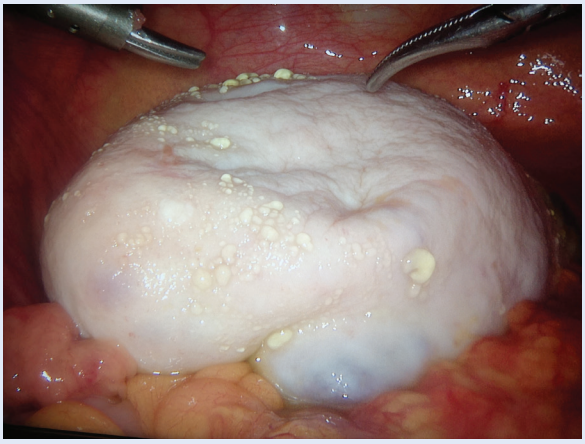

Figure 1. Laparoscopic surgery: ovarian adenocarcinoma of the left ovary

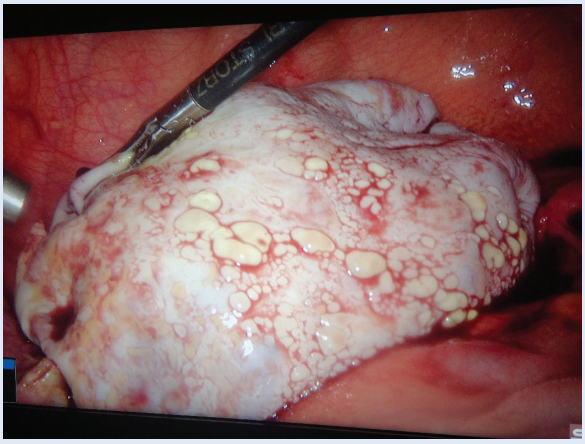

Figure 2. Laparoscopic surgery: ovarian adenocarcinoma of the left ovary

Laparoscopic surgery, which included the resection of the tumor, left salpingo-oophorectomy and collection of part of the tissue from the right ovary, was performed in oncological purity (Fig. 1 and 2).

Final histology analysis revealed an adenocarcinoma of intestinal type of the left ovary without fallopian tube infiltration, but with simple carcinoma cells in peritoneal fluid. The part of the tissue from the right ovary did not reveal any oncological changes.

After receiving histopathological results, the Oncological Council decided to conduct urgent gastroenterological consultation, gastroscopy, colonoscopy and a PET scan. All the mentioned procedures did not show any abnormalities.

The patient was transferred to the Department of Pediatric Oncology, Hematology and Chemotherapy of Upper Silesian Child Health Center in Katowice for complementary therapy. Based on the results of diagnostic tests she was qualified for IIB stage of disease according FIGO 2014.

Regarding to the decision of the European Reference Network for Pediatric Oncology, six cycles of chemotherapy with carboplatin and paclitaxel was applied as well as in the procedure for ovarian cancer in adult women treatment.

Six months after completed the treatment process, all tumor markers were negative, the control MRI scan was correct and an ultrasonography examination of the pelvis and abdominal did not show any abnormalities.

A further follow-up of the patient was recommended.

CONCLUSIONS

Considering the case mentioned above, it is necessary to keep in mind that during a medical examination of adolescent girls having lower abdominal pain, beside commonly typed diseases, ovarian cancer might occur even though it is extremely rare. Mucinous adenocarcinoma of the ovary should be considered in the differential diagnosis of an ovarian tumors in an adolescent group of girls. This is the reason for conducting an advanced diagnostic process, including an ultrasonography examination, MRI, biochemical tumor markers and a consultation with a specialist experienced in adolescent gynecology.

Conflict of interest

All authors declare no conflict of interest.

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