Case Reports

Ovarian malignant immature teratoma associated with pregnancy - a case report

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Summary

We report the case of a malignant immature teratoma diagnosed at 21 weeks of amenorrhea in a 36-year-old healthy woman. Ultrasound examination showed a multilocular cystic mass of 175 mm in diameter, situated on the left side of the uterus. A left ovariectomy was performed by laparotomy at 22 weeks of amenorrhea. Histologic examination revealed a malignant grade 2 immature teratoma, and the patient underwent three courses of chemotherapy with a good pregnancy outcome. A cesarean section was carried out at 39 weeks of amenorrhea, associated with a left salpingectomy on which the pathologist examination did not find any malignant cells. The newborn had a normal aspect, and the mother was considered to be in remission after two more courses of chemotherapy..

Key words: Ovarian neoplasm; Malignant immature teratoma; Pregnancy.

Introduction

The diagnosis of an ovarian tumor during pregnancy is uncommon, occurring in approximately 0.1% of cases [1]. This frequency is tending to increase due to the fact that women are becoming pregnant at older ages. Malignant immature teratoma occurs in approximately 1/30,000 pregnancies. This cancer is associated with a low malignant potential, is radio- and chemo-sensitive, and is often diagnosed in young women.

Case Report

A healthy 36-year-old woman presented at 21 weeks of amenorrhea for her second-trimester prenatal ultrasonography. Ultrasonographic (US) examination showed an ongoing pregnancy and a voluminous ovarian mass localized on the left side of the uterus, measuring 175 mm in diameter, with a multilocular cystic structure.

A laparotomy performed at 22 weeks of amenorrhea revealed an isolated left ovarian tumor without any external vegetation, and a left ovariectomy was performed. Figure 1 shows a macroscopic view of the ovarian tumor, measuring 18 cm in diameter. Histologic examination revealed a malignant grade 2 immature teratoma (Norris classification) with neither part of embryonic carcinoma nor vitellin tumor, containing respiratory-type epithelium (Figure 2), neuroepithelial and glial components (Figure 3).

After multidisciplinary assessment, three courses of chemotherapy based on etoposide and cisplatin were initiated between 23 and 31 weeks of amenorrhea. The treatment was well tolerated by the mother, with a normal uneventful fetal growth. A cesarean section was decided at 39 weeks of amenorrhea, associated with a left salpingectomy on which the pathologist examination did not find any malignant cells.

The newborn had a normal aspect and weighed 3130 g. The Apgar score was 10/10/10 and his clinical examination was normal. The mother received two more courses of chemotherapy, and six months later she was considered to be in remission.

Discussion

The management of adnexal masses during pregnancy is difficult. The most frequently documented primary malignant neoplasms associated with pregnancy are breast cancer, cervix cancer, melanoma, lymphoma and ovarian cancer. An ovarian tumor is diagnosed in approximately 0.1% of pregnancies, although the proportion of malignancy remains weak ranging from 2 to 8.5% of cases. The mean age of pregnant women with an ovarian tumor is not different in comparison to the general population (32.3 years vs 31.1). The majority of adnexal masses are functional cysts that usually disappear by the end of the first trimester of pregnancy, or teratomas.

Clinical diagnosis is difficult because digestive symptoms are unspecific due to increased size of the uterus, uterine contractions, distension of the abdomen and hormonal impregnation. Few ovarian tumors are revealed with clinical symptoms and US examination plays a crucial role, leading to an early diagnosis principally during the first trimester of pregnancy. The risk for adnexal torsion (29% vs 7% in the general population) and tumoral rupture (14% vs 2-3%) are increased during pregnancy.

Surgical management is indicated in case of presence of symptoms, US findings including a tumor diameter above 7 cm, a solid component, increasing dimensions of the tumor, and persistence of the adnexal mass during the second and third trimester. Surgical treatment is considered dangerous for both the mother and fetus, leading to high risk of fetal loss and premature birth. Recommenda-

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Fig. 1

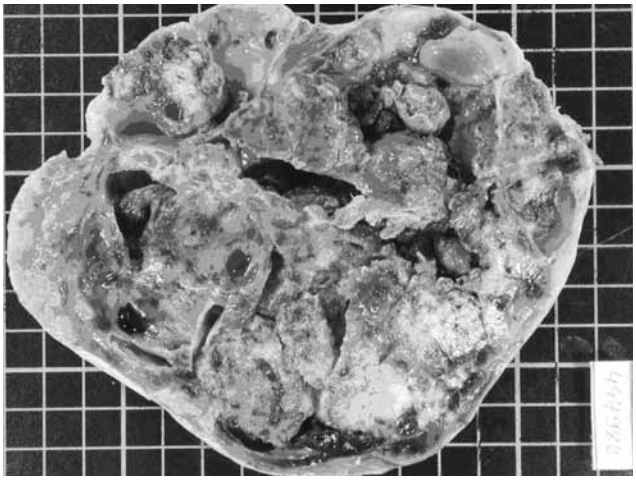

Fig. 2

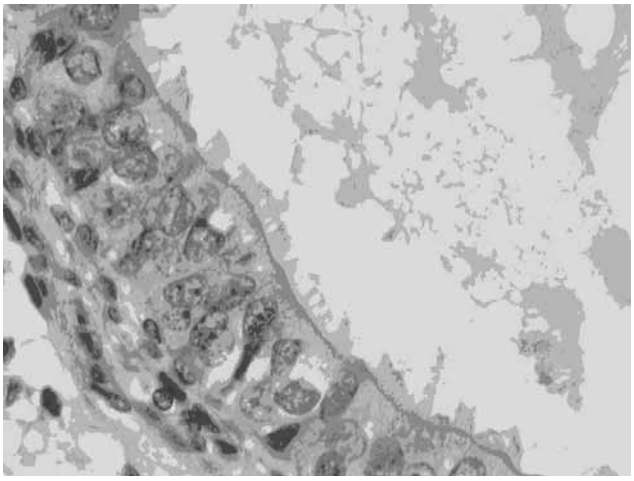

Fig. 3

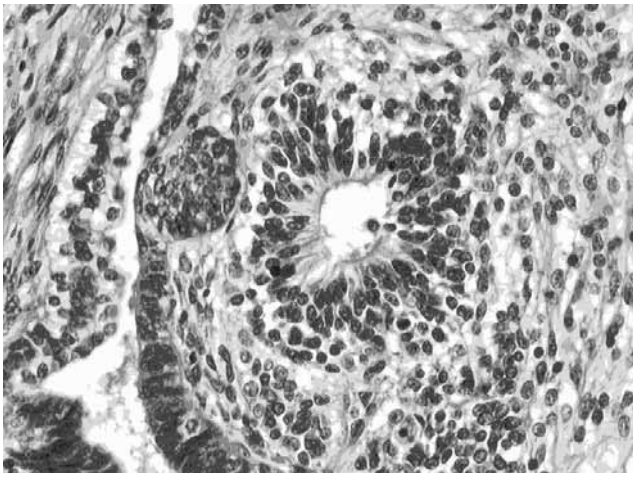

Figure 1. — Ovarian immature teratoma (macroscopic view).

Figure 2. — Immature teratoma (histologic section) - mature respiratory-type epithelium.

Figure 3. — Immature teratoma (histologic section) - immature neuroepithelial and glial components.

tions concerning chemotherapy are to adapt the therapy to each patient, to avoid anti folic agents during the first trimester, and if possible any chemotherapy at that time. Radiotherapy is the only therapy forbidden during pregnancy due to the risk of fetal loss.

Conclusion

There is no argument to state that pregancy worsens the prognosis of ovarian cancer, in contrast with breast cancer and melanoma, leading thus to restrict indications of pregnancy termination. Multidisciplinary assessment including a gynecologist, obstetrician, oncologist, pediatric and neo-natalogist is mandatory to determine the best therapeutic option for both mother and foetus in such cases.

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