Advanced mixed germ cell tumour diagnosed in pregnancy – case report

¹Bednaříková M., ²Minář L., ²Gerychová R., ²Felsinger M., ³Jandáková E., ⁴Mihulová I., ⁴Křikavová L., ²Vinklerová P., ²Weinberger V.

¹Department of Internal Medicine, Haematology and Oncology, ²Department of ²Gynaecology and Obstetrics, ³Department of Pathology, ⁴Department of Radiology and Nuclear Medicine University Hospital Brno, Czech Republic

Background: Diagnosis of malignancy is an uncommon complication of pregnancy requiring a comprehensive multidisciplinary approach. For an optimal therapeutic strategy in this very rare clinical situation, there is still not enough information. We are presenting a case of a patient treated with chemotherapy for advanced germ cell tumor with atypical biologic behavior diagnosed in pregnancy.

Case Report: A 32-year-old woman presented with acute abdominal pain and distention caused by pelvic mass at 17 weeks' of pregnancy, underwent emergent laparotomy with the finding of ruptured ovarian tumor complicated by simultaneous bleeding into the abdominal cavity. Unilateral salpingo-oophorectomy and multiple biopsies of omental cake were performed. Histological examination revealed an advanced dysgerminoma of the left ovary, FIGO stage IIIC minimally. Chemotherapy with carboplatin and paclitaxel was started at 20 weeks' gestation^{1,2}. Subcutaneous metastases were biopsied and histologically verified in the trunk and breast during the chemotherapy. Despite to very good clinical response initially, the disease progressed rapidly in terms of new clinical occurrence of metastases. Therefore, the regime of the chemotherapy had to be switched to cisplatin, vinblastine, and bleomycin since the third cycle at 27 weeks' gestation. Due to symptoms of bowel obstruction caused by progressive disease in the contralateral right ovary with tumorous mass making vaginal birth obstacle the decision for preterm labor via Caesarean section was made.

The baby was born after the induction of fetal lung maturation at 30 weeks of pregnancy and the right salpingo-oophorectomy with retroperitoneal metastasis biopsy were performed at the same time. The baby girl was born, 1270g weight and 39cm length with Apgar score 4/8/8 and umbilical artery pH 7.42. Neither maternal nor neonatal infectious or other complications were present during the immediate postpartum period and another six month to date.

Except for pure dysgerminoma, the pathologist has recently described a synchronous component of an embryonal carcinoma in the final histology report that was not present in the previous samples even after retrospective review. The patient completed postpartum three cycles of chemotherapy with cisplatin, etoposide, and bleomycin with a good but short-term response again. Subsequently, multiple viable bone metastases among others were described on the PET/MR examination after completion of planned chemotherapy. Patient underwent further line of chemotherapy with gemcitabine and oxaliplatin with no clinical response and died 9 month after diagnosis.

Conclusion: Presented case report confirms the previously published assumption that diagnosis of advanced germ cell tumour during pregnancy seems to have worse prognosis than in the non-pregnant population³. The chemotherapy administered during the second and third trimester of pregnancy is feasible and we did not pick up any its side effects on the child so far.

MR image of transient almost complete remission of intraperitoneal metastases in 28th week of gestation:

Fused PET/MR image of massive intraperitoneal, pelvic and skeletal dissemination:

¹ Hubalek M et al.: Arch Gynecol Obstet (2007), 276:179–183

² Amant F et al.: Int J Gynecol Cancer (2014), 24(3):394-403

³ Kodama M et al.: Eur J Obstet Gynecol Reprod Biol. (2014), 181:145-56