Tubal primary metastatic choriocarcinoma coexistent with a viable early pregnancy: a case report

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Abstract

Introduction: Choriocarcinoma is a rare variant of gestational trophoblastic disease. This is a high malignant neoplasia composed by cyto- and syncitiotrophoblastic tissue characterized by atypical and irregular cells proliferation that cause necrosis (1). The incidence of choriocarcinoma is estimated to be 0,133 per 100.000 woman-years and the incidence with a concomitant normal pregnancy is 1 case per 160.000 pregnancies (2).

Case Report

A 30-year-old woman presented at the 20th gestational week of a spontaneously onset pregnancy was admitted with left lower abdominal pain. Routine blood tests were performed and a β-hCG reading of 24474 mUl/ml was found (as appropriate for the gestational age). All other biochemical and clinical values were in the normal range. The woman underwent also a pelvic ultrasound (US) scan that showed regular intrauterine fetus, with regular biometry for the gestational age. However, a ring shaped mass was found in the left adnexal region, probably originating from the left fallopian tube and blood flow was detected. The magnetic resonance (MRI) of abdomen and chest confirmed the pelvic finding and failed to show any other site of disease.

The patient underwent a laparoscopy whereby sahineous free fluid (300cc) and an 8 cm mass in the left fallopian tube were found. A left salpingoophorectomy was completed.

The histology reported the diagnosis of primary tubal choriocarcinoma. Additional immune-histochemistry markers were performed: CK7 and Ki 67 resulted positive. After an appropriate counseling, the woman decided to maintain the pregnancy despite the oncologic risk.

The disease evolution was monitored by serial β-hCG, US and MRI scans, while the pregnancy evolution was monitored by seriate US scan and cardiotocography (Tab. 1).

During the 28th a chest MRI detected a 5 mm subpleural right lung mass, suspicious for metastatic disease. In view of the progression of the disease, the decision was taken to expedite delivery and the patient started treatment with betamethasone disodium phosphate to facilitate the fetal lung maturation. Following confirmation of good fetal development and health, the patient underwent a cesarean section at the 31st gestational week. A male fetus weighed 1263 g was born in safe health condition, witnessed by ad-
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Table 1. Monitoring of feto-maternal status.

<table>
<thead>
<tr>
<th>WEEKS OF AMENORRHEA</th>
<th>β-hCG (mUI/ml)</th>
<th>COMPLEMENTARY EXAMINATIONS/TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>27784-31729</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>38576-48903</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>32538-48123</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>28440-31276</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td></td>
<td>MRI abdomen and chest: solid subpleural mass of 5 mm diameter in the right lung apical side (suspect of tumor secondary localization).</td>
</tr>
<tr>
<td>29</td>
<td>34550-36360</td>
<td>Seriato cardiotochography: regular</td>
</tr>
<tr>
<td>30 + 5 days</td>
<td></td>
<td>treatment with betamethasone disodium phosphate for the fetal lung maturation</td>
</tr>
</tbody>
</table>

Note: summary of laboratory and radiologic examinations.

equate Apgar scores and umbilical cord pH of 7.24. The post-partum and puerperium were uncomplicated. Two weeks after childbirth the β-hCG value decreased (β-hCG 932 mUI/ml). A chest/abdomen computed tomography (CT) showed a 9mm lung nodule of right superior lobe. A brain MRI failed to spot any focal lesion. Twenty days after delivery the β-hCG was 1381 mUI/ml. Due to the high-risk group classification (FIGO stage III), chemotherapy was commenced using the EMA-CO regimen (etoposide 100 mg/m², methotrexate 100 mg/m², 200 mg/m² with folic acid, actinomycin D 0.5 mg, cyclophosphamide 600 mg/m² and vincristine 1 mg/m²). After two cycles the β-hCG levels started to decrease. Three months following completion of chemotherapy the β-hCG value was 0 mUI/ml, and a chest MRI revealed a total regression of the lung lesion. No other lesion was observed. Sixteen months later the patient remains disease free as per blood levels and radiology (Tab. 2).

Discussion

This was the first case reported of fallopian tube choriocarcinoma coexistent with viable intrauterine pregnancy detected as early as 20 gestational weeks and with the pregnancy brought to birth. There are few cases in literature of choriocarcinoma in viable pregnancy. Nabers only found 5 cases in the literature, in which both mother and child survived (3). Ahmed reported in 2002 a case of pregnant women at 33 weeks admitted for hemoptysis. The β-hCG value was high and the chest X-ray detected multiple bilateral lung lesions suggestive for neoplastic metastatic disease. The patient underwent a cesarean section at the same week and was treated with MTX and actinomycine. Four cycles after treatment was necessary to introduce the EMA-CO protocol. Four cycles after chemotherapy, the β-hCG value was 0 mUI/ml (4). Lee reported in 2005 a case of a pregnant woman 32 weeks admitted for hemoptysis and dyspnea. She was diagnosed for metastatic choriocarcinoma. The cesarean section was performed at 33+4 weeks and the woman underwent a standard EMA-CO protocol with good outcome (5). As the authors point out in their case report (5), the coexistence of normal intrauterine gestation and gestational trophoblastic disease poses some specific questions about the origin of the disease. It may originate from the placenta during a normal pregnancy or it may originate from the

Table 2. Chemotherapy protocol.

<table>
<thead>
<tr>
<th>CHEMOTHERAPY</th>
<th>β-hCG (mUI/ml)</th>
<th>RADIOLOGIC EXAMINATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I CYCLE</td>
<td>177</td>
<td></td>
</tr>
<tr>
<td>II CYCLE</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>III CYCLE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>IV CYCLE</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>3 MONTHS AFTER TREATMENT</td>
<td>0</td>
<td>CHEST/ABDOMEN MRI Complete regression of chest and abdominal lesions</td>
</tr>
<tr>
<td>16 MONTHS AFTER TREATMENT</td>
<td>0</td>
<td>NO EVIDENCE OF DISEASE</td>
</tr>
</tbody>
</table>

Note: chemotherapy protocol etoposide, metotrexate, ciclofosfamide, actinomycin and vincristyn (EMA-CO): β-hCG value and radiological findings.
remnants of a previous pregnancy or it may originate from multiple pregnancies with one concept undergoing degenerative change to choriocarcinoma. The same questions can be apply to our case report.

Conclusions

Although there are few data on the management of patients with choriocarcinoma and viable early pregnancy, the choice of conservative management demands strict follow up of the maternal and fetal health condition. The delivery should be performed as soon as the gestational age provides safe survival outcomes of the fetus, so between 30th - 33rd gestational weeks. The delivery modality should prefer the caesarian section and should be followed by revision of uterine cavity and administration of EMA-CO chemotherapy protocol based on the risk factors. Close post chemotherapy follow-up is necessary in agreement with general guidelines on gestational trophoblastic disease.

Conflict of interest

The Authors report no conflict of interest.

The Authors attest that they have obtained written consent from the patient.

References