Presentation and Management of Post-partum Choriocarcinoma in Qatar

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Abstract:

Post-partum choriocarcinoma is a rare complication of pregnancy. We have analyzed a series of six consecutive patients presenting with choriocarcinoma after a full-term non-molar pregnancy. The incidence was calculated to be 1 in 19,000 births. Five patients were managed at the Hamad Medical Corporation between 1991 and 2001. All presented with persistent primary or secondary post-partum hemorrhage. Treatment with chemotherapy was successful in all cases. Early diagnosis is important because this rare condition is potentially curable with appropriate chemotherapy.

Keywords: choriocarcinoma, post-partum, chemotherapy

Introduction:

Gestational trophoblastic disease (GTD) is a term that incorporates a rare but important spectrum of disorders that may complicate pregnancy. GTD is most commonly associated with an abnormal conception (either a complete or partial hydatidiform mole or more rarely choriocarcinoma) but it may follow a normal pregnancy or non-molar abortion. Choriocarcinoma following a live birth is said to have an incidence of 1 in 30,000 to 50,000 births in the West (1) and 1 in 11,000 in Oriental communities (2). We have evaluated our experience in the management of post-partum choriocarcinoma by undertaking a retrospective analysis of all patients registered and treated for persistent trophoblastic disease (PTD) between 1991 and 2001 at Hamad Medical Corporation, specifically identifying those patients with post-partum choriocarcinoma.

Methods:

The Hamad General Hospital Registry of gestational trophoblastic tumors was used to identify all women treated for histologically confirmed choriocarcinoma. Patients who presented following full term non-molar pregnancy had their case notes studied to identify patient demographics, obstetric history, presentation, treatment and outcome.

The current management policy on referral of patients with PTD is to review and confirm the histological diagnosis of choriocarcinoma: the patient undergoes a prognostic risk assessment according to the World Health Organization prognostic score (3), it includes full physical examination, imaging techniques such as ultrasound pelvis and abdomen, computed tomography (CT) thorax and head, chest X-ray and serum B human chorionic gonadotrophin (BhCG) evaluation prior to initiation of treatment.

Results:

Between January 1991 and December 2001, six patients with PTD, the antecedent pregnancy was a full term non-molar pregnancy and the total number of mothers delivered was 114643, the incidence of post-partum choriocarcinoma was calculated to be 1 in 19,000 births, the results are summarized in Table 1.

The median age was 30 years (range 21-39), parity ranged between 1 to 8, there was sexual preponderance in the antecedent pregnancy towards female (four female, two male). The time interval from antecedent pregnancy to onset of symptoms ranged from 0 to 9 weeks. All six patients presented with abnormal vaginal bleeding. In four cases this was persistent from the time of delivery, while in the other two cases the post-partum hemorrhage commenced at 6 weeks and 9 weeks after delivery.

The interval between the antecedent pregnancy and registration for treatment ranged from 7-26 weeks. In one case, 25 weeks elapsed before referral after she underwent resection of intestinal vascular ulcerated mass at 24 weeks post-partum. In a second case, vaginal bleeding persisted for 5 months from the time of birth and finally presented 22 weeks post-partum with dyspnoea and headache secondary to multiple pulmonary and brain metastasis.
Table 1: Summary of Findings in Six patients with post-partum choriocarcinoma

<table>
<thead>
<tr>
<th>Patients</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onset of PV bleeding (weeks post-partum)</td>
<td>Primary PPH</td>
<td>6</td>
<td>Primary PPH</td>
<td>9</td>
<td>Primary PPH</td>
<td>7</td>
</tr>
<tr>
<td>Diagnosis (weeks post partum)</td>
<td>6</td>
<td>22</td>
<td>26</td>
<td>10</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>Interval to diagnosis (weeks)</td>
<td>6</td>
<td>16</td>
<td>26</td>
<td>10</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Number of metastases</td>
<td>Nil</td>
<td>Multiple</td>
<td>Multiple</td>
<td>Multiple</td>
<td>Multiple</td>
<td>Multiple</td>
</tr>
<tr>
<td>Site of metastases</td>
<td>Nil</td>
<td>Lungs</td>
<td>Intestine</td>
<td>Lungs</td>
<td>Lungs</td>
<td>Lungs</td>
</tr>
<tr>
<td>Serum BhCG at diagnosis mIU/mL</td>
<td>5,000</td>
<td>965,000</td>
<td>1,000,000</td>
<td>200,000</td>
<td>25,000</td>
<td>143,000</td>
</tr>
<tr>
<td>Treatment MTX (6)</td>
<td>EMACO(6)</td>
<td>EMACO(1)</td>
<td>EMAEP(7)</td>
<td>EMACO(6)</td>
<td>EMACO(6)</td>
<td>EMACO(5)</td>
</tr>
<tr>
<td>Survival</td>
<td>AWNED</td>
<td>AWNED</td>
<td>AWNED</td>
<td>AWNED</td>
<td>AWNED</td>
<td>AWNED</td>
</tr>
<tr>
<td>Duration of follow-up in year</td>
<td>5</td>
<td>10</td>
<td>8</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Post-therapy pregnancy</td>
<td>Had TAH</td>
<td>3 (babies)</td>
<td>2 (babies)</td>
<td>Had TAH</td>
<td>1 (baby)</td>
<td>-</td>
</tr>
</tbody>
</table>

AWNED, a live and well, no evidence of disease, BhCG, human chorionic gonadotrophin; EMA. CO, etoposide/methotrexate/actinomycin/cyclophosphamide/Oncovin (vincristine), MTX, methotrexate; EMA.EP, etoposide/methotrexate/actinomycin D/etoposide/cisplatin, PPH, post partum haemorrhage, PV per vaginum, TAH, total abdominal hysterectomy.

By the time of referral five of the six patients had metastatic disease. All these metastases resulted in symptoms in all of them, four had lung metastases presented with dyspnoea, one of them progressive. Two patients in addition, had brain metastases, one had headache. The patient with gastrointestinal tract and liver metastases presented with melena and dropped her hemoglobin to 4.5 gm%.

All patients except one presented with high-risk disease, the median risk score was 12, (range 11-16). The median level of BhCG at the time of referral was 244,000 iU, (range 5,000-1,000,000, iU/L).

One patient received “low risk” chemotherapy protocol, methotrexate with folinic acid rescue on a two weekly cycle(4). She had six cycles: The other four patients required the high-risk protocol of weekly EMA/CO(5) (alternating etoposide, methotrexate, actinomycin D, cyclophosphamide and vincristin (oncovin)). The fifth patient of high risk group (the patient with intestinal and liver metastases) had her chemotherapy at the Charing Cross Hospital in London, (according to patient’s desire) she initially received one course of EMA/CO followed by seven cycles of EMA/EP regimen, by substituting cisplatin and etoposide on day 8(6). Her chemotherapy was interrupted on several occasions by both gastrointestinal and intraperitoneal bleeding whenever her platelet count dropped.

In general chemotherapy was well tolerated, the median number of cycles of chemotherapy received was six (range five to eight). Only one patient exhibited grade IV neutropenia and sepsis resulted. Nausea and vomiting were minimal and all patients exhibited temporary alopecia. All patients achieved a complete response and remain disease-free at a median of 5 years (range 1 to 10 years). There was no treatment or disease-related mortality seen in this group of patients. All except one from Indian origin left to her home country are followed up regularly with urine hCG levels for life.

Future fertility in this patient group does not appear to be affected, three women subsequently had further six babies without complications, two women underwent a hysterectomy (for reasons unrelated to the disease), during chemotherapy as their family was complete. The sixth patient has not had a further pregnancy and her future fertility wishes are not known, despite excellent response to treatment.

All post-therapy pregnancies were followed-up and none of them developed recurrent choriocarcinoma or a hydatidiform mole.

Discussion:

Post-partum choriocarcinoma is a very rare complication of pregnancy with a reported incidence of 1 in 50,000 live births in UK(7), 1 in 11,000 in Oriental communities(8) and in Qatar we calculated the incidence to be 1 in 19,000 live births. The mixed ethnicity of the population in Qatar may explain this difference in incidence. All women in our study presented with abnormal bleeding after pregnancy, however, they reported that the bleeding is not associated with their normal menstrual symptoms. This should raise the index of suspicion to include the potential diagnosis of choriocarcinoma, particularly if bleeding persists...
Post-partum choriocarcinoma is extremely rare, curable. Early diagnosis is important.

References: