A case of giant placental chorioangioma affecting a diamniotic dichorionic twin pregnancy

Katarzyna Gajewska-Knapik and Catherine Aiken
Department of Fetal Medicine, Addenbrooke’s Hospital, Hills Road, Cambridge UK CB2 0QQ

Objective
Giant placental chorioangiomata are rare, occurring in <16,000 pregnancies, and are associated with fetal complications in approximately 50% of cases. We present a very unusual case of a giant placental chorioangioma complicating a dichorionic diamniotic twin pregnancy.

Methods
A report of a case referred to our tertiary fetal medicine service in the UK. The care of the mother and infants took place at 5 UK centres in total (including 2 tertiary fetal medicine centres and 1 tertiary neonatal intensive care unit). We obtained data from all centres involved to give a complete picture of the clinical course and outcome of the pregnancy.

Results
A 35-year old para 6 (5x SVD at term, 1x preterm Caesarean section) was referred to our fetal medicine service at 28 weeks gestation in a DCDA twin pregnancy conceived via IVF, with a mass in the placenta of twin 2 detected at routine second-trimester ultrasound. At presentation, the mass measured 41x66x50mm and showed extensive vascularity (Figure 1).

![Figure 1a and 1b: Ultrasound image of giant placental chorioangioma at 29 weeks (1a) with Doppler flow demonstrating vascularity (1b)](image)

Both twins were normally grown at presentation (12 and 25th centiles respectively) and had normal dopplers. However while twin 1 had normal liquor volume, twin 2 exhibited polyhydramnios. At 29 weeks, the membranes of twin 1 ruptured spontaneously. A specialist opinion was sought to determine whether embolization of placental vessels would be of benefit in prolonging the pregnancy, however in view of the size of the mass and the close proximity to the cord insertion, the risk of intervention outweighed the benefits.

<table>
<thead>
<tr>
<th>Placental chorioangioma &lt;4cm</th>
<th>1:100-200</th>
<th>Rarely cause problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placental chorioangioma &gt;4cm</td>
<td>1:3500-16,000</td>
<td>50% complications</td>
</tr>
<tr>
<td>Placental chorioangiomatosis</td>
<td>&lt;1:50,000</td>
<td>High rate of complications</td>
</tr>
</tbody>
</table>

Table 1: Incidence and likelihood of complications from placenta chorioangiomas of varying sizes

Preterm labour followed shortly thereafter. Both twins were delivered vaginally. Twin 1 (female) was born in good condition and appropriate weight for gestation (1080g, 21st centile). She had an uneventful 2-week NICU stay primarily for respiratory support. Twin 2 (male) was born in poor condition at 1310g (41st centile, but very oedematous) with anaemia, severe thrombocytopenia (to a minimum platelet level of 13x10^9/L) and coagulopathy requiring multiple transfusions. He was discharged from hospital at 36-weeks corrected age still oxygen-dependent.

![Figure 2: Schematic diagram showing the mechanisms of tumour sequestration and thrombotic microangiopathy associated with giant placenta chorioangioma. The association with fetal oedema and high-output failure is also shown](image)

Conclusions
Giant chorioangiomas are often associated with anaemia and thrombocytopenia due to tumour sequestration and thrombotic microangiopathy (Figure 2). These placental masses carry high complication rates (Table 1), and even where treatment is possible are often fatal for the fetus. Very few reports have previously described giant chorioangiomas in twin pregnancies: the good outcome for the co-twin in this case is reassuring.