


Dr. Scherjon comments:
The most obvious difference in the analysis presented in the letter of Kempley et al and our study is that our analysis is based on 10 longitudinal measurements, instead of two previous measurements. We are therefore able to analyse the contribution of several variables to a repeated measurement model.

We used values of MAP and Pco2 (as did Kempley), but also analysed both variables as continuous variables. We therefore include gestational age in the model, as it is a contributing factor.

Interestingly, the interaction component between IUGR grouping and MAPmed appeared to be significant only for the most severe group. This suggests that there might be a different effect of MAPmed on CBFV for IUGR compared with non-IUGR infants (IUGR defined by FGR and not by the U'/C' ratio).

We therefore repeated the analysis for the two growth retardation definitions. For the normal FGR infants and not for the normal U'/C' ratio group, we found a significant contribution of the time course of blood pressure changes on CBFV changes, but the absolute levels of MAP seem to have no contribution to the model (table 2).

A model with MAPmed and MAPmax effect for growth retardation suggests that there is a more severe effect on CBFV for IUGR infants (IUGR defined by FGR and not by the U'/C' ratio).

Table 1 Variables significantly contributing to the model: repeated measurements model

<table>
<thead>
<tr>
<th>Model</th>
<th>U' /C' ratio</th>
<th>U' /C' ratio</th>
<th>FGR ratio</th>
<th>FGR ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>GA</td>
<td>Not included</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>IUGR</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.01</td>
</tr>
<tr>
<td>MAPmax time course*</td>
<td>0.14</td>
<td>0.16</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CO2 level</td>
<td>0.23</td>
<td>0.14</td>
<td>0.01</td>
<td>0.18</td>
</tr>
</tbody>
</table>

GA: gestational age; IUGR: fetal growth retardation as defined by U' /C' ratio or FGR; MAP: mean arterial blood pressure; CO2: transthoracic PCO2; *interaction component between MAPmed and IUGR.

Table 2 Variables significantly contributing to the model: repeated measurements model

<table>
<thead>
<tr>
<th>Model</th>
<th>U' /C' ratio</th>
<th>U' /C' ratio</th>
<th>FGR ratio</th>
<th>FGR ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Gestational age</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CO2 level</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>MAPmax time course</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>MAPmax level</td>
<td>0.36</td>
<td>0.27</td>
<td>0.56</td>
<td>0.17</td>
</tr>
</tbody>
</table>

GA: gestational age; IUGR: fetal growth retardation as defined by U' /C' ratio or FGR; MAP: mean arterial blood pressure; CO2: transthoracic PCO2; MAPmax: mean arterial blood pressure; MAP: mean arterial blood pressure; CO2: transthoracic PCO2; *interaction component between MAPmed and IUGR.
Methods of cord care which hasten the happy conclusion of this ritual seclusion. Policy makers should be aware that home cord care kits which prolong the time to cord separation may not be taken up by the target population.

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Cardiac arrest associated with vancomycin in a neonate

EDITOR,-A 13 day old newborn girl was treated for an Escherichia coli infection with a once daily, 20 minute infusion of 150 mg of ceftriaxone. Progress was normal until vancomycin (150 mg) was mistakenly injected intravenously over 20 minutes. Within 10 minutes she stopped breathing and became cyanotic; pulse and cardiac sounds were absent. Bag ventilation with 100% oxygen and chest compressions were immediately started. An endotracheal intubation was performed. The infant recovered within one minute from her cardiac arrest. The evolution during the following 18 months has been favourable.

To our knowledge, four other cases of cardiac arrest after a rapid infusion of vancomycin have been reported involving one adult and three children.1,2 Of these, two infants died. No cardiac arrest in a newborn baby has been described before.

This report of a cardiac arrest in a neonate, after a rapid intravenous infusion of vancomycin, strengthens the usual recommendation that this drug should be administered over a prolonged time. The proportion of young children (four out of five) among the reported cases might suggest that a rapid infusion of vancomycin could particularly lead to a cardiac arrest in this age group. This major side effect of vancomycin could be related to a neuromuscular blockade or a ventricular arhythmia,2 a direct transient depression of the cardiac function,3 or an extreme form of an anaphylactoid reaction.

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Intestinal dilatation in the fetus

EDITOR,-Richards and Holmes have described a series of nine cases with intestinal dilatation in the fetus, all with surgical
teotiology.1 Similar findings are also seen in congenital chloride diarrhoea.2

We admitted a baby girl after delivery, for observation and investigations for similar findings on antenatal ultrasound scan (figure). Physical examination was unremarkable as was a plain x-ray picture of the abdomen. Stools had the consistency of urine and could only be collected with a Foley’s catheter in the rectum. Diagnosis of chloride diarrhoea was confirmed by a stool chloride of 137 mmol/l.3 She responded satisfactorily to adequate fluid and electrolyte replacement.

It is quite easy to confuse the watery stools of congenital chloride diarrhoea with urine and thus miss the diagnosis. In an apparently normal child with a history of intestinal dilatation in the antenatal period, examination of the stools should be done before any invasive procedure such as suction biopsy.

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Antenatal ultrasound scan showing intestinal dilatation.


Predictors of mortality

EDITOR,—Kuint et al have presented the use of the change in a:A ratio from just before dosing to one hour after dosing as a significant predictor of mortality.1 Their basis for recommending this predictor is its correlation with mortality. The traditional measures of the predictive ability of a model for dichotomous outcomes include rates of false positive and false negative results or equivalently, sensitivity and specificity.2 A model that has high predictive power will have low error rates or high specificity and sensitivity and thus correlation close to unity. However, the P value that Kuint et al report corresponds to a null hypothesis that the correlation is zero, whereas prognostic value depends on the correlation being close to unity. Ironically, they present false positive and negative rates from a model studied by Patterson et al,3 and suggest that this model could be improved by the addition of a:A ratio, while failing to provide the same information for their own model. Without these rates, the prognostic value of a:A ratio for mortality cannot be evaluated.

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3 Patterson CC, Halliday HL. Prediction of outcome shortly after delivery for the very low birth weight (<1500 g) infant. Pediat Perinat Epidm 1988; 2: 221-6.

Guidance after twin and singleton death

EDITOR,—In relation to the perinatal death of a twin baby Dr de Kleine and colleagues recommend that all parents should be given a photograph of their babies together, as well as separately.1 Not all parents would feel comfortable about displaying a photograph of a stillborn baby, but an attractive picture of the two babies can readily be created (sometimes from two separate photographs). We would be happy to provide names of artists prepared to do this.

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Pros and cons of antiseptic cord care.

M. Ellis

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