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Effects of repeated indomethacin administration on cerebral oxygenation and haemodynamics in preterm infants: combined near infrared spectrophotometry and Doppler ultrasound study

We have detected an unfortunate error in the calculation of ΔCBV in our manuscript. The correct calculation is:

Changes in CBV (ΔCBV), expressed in ml/100 g, were calculated from the formula $\Delta\text{CBV} = 4 \cdot \Delta\text{ctHb} / 0.69 \cdot \text{cHb}$, where cHb = arterial haemoglobin concentration in mmol/l, 0.69 = cerebral-arterial haematocrit ratio and 4 = correction factor, since ctHb is calculated from changes in light absorption using extinction coefficients based on the tetrahaeme molecule, while cHb determination in blood samples is based on the monohaeme molecule. The corrected ΔCBV values in Table 2 and Fig. 2 are shown below. This correction does not influence the (statistical) interpretation, the essential statements in the discussion and the final conclusion of the study. Only paragraph 4 of the discussion must be replaced by the following comment:

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Table 1 Changes of CBV at 5 and 60 min after indomethacin administration [values are means (SD)]

	ΔCBV (ml/100 g)
<i>After 1st dose</i>	
All infants ($n = 14$)	
at 5 min	-0.31 (0.12)*
at 60 min	-0.32 (0.17)*
<i>After 2nd dose</i>	
All infants ($n = 14$)	
at 5 min	-0.19 (0.13)*, **
at 60 min	-0.20 (0.18)*
- PDA present ($n = 7$)	
at 5 min	-0.16 (0.08)*
at 60 min	-0.20 (0.19)*
- PDA absent ($n = 7$)	
at 5 min	-0.23 (0.17)*
at 60 min	-0.20 (0.18)*
<i>After 3rd dose</i>	
All infants ($n = 12$)	
at 5 min	-0.23 (0.11)*, **
at 60 min	-0.22 (0.20)*
- PDA present ($n = 4$)	
at 5 min	-0.21 (0.10)*
at 60 min	-0.10 (0.16)
- PDA absent ($n = 8$)	
at 5 min	-0.24 (0.12)*
at 60 min	-0.28 (0.20)*

* Significant changes ($P < 0.05$)

** Different from change after 1st dose ($P < 0.05$)

Simultaneously with CBFV reduction after indomethacin administration, a decrease in CBV was observed, which is of the same magnitude as the reduction reported in previous NIRS studies [1, 2].

Fig. 1 CBV changes during 30 min after the first indomethacin dose in a 30-week, 890-g infant

References

1. Edwards AD, Wyatt JS, Richardson C, Potter A, Cope M, Delpy DT, Reynolds EOR (1990) Effects of indomethacin on cerebral haemodynamics in very preterm infants. *Lancet* 335:1491–1495
2. McCormick DC, Edwards AD, Brown GC, Wyatt JS, Potter A, Cope M, Delpy DT, Reynolds EOR (1993) Effect of indomethacin on cerebral oxidized cytochrome oxidase in preterm infants. *Pediatr Res* 33:603–608