Lipid peroxidation as a measure of oxygen free radical damage in the very low birthweight infant

Editor,—We read with interest the paper by Inder et al on lipid peroxidation as a measure of oxygen free radical damage in preterm infants.1 They showed a rise in malondialdehyde detected by the thiobarbituric acid (TBA) test over the first week which was significantly greater in those infants developing chronic lung disease. We have also used the TBA test to detect lipid peroxidation in 131 very preterm infants during the first seven days after birth. Concentrations rose from a median of 2-13 μmol/l (1-63–2-77 range) on day 1 to 3-27 μmol/l (2-49–4-48) on day 7 in those not developing chronic lung disease and from 0-07 μmol/l (1-16–98) to 3-77 μmol/l (2-6–4-21) in the 40 infants who developed chronic lung disease. No significant difference was observed. It is of interest that our values for the TBA test were about 30 times lower than those of Inder et al, in keeping with other published values for the test.2 We used a fluorimetric method, but the HPLC technique used by Inder et al generally gives lower values than the fluorimetric method.3 Until these differences are explained, we cannot accept the authors' findings as evidence for lipid peroxidation in very preterm infants.

R W I COOKE
G A DRURY
G B RUSSELL
Department of Child Health, Institute of Child Health, Royal Liverpool Children's Hospital, Alder Hey, Eaton Road, Liverpool L12 2AP

Dr McIntosh comments:
In our studies using EMLA cream we were attempting to reduce pain and distress (apparently unsuccessfully) in newborn infants receiving heel pricks. The parents were informed that EMLA cream had not been used other than in our own study on neonates, but that it was commonly used and with no problem in older children. We knew about the possibility of methaemoglobinemia but at the time of starting the study there was only one report of this problem in a child who was also receiving a sulphonamide, so we did not believe that we ought to inform the parents of this specific but theoretical hazard.

Lipid peroxidation as a measure of oxygen free radical damage in the very low birthweight infant.

R W Cooke, J A Drury and G A Russell

Arch Dis Child Fetal Neonatal Ed 1994 71: F234
doi: 10.1136/fn.71.3.F234

Updated information and services can be found at:
http://fn.bmj.com/content/71/3/F234.citation

These include:

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/