

To: the Officers of the Michigan Section ACOG

In October 2004, the **Detroit Free Press** published a report on the Cochrane Review **Early versus delayed clamping in preterm infants**. Delayed cord clamping (as opposed to immediate clamping – ICC) prevented intra-cranial bleeding, (IVH brain damage) anemia and the need for blood transfusion in preemies.

At the three previous “Snow” meetings I notified the attendees that ACOG’s widely practiced procedure, ICC, for obtaining a cord pH is injurious to the neonate, has no clinical benefits for the neonate, and is the major causative agent in the following neonatal pathologies:

1. Hypoxic ischemic encephalopathy, (HIE) cerebral palsy (CP) and IVH.
2. Respiratory distress syndrome and hyaline membrane disease
3. Infant anemia, mental deficiency, cognitive and behavioral disorders, ADD, ADHD, autism and ASD
4. Hypotension, oliguria, hypothermia, metabolic acidosis, pallor, persistent fetal circulation, PPH, PFO

In February 2004 I asked the president of MSMS, that MSMS address this problem, and I presented it to physician members of the MSMS neonatal / perinatal practice committee. I have not received the promised reply.

In August 2004, the Michigan Midwives Association (*Expectations* newsletter) published a synopsis of my article from OBGYN.NET “Neonatal Resuscitation: Life That Failed”. Michigan midwives routinely delay cord clamping until the placenta is delivered and routinely avoid all the above complications of ICC.

In September 2004 I presented two papers on this subject to the international annual meeting of the Fetal and Neonatal Physiological Society in Italy. I found that several countries practiced delayed cord clamping (waiting for pulsation to stop is widespread in Spain and South America) and in some Scandinavian hospitals the cord and placenta are left attached to preemies and go with the child to the NICU.

A full explanation of ACOG’s ICC procedure as the causative agent in HIE and cerebral palsy is available at the British Medical Journal’s web site address:

<http://fn.bmjournals.com/cgi/eletters/89/2/F152#539>

following Shah’s article “**Multiorgan Dysfunction in Infants with Post- asphyxial Hypoxic Ischaemic Encephalopathy**”

The American Academy of Pediatrics (AAP) has the following policy statement:

“It has been shown that the timing of umbilical cord clamping has an important effect on the neonatal blood volume and the subsequent hematologic status. If cord clamping is done too soon after birth, the infant may be deprived of a placental blood transfusion, resulting in lower blood volume and increased risk for anemia in later life.”

The Canadian Pediatric Society (CPS) echoes the AAP:

*“To prevent and reduce the severity of anemia ... strategies to consider may include:
Delayed clamping of the umbilical cord ...”*

The pediatricians' concern about infant anemia is that it strongly correlates with learning and behavioral disorders and mental deficiency in grade school children. [1][2] The most certain method of preventing infant anemia and these mental sequelae is to allow the neonate to receive a full placental transfusion – don't clamp the cord. Correcting the anemia with iron or with red cell transfusion does not appear to prevent the later mental consequences; therefore, hypovolemia and cerebral ischemia at birth appear to be the causes of the anemia and the brain dysfunction. There are no documented ill effects of physiological cord closure.

1. The basic causal pathogen in HIE / CP is ischemia – loss of blood flow – visualized on MRI; the lesion produced is an infarct, usually of the basal ganglia and / or cerebral cortex.
2. In preemies, IVH is visualized on MRI as a hemorrhagic infarct of the germinal matrix – ischemic necrosis with bleeding into the ventricle.
3. Massive blood loss results in severe anemia and ischemia.
4. Infant anemia is associated with mental deficiency, learning and behavioral disabilities in later childhood.
5. ICC may cause massive blood loss and anemia (loss of placental transfusion.)
6. ACOG no longer publishes Bulletins 138 and 216 that advocated ICC for cord pH.

Since publication of the Cochrane (peer) review, ICC has been medico-legally linked to neonatal anemia, blood transfusion and brain damage. Any brain damaged / mentally deficient, and anemic / transfused neonate that has a cord pH on the chart is very subject to litigation regarding the time of cord clamping and its consequences.

A normal, full placental transfusion is available at every birth by delaying cord clamping until all cord pulsation has ceased; this will prevent anemia, hypovolemia and ischemia – and their complications. It would seem ethically prudent for the Michigan ACOG officials to advise all Michigan obstetricians about the hazards of clamping a pulsating cord before lawyers begin to do so.

References:

1. Lozoff B. Jimenez E. Wolf AW. Long Term Development Outcome in Infants with Iron Deficiency. N Eng J Med 1991; 325: 687-94.
2. Hurtado EK et al. Early childhood anemia and mild to moderate mental retardation. Am J Clin Nut. 1999; 69(1): 115-9.

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