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The Coroners Registrar
Coroners Court of Victoria
Level 11, 222 Exhibition Street
Melbourne, Victoria 3000



Dear Briley Miller

Re: Investigation into the death of Tyler Reading-Adams (Court Ref: COR 2007 004502)
Response to Coroner's Recommendation

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) welcomes the opportunity to respond to the recommendation relevant to the College resulting from the Coronial findings without inquest into the death of Tyler Reading-Adams.

Recommendation Five:

The Consultative Council on Obstetrics and Paediatric Mortality and Morbidity and the Royal Australian and New Zealand College of Obstetricians and Gynaecologists publish the statistical information that becomes available from the Victorian Perinatal Data Collection as a way of encouraging obstetricians and midwives to consider how they can minimise the risks associated with true knots and other umbilical cord complications in otherwise non-concerning births.

This recommendation is contingent on data being made available in the future by the Victorian Perinatal Data Collection. The College regards as important all matters pertaining to minimising risks around childbirth. As such, the College, through its Women's Health Committee, will review this information as it becomes available; with consideration to be given at that time to publishing the data on the College website as per the above recommendation.

The College notes data from already published material regarding the incidence of cord complications in cases of perinatal death relative to good outcomes and is also of the view that the Victorian Data is unlikely to differ dramatically from this. As referenced below, approximately 1.2% of pregnancies are complicated by true knots. Of these, approximately 1 in 50 may have a perinatal death as a result with an unknown but probably lower incidence of non-lethal adverse outcome. Approximately 14% of pregnancies have nuchal cord encirclements of which only a very small number (probably less than 1 in 1,000 of those with encirclements) will experience a term perinatal death as a consequence (MacLennan et al 1988; Mastrobattista et al 2005).

Two approaches are possible:

- a. Improve antenatal diagnosis of cord complications and develop guidelines for management of those pregnancies with encirclements or knots.

Screening programs for cord encirclement have not been adopted in any country that the College is aware of, and potentially create a number of logistical problems that have the potential to overwhelm imaging and obstetric resources. Prenatal diagnosis of a true umbilical cord knot is very challenging (Rodriguez et al, 2012) and whilst the diagnosis of an encirclement is more feasible, specific actions as a consequence of that finding are difficult – given the low incidence of clinical sequelae as referred to above.

OR

- b. Ensure that all maternity guidelines are cognisant of a very low but important number of pregnancies with cord complications that may lead to adverse outcomes in pregnancy or in labour.

This is the approach taken currently by RANZCOG with guidelines that support:

- i. Antenatal fetal surveillance and, in particular, maternal attention to fetal movements through the third trimester of pregnancy.
- ii. Intrapartum fetal surveillance and in particular the option of admission CTG and continuous electronic fetal monitoring for those women who are accepting of increased obstetric procedures in order to minimise as far as possible the risk of adverse obstetric outcome from unanticipated cord complications in labour.

The additional advantage of the latter approach is that it will also encompass other causes of late pregnancy death and disability such as undiagnosed placental insufficiency.

Again, I thank you for the opportunity for the College to respond and am available should you wish to discuss further any aspect of this correspondence.

Yours sincerely



Michael Permezel

President

References:

1. Airas U, Heinonen S. Clinical significance of true umbilical knots: a population-based analysis. *Am J Perinatol.* 2002 Apr;19(3):127-32.
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3. McLennan H, Price E, Urbanska M, Craig N, Fraser M. Umbilical cord knots and encirclements. *Aust N Z J Obstet Gynaecol.* 1988 May;28(2):116-9.
4. Rodriguez N, Angarita AM, Casasbuenas A, Sarmiento A. Three-dimensional high-definition flow imaging in prenatal diagnosis of a true umbilical cord knot. *Ultrasound Obstet Gynecol.* 2012 Feb;39(2):245-6. doi: 10.1002/uog.11075.
5. Mastrobattista JM, Hollier LM, Yeomans ER, Ramin SM, Day MC, Sosa A, Gilstrap LC. Effects of nuchal cord on birthweight and immediate neonatal outcomes. *Am J Perinatol.* 2005 Feb;22(2):83-5.