Reviewer's report

Title: Factors associated with tocolytic hospitalizations in Taiwan: evidence from a population-based and longitudinal study from 1997 to 2004

Version: 1 Date: 9 May 2009

Reviewer: Cecily M Begley

Reviewer's report:

This is a well-written paper that will contribute to the literature on preterm labour, if some essential changes are made. The methods used in this study are appropriate and well described and the data appear sound and useful. The discussion and conclusions are, in the main, supported by the data but reference needs to be made to other published, modern literature in the discussion section.

Major Compulsory Revisions

Abstract

1) The use of tocolytic hospitalization in antenatal care is certainly controversial but I do not think one could say that it was “understudied”, so this would need to be changed in the abstract.

2) “The decline in fertility significantly increased the probability of tocolytic hospitalizations” is too strong a statement, based on the data. Including the decline in fertility in with the other factors that are listed as “associated with” hospitalization would be better.

Background and discussion

3) There is a wealth of literature on this topic, but much of it has been omitted from the paper. In general, the references quoted appear to be rather dated. For example, seven of the ten refs in the initial review (2-11) are from 1992-1999. Other, more modern refs would also be appropriate here e.g. Parry et al 2006, Fox et al 2007, Gilbert 2008, Parant et al 2008. (If the authors wish to indicate the state of research prior to the conduct of the study, i.e. 2004, then it may be acceptable just to include more up-to-date work up to 2004, but the other studies should then be included in the discussion).

4) The references to support the statement “antenatal hospitalizations with a pregnancy-related diagnosis impose significant health, economic, and psychosocial burdens on pregnant women” are from 1996 and 1987! These are too old, especially given that the authors are writing about economic and psychosocial costs that will have changed over the 1-2 decades since the papers referred to were published. The Cochrane review by Sosa et al 2004 might be a suitable replacement.

5) “Tocolytic treatment, which uses pharmacologic agents to inhibit uterine
contractions and to prevent delivery before the completion of 37 weeks of gestation, is touted to reduce perinatal morbidity and mortality associated with threatened preterm labor” – needs a reference to one, or more, of the many Cochrane reviews on this topic.

6) The reference quoted for the decline in fertility rate is a secondary one, and is also out of date, based on a fertility rate in 2004. The fertility rate in Taiwan was 1.1 in 2007 (statistics obtained from the governmental website http://eng.stat.gov.tw/public/Data/87311841271.pdf). (I appreciate that the data were collected up to 2004, so perhaps a fertility rate of 2004 is appropriate to quote, but it should come from the government statistics and be followed by a reference to the latest (2007) rate, to indicate that this is still a factor of interest.)

7) Re “evidence that for women with preterm labor, tocolysis is frequently unnecessary, often ineffective, and occasionally harmful” - one reference quoted is from 1973, and all three are single studies or opinion pieces. That is not really convincing evidence. There are a number of Cochrane reviews on this topic and they need to be read in detail and used throughout this paper as they contain the best evidence available at present.

8) “Other options to constrain overutilization include the application of technology (e.g., the use of testing such as fetal fibronectin)” - the authors would need to refer to recent reviews on this topic such as that by Smith et al (2007).

9) One major limitation of the work that needs to be clearly stated is that these data stem from 2004, five years ago, and much may have changed since then.

Discretionary Revisions
Following a thorough perusal of the Cochrane reviews, the authors may wish to change, re-word or adapt their conclusions.

Minor Essential Revisions
Second line of results “tcolytic” needs an “o”

Parant O et al Management of threatened preterm delivery in France: a national practice survey (the EVAPRIMA study) BJOG 2008; 115 (12): 1538-1546

Gilbert WM The cost of preterm birth: the low cost versus high value of tocolysis. BJOG 2006; 113 (Suppl 3): 4-9


Parry E. et al Improved management in threatened preterm labour with rapid fetal fibronectin testing Aust N Z Obstet Gynaecol 2006; 46(3): 240-1


**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

'I declare that I have no competing interests'