Reviewer's report

Title: Determinants of mastitis in a cohort of Australian breastfeeding women

Version: 1 Date: 13 September 2006

Reviewer: Suzanne Filteau

Reviewer's report:

General

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

The paper is well written and clear and provides information about mastitis incidence among a large cohort of women followed prospectively for this purpose. As such, it provides a useful addition to the literature on prevalence and timing of mastitis. However, in the end the results do not allow us to learn anything further about the ‘determinants’ of mastitis which the title advertises. This is partly because that is just how the results turned out but it is likely that with a bit more information provided, detailed below, the authors might be able to address ‘determinants’ a bit more. If not, they should change the title to reflect that the paper is more about the incidence of mastitis.

The first sentence of the abstract states three factors associated with mastitis: milk stasis, nipple damage, and maternal fatigue. However, only nipple damage is discussed further in the paper. Did the authors collect any information about maternal fatigue or mood, eg. using the Edinburgh Postnatal Depression Scale in the early postpartum period or one of the other published quality of life indicators? I am not sure it would have possible with a single telephone interview to get information about milk stasis although perhaps they collected some information about symptoms which could be interpreted as milk stasis. If they are not going to discuss particular determinants, they should not mention them at the top of the abstract where they appear to be aims of the research.

The ABFAB trial was a randomised controlled intervention of breastfeeding education. A brief mention of the content of the education would be helpful. Since the intervention groups are included together in the results, I am assuming the intervention made no difference to mastitis rates; if that is the case, it should be explicitly stated. The lack of benefits of the intervention for mastitis, as well as for initiation and duration of breastfeeding, is disappointing but should be mentioned if only to help other researchers and clinicians know what does not work in such a situation. In this regard, the nature of lactation counselling and support provided at all 3 trial sites should be described.

Since the majority of women were still breastfeeding at the 6 month data collection point, it is misleading to quote median breastfeeding duration, even with the proviso mentioned on p6. Figure 1 provides sufficient information about breastfeeding duration and since duration is not actually the outcome of interest in this paper. It would be best to remove all reference to median duration of breastfeeding in the paper (i.e. also Table 2).

It seems slightly odd to include pain as one of the predictors of mastitis since pain is part of the presentation of mastitis. It should not have been included in the multivariable analysis for the same reason nipple thrush was not included (p8).

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

The definition used for mastitis in this study is in the Results section of the abstract but really belongs in the Methods.

On p4, under sample size, it is not clear whether 270 women needed from ‘each group’ refers to each of the 3 trial centres or whether, as seems from the number eventually recruited, the birth centre and the private
hospital were being considered together as one 'group'. Please clarify the wording and, if the aim was 270 in each of 3 centres, perhaps this section should be completely rewritten to reflect the numbers of women actually available. Note that sample size calculations to compare with the ABFAB trial could take advantage of the large number in that arm and consider two ‘controls’ per ‘case’.

In Table 4, in order for the table to stand alone, the statistics mentioned on the top of p8 could be included in a footnote.

On p9, last line of first paragraph, it is not necessary to give both the actual P value of 0.22 and state that this was greater than 0.01; the actual value alone is sufficient.

Discretionary Revisions (which the author can choose to ignore)

No doubt the authors were disappointed that they could not figure out why women in the birth centre and private hospital had more mastitis. Did they not collect any information that might shed some light on this, eg, feeding intentions during pregnancy, attitudes towards breastfeeding, content and quality of lactation counseling, exclusivity of breastfeeding especially during the first few weeks, actual breastfeeding practices, having a caesarean section? In other words, although these may have been unplanned analyses and should be indicated as such, they could provide useful information.

Some paragraphs in Results seem in an odd order and the flow might be improved by cutting and pasting a bit. The paragraph on p7 beginning ‘A Kaplan-Meier …’ could be moved to the top of that page (i.e. to be the second paragraph of Mastitis Results) where it not only fits better but also then does not break the logical flow between the paragraphs currently before and after it.

I realise space limitations are not a major concern in an online journal but it does seem redundant to have the same results presented in Table 3, Figure 2, and the text on p7. The figure is good so perhaps the table could go.

One possibility postulated in the background for the higher incidence of mastitis among women delivering at private facilities is their longer duration of breastfeeding. The incidence density analysis suggests this is not the case but the authors rather gloss over this important result in both the abstract and discussion (p10).

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests.