



## Review

## Childbirth pain and postpartum depression

S.C. Kwok<sup>a</sup>, D. Moo<sup>a</sup>, S.T. Sia<sup>b</sup>, A.S. Razak<sup>a</sup>, B.L. Sng<sup>a,\*</sup><sup>a</sup> Women's Anaesthesia, KK Women's and Children's Hospital, Singapore<sup>b</sup> Barts and The London School of Medicine and Dentistry, Queen Mary University of London, UK

## S U M M A R Y

## Keywords:

Pain  
Depression  
Caesarean  
Epidural analgesia

Childbirth pain is one of the most painful experiences of a mother's life. In this review we investigate the association between childbirth pain and postpartum depression. It is well documented that postpartum depression is an increasing concern which affects not only the mother but can impact the newborn's development. Multiple factors seem to contribute to the likelihood of this depression developing such as the mother's socio-economic background, age, education level, history of childhood abuse as well as the presence of pain catastrophizing traits. Severe acute pain is linked with an increased risk of chronic pain as well as postpartum depression and so it is essential that childbirth pain be managed effectively and in a timely fashion. With this increasing knowledge, we explore the methods used to minimise the risks factors thereby reducing the occurrence of postpartum depression.

© 2015 Elsevier Ltd. All rights reserved.

## 1. Introduction

Childbirth pain management is an integral aspect and concern for the obstetric anaesthetist.<sup>1</sup> There is increasing evidence that effective acute pain management is crucial with long term sequelae if pain is not treated adequately.<sup>2,3</sup> In the case of pregnancy and childbirth, a significantly stressful and painful period for mothers, poor childbirth pain management may be associated with consequences on a mother's psychological well-being, which may lead to persistent pain and postpartum depression. There are broadly two main aspects of pain management<sup>1</sup>: labour and delivery pain management and<sup>2</sup> anaesthesia and analgesia for caesarean section.

Postpartum depression is a significant morbidity that affects the health of mothers and their newborns and is associated with long term psychological and socio-economic implications.<sup>4</sup> Clinical presentations of major depression may include low or depressed mood, insomnia, weight loss or weight gain, psychomotor agitation or retardation, feelings of worthlessness and guilt, low self-esteem, difficulties in concentration and suicidal tendencies.<sup>5</sup> The strong predictors of postpartum depression are depression during pregnancy, anxiety during pregnancy, experiencing stressful life events

during early and advanced pregnancy, low levels of social support and a previous history of depression.<sup>6</sup> Stressful childhood experiences such as physical and sexual abuse also increase the affinity of neural networks in the central nervous system involved in the regulation of stress and emotion to subsequent stress, making individuals more vulnerable to stress and consequently at an increased risk of depression in their adult lives.<sup>7</sup>

The incidence of postpartum depression varies between studies depending on the period of survey and population investigated. Verreault et al. reported that the rate of depressed mood was 28.3% during pregnancy and 16.4% at 3 months postpartum.<sup>8</sup> Among women with postpartum depressed mood, 6.6% were new cases. Ding et al. reported an incidence of 24.3% at 6 weeks postpartum<sup>9</sup> while other studies have reported an incidence of between 7% and 15%.<sup>10,11</sup> In O'Hara and Swain's meta-analysis,<sup>12</sup> the average prevalence of postpartum depression, which can vary in severity and prognosis, was 13% based on 59 pooled studies. Major factors affecting the observed prevalence included method of assessment (larger estimates if self-report measures used), as well as the duration under evaluation (longer postpartum periods predict higher prevalence). Other possible reasons include differences in characteristics of these new mothers namely their age, education level and socio-economic situation, as well as the local health services available such as the use of labour analgesia.<sup>9</sup>

The causes of postpartum depression are likely to be multifactorial.<sup>13,14</sup> Both psychological and biological factors contribute to postpartum depression.<sup>15</sup> Animal studies have suggested that

\* Corresponding author. KK Women's and Children's Hospital, 100, Bukit Timah Road, Singapore 229899, Singapore. Tel.: +65 63941081; fax: +65 62912661.

E-mail addresses: [kwoksa@gmail.com](mailto:kwoksa@gmail.com) (S.C. Kwok), [daphnemoo@gmail.com](mailto:daphnemoo@gmail.com) (D. Moo), [seansiatjunan@gmail.com](mailto:seansiatjunan@gmail.com) (S.T. Sia), [anisasuraya96@hotmail.com](mailto:anisasuraya96@hotmail.com) (A.S. Razak), [sng.ban.leong@kkh.com.sg](mailto:sng.ban.leong@kkh.com.sg) (B.L. Sng).

changes in hormonal and neurotransmitter concentration can modulate anxiety during pregnancy.<sup>16</sup> Pregnancy alters chemical neurotransmitter regulation of the human brain gamma-aminobutyric acid (GABA), norepinephrine and prolactin, which may play a significant role in the changes in vulnerability to anxiety and depression during pregnancy and postpartum period.<sup>17</sup> The reduced ability in handling stress and depressive mood due to regulation of neurotransmitters in the human brain suggests a biological mechanism of disease in postpartum depression. Studies have also demonstrated that women with early stages of postpartum depression are extremely sensitive to the huge reduction of gonadal steroid levels that occurs at birth, which further compounds the risk of major depressive disorder [MDD] on top of the pre-delivery risk factors.<sup>18,19</sup>

## 2. Consequences of postpartum depression

The prompt detection of maternal mood deterioration is of utmost importance because it may have a negative impact on mother-infant attachment and may inhibit the development of the newborn.<sup>20–23</sup> Depressed mothers are more likely to demonstrate inappropriate maternal behaviours such as smoking tobacco or failing to restrain their infants into adequately sized car seats, leading in medical and safety issues.<sup>24,25</sup> Furthermore, maternal depression is associated with a higher incidence of behavioural issues as well as cognitive impairment in infants and children.<sup>26–30</sup> Postpartum depression has been shown to significantly impair the quality of mothers' lives up to four months postpartum. This has led to the recommendation that postpartum depression screening be fully integrated into routine postnatal care.<sup>31</sup>

As few as 18% of women who meet the criteria for MDD seek treatment during pregnancy and in the postpartum period.<sup>25</sup> This could be because common symptoms of depression such as insomnia, loss of appetite and energy are interpreted as expected experiences of pregnancy. In a study comparing maternity mortality statistics in Finland, France and the American states of Massachusetts and North Carolina, Gissler et al. also showed that out of 151 pregnancy-related deaths, ten were due to suicide in mothers with postpartum depression.<sup>32</sup>

As postpartum depression usually occurs with the entry of a newborn into the family, it is not surprising that exposure to postpartum depression increases the child's vulnerability to depression in the later stages of life.<sup>33</sup> Therefore strategies such as the screening for depressive symptoms and self-harm ideation could have a substantial, multigenerational public health impact.<sup>11</sup> Early detection of these conditions can also help avoid or minimize the use of pharmacological therapies to treat the psychological problems that children may face in the future, which carry potential side effects.<sup>34</sup>

## 3. Significance of childbirth pain

Labour pain is one of the worst pain experiences a woman will suffer in her lifetime.<sup>35</sup> As high as 60% of first time mothers have described their pain as "severe" or "extremely severe".<sup>36</sup> In one study by Soet et al.,<sup>1</sup> a correlation was found between labour pain and the development of posttraumatic stress disorder and approximately 34% of parturients rated their childbirth experience as traumatic. This suggests a strong stress stimulus can inflict severe adverse neuropsychological consequences on labouring mothers. In addition, the prevalence of persistent pain at 8 weeks after delivery was reported at 10% (95% CI, 7.7–12.3) following vaginal delivery and 9.2% (95% CI, 5.5–12.6) after Caesarean delivery in the study by Eisenach et al.<sup>37</sup> Of these women who reported persistent pain, 36–60% had constant or daily pain, and

almost 50% of women complained of pain interfering with activities of daily living. Mood and sleep were also negatively affected in 33–50% of these women. Persistent childbirth pain can hinder a mother's ability to cope with the numerous stresses that are present after delivery. However, the consequences of childbirth pain may be underestimated as in general mothers do not reveal such issues readily due to embarrassment or difficulties in expressing themselves even though they may desire more guidance and help.<sup>38,39</sup> In an Australian study by Brown et al., 94% of women reported one or more health problems such as backache and perineal pain after childbirth, but up to 25% of these women did not talk to their healthcare professional about these problems. Among those who reported postnatal health issues, as high as 49% of them verbalized that they would have liked more help or advice.<sup>38</sup>

Boudou et al. have postulated a link between the intensity of labour pain and the intensity of mood disorders in the early postpartum period.<sup>40</sup> Knowing that intense labour pain is a risk factor for these mood disorders could improve their detection and focus attention on the psychological impact of labour and subsequent risk of post-traumatic stress disorders. In women without a previous history of depression, it was found that physicians' diagnoses of fear of childbirth and fear of Caesarean section were associated with postpartum depression.<sup>41</sup> Dysphoric emotions were especially associated with affective dimension of pain, suggesting that women distressed by childbirth pain would be at increased risk of developing posttraumatic stress symptoms.<sup>42</sup>

## 4. Labour pain and postpartum depression

In a recent study, Ding et al. reported that epidural labour analgesia is associated with a decreased risk of postpartum depression (odds ratio [OR] 0.31, 95% confidence interval [CI], 0.12–0.82,  $P = 0.018$ ).<sup>9</sup> Postpartum depression occurred in 14.0% (15 of 107) of parturients who received epidural labour analgesia and in 34.6% (37 of 107) of those who did not ( $p < 0.001$ ). In addition, attendance at childbirth classes during pregnancy (OR 0.30, 95% CI, 0.12–0.79,  $p = 0.015$ ) and continued breast-feeding after delivery (OR 0.02, 95% CI, 0.00–0.07,  $P < 0.001$ ) were associated with decreased risks of postpartum depression. A high Edinburgh Postnatal Depression Scale [EPDS] score at 3 days postpartum was associated with an increased risk of postpartum depression (OR 1.20, 95% CI, 1.05–1.37,  $p = 0.009$ ). However, when EPDS score and breastfeeding was excluded from analysis, epidural labour analgesia remained an independent predictor of decreased risk of postpartum depression at 6 weeks (OR 0.35, 95% CI, 0.14–0.86,  $p = 0.02$  and OR 0.30, 95% CI, 0.14–0.65,  $p = 0.002$ , respectively). When all variables were included in the model, epidural analgesia also remained an independent predictor of decreased risk of postpartum depression (OR 0.32, 95% CI, 0.11–0.89,  $p = 0.02$ ).

The association between not breast-feeding and postpartum depression can be explained in 2 ways<sup>1</sup>: women with depressive symptoms immediately after delivery are less likely to attempt nursing and have a higher tendency to stop breast-feeding early, and<sup>2</sup> early discontinuation of breast-feeding is associated with increased severity of postpartum depression.<sup>43,44</sup> Previous studies have demonstrated that breastfeeding promotes high levels of prolactin in the maternal circulation,<sup>45</sup> which has been shown to minimize distress and low moods in new mothers.<sup>46</sup>

Interestingly, studies by Hiltunen and Eisenach suggest that the mode of delivery does not affect postpartum depression.<sup>37,47</sup> Hiltunen demonstrated that Caesarean delivery did not increase the risk of high EPDS scores when compared with vaginal delivery in the first week or at 4 months postpartum. These findings were

Download English Version:

<https://daneshyari.com/en/article/2772550>

Download Persian Version:

<https://daneshyari.com/article/2772550>

[Daneshyari.com](https://daneshyari.com)