

Is There Evidence for the Use of Acupuncture in Postpartum Depression?

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ABSTRACT

Postpartum depression is a significantly debilitating condition that affects up to 12% of women, resulting in immense distress to the mother, child, and family. Conventional therapy involves the use of psychotherapy and antidepressant medications. Nevertheless, more women are turning towards alternative medicine such as acupuncture due to recent research citing its effectiveness and reduced potential for adverse effects. This paper reflects on the current evidence for the use of acupuncture as monotherapy, the challenges encountered in acupuncture research and its effectiveness as adjunctive therapy in postpartum depression.

RÉSUMÉ

La dépression post-partum est une condition débilitante importante qui affecte jusqu'à 12% des femmes, entraînant une détresse immunitaire pour la mère, l'enfant et la famille. La thérapie conventionnelle implique l'utilisation de psychothérapie et d'antidépresseurs. Néanmoins, plus de femmes se tournent vers la médecine alternative comme l'acupuncture en raison de la recherche récente citant son efficacité et sa réduction du potentiel d'effets indésirables. Cet article se penche sur les preuves actuelles de l'utilisation de l'acupuncture en monothérapie, les défis rencontrés dans la recherche en acupuncture et son efficacité en tant que thérapie d'appoint dans la dépression post-partum.

A 27-year-old new mother of a 4-month-old son reports severe fatigue, loss of interest, poor concentration, insomnia, low energy, and tearfulness that has lasted for 3 months. She had similar symptoms for several weeks when she was 18 and was diagnosed with depression and treated on citalopram. She is concerned with the effects of antidepressant medications on breast-feeding and has read online about the benefit of acupuncture in relieving depression as a safer alternative. What would you advise?

INTRODUCTION

For many women, the idea of becoming a new mother is a time of celebration but for some it can also be a time of stress, fear and despair. Postpartum depression (PPD) is a common and debilitating condition with a prevalence of approximately 12%, with the highest rate of occurrence in the last two trimesters [1]. PPD is a diagnosis classified within the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) as a major depressive episode with "peripartum onset if onset of mood symptoms occurs during pregnancy or within 4 weeks following delivery" [2]. Clinically, this period is more variably defined and can include depressive episodes that last up to one year after childbirth [3]. Symptoms of postpartum depression often include decreased mood and mood swings, excessive crying, withdrawal from

family and friends, appetite problems, insomnia, worthlessness, fatigue, and irritability [2]. Rapid decline in levels of reproductive hormones and changes in neurotransmitters, including serotonin (5-HT), norepinephrine (NE), dopamine (DA), and endorphins is thought to contribute to development of symptoms [3]. Pregnancy and postpartum are associated with marked alterations to the mother's hypothalamic pituitary adrenal and hypothalamic pituitary gonadal axes, which subsequently alter levels of corticosterone, estrogen, and progesterone [3].

Postpartum depression is a significant mental illness that impacts not only the affected mother but also the fetus and child. PPD can directly interfere with a child's attachment with the caregiver and their physical and psychosocial maturation. Moreover, women with PPD are at increased risk for smoking, alcohol and illicit substance abuse [4,5]. The aim of this paper is to explore the current evidence for the use of acupuncture as monotherapy in PPD, the challenges encountered in acupuncture research and its effectiveness as adjunctive therapy in women with PPD.

MAINSTAY THERAPY

Given the high prevalence and severe consequences of PPD, prompt recognition and management is paramount. To date,

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there have been four randomized control studies that have evaluated the use of antidepressant medications on PPD [5]. In one landmark trial, 87 women were randomized into four groups: those receiving fluoxetine or placebo, plus one or six sessions of cognitive behavioural therapy (CBT) [6]. Greater reduction in depressive symptoms was observed in the fluoxetine group compared to placebo medication, with greater improvement in the 6-session CBT group [6].

Despite the efficacy in selective serotonin reuptake inhibitor (SSRI) use for PPD, many mothers are reluctant due to the potential effects of antidepressant medications on breastfeeding. Young infants are particularly vulnerable to drug effects as a result of their newly developing hepatic, renal, and nervous systems [5]. There is a relative paucity in research regarding the effects of antidepressant medications in breast milk and it is recommended that non-pharmacological modalities be employed when possible. Of the existing SSRIs, several reviews indicate that sertraline and paroxetine are least detectable in infant plasma following breast-feeding [5]. Contrastingly, fluoxetine and citalopram have higher penetration in the infant's plasma following breast-feeding and are more likely to be associated with adverse effects including gastrointestinal problems, respiratory issues, sleep disturbances, and seizures [7-9].

EVIDENCE FOR ACUPUNCTURE

A growing percentage of the population is seeking alternative therapies to antidepressant medications and recent research has suggested some preliminary evidence regarding the use of acupuncture. Acupuncture, a Traditional Chinese Medicine technique, involves inserting needles into the skin with the aim of restoring physiological imbalances within the body via stimulation, either manual or electrical, at various acupoints [10]. Psychiatric symptoms of depression are thought to be associated with neurotransmitters 5-HT, NE, DA, and endorphins and also dysregulation of the hypothalamic-pituitary-adrenal axis [5]. Though the mechanism is not fully elucidated, acupuncture has been shown to influence the neuroendocrine and immune system and regulate levels of 5-HT, NE, DA, endorphins, and glucocorticoids thereby modifying existing neural functioning [5]. A review by Wu et al. in 2012 identified 114 reports of acupuncture use in depression, including 53 randomized control trials (RCTs), 17 simple RCTs, 12 animal studies, 6 theoretical articles, and 30 review articles [11]. In an article in the *Journal of Obstetrics and Gynecology*, the utility of acupuncture specific to postpartum depression was evaluated [12]. 150 pregnant women

who met DSM criteria for major depressive disorder were randomly allocated to one of 3 groups: acupuncture treatment specific for depression, control acupuncture group, or massage. The authors concluded that women who received acupuncture specific for depression at 8 weeks experienced greater reductions in symptom severity as evaluated by the Hamilton Rating Scale [12].

Despite these promising results, there are several noteworthy limitations that apply not only to this study, but trials evaluating the efficacy of acupuncture in the clinical setting at large. First, it is often difficult to institute a proper sham control that is entirely inert. Most acupuncture sham designs assume that variations in needling parameters such as depth, placement, and stimulation influence the clinical response [10]. As such, more superficial needling or placements at non-acupoints would theoretically result in no clinical benefit and constitute a reasonable control. However, no study thus far has examined whether these parameters may indeed play a therapeutic role, and thus researchers are handicapped by a lack of a standardized sham group. Implementing the above sham control group would further supplement the validity of future acupuncture trials. Moreover, it is difficult to institute a double blind study since patients who do not believe in the efficacy of acupuncture are unlikely to partake in a study involving the technique. Likewise, since acupuncturists are the investigators providing the therapy, they will be aware if they are performing a sham or real procedure. Lastly, most studies to date are limited by a relatively small sample size and plagued with low statistical power, thus further large-scale, multi-center studies are required [11].

ACUPUNCTURE AS ADJUNCTIVE THERAPY

Given the efficacy and wealth of research devoted to antidepressant medications, it is difficult to dispute their role in treating postpartum depression. Nevertheless, higher doses of medication often increase side-effect profile including weight gain, nausea, drowsiness, insomnia, and sexual dysfunction, which subsequently reduces patient adherence [5]. Acupuncture has been employed with reasonable efficacy in managing physical symptoms including nausea, vomiting, and weight gain [13,14]. A Cochrane review on the effect of acupuncture in controlling nausea and vomiting following chemotherapy and pregnancy showed that P6 stimulation was superior to antiemetic medication for nausea and equivalent for vomiting [15].

Likewise, in another study on postpartum depression, the ther-

apeutic effect of acupuncture was assessed in conjunction with standard psychological intervention [16]. 43 patients were randomly allocated to the treatment group who received acupuncture in addition to psychological therapy, whereas the control group received oral fluoxetine hydrochloride. At six weeks the patients were scored using the Hamilton depression scale, which demonstrated effective outcomes in both groups, but no significant difference between the two. Adverse effects were observed in the control group, however, with five reporting nausea, dizziness and poor appetite. The reported side effects were not evident in the treatment group [16]. Hence for PPD, there is relative evidence that acupuncture is a useful adjunct to conventional care. It is worthwhile exploring the combination of acupuncture with medication therapy to see if there is evidence for augmented effects and if the technique is able to mitigate adverse effects of conventional antidepressants.

CONCLUSIONS

Revisiting our case example, given the concern for the use of antidepressants and their side effects on breastfeeding, evidence based medicine suggests the use of sertraline and paroxetine. Nevertheless, when it comes to the use of acupuncture, much of the existing evidence from studies using randomized control trials for acupuncture in PPD have a relatively limited sample size and homogeneity. Given the lack of rigorous sham control and repeatability, it is too early to recommend the use of acupuncture as a single treatment modality in patients with postpartum depression. However, it is undeniable that observable benefits can be cited based on small-scale studies warranting further research.

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