SHOULD WE ROUTINELY SCREEN FOR PERINATAL DEPRESSION?

By Rajan Nimalanathan

4th Year Medical student

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Introduction

Despite considerable advancements in maternal health and clinical outcomes, psychiatric complications have emerged as a major precipitating factor of maternal death in recent years.[1] Epidemiological data illustrates that approximately 10 to 15% of women experience a clinically significant depressive episode during pregnancy or the early postpartum period, while a significant proportion of depressed mothers go on to develop persistent or recurrent depressive symptoms.[2,3] A shift in approach from the narrow concept of postnatal depression to a broader spectrum of depressive and anxiety disorders in the perinatal period which encompasses pregnancy and the first year postpartum, has enabled research to focus on prevention and early intervention. In addition to the distress and impairment experienced by depressed women, depression during this time period has been attributed with further adverse physical, emotional, behavioural and cognitive outcomes for the child.[3] Wider social implications involve breakdowns in family life, time of work and older siblings having to shoulder heavier responsibilities. Hence, given the prevalence of perinatal depression and the adverse effects it has on women, their children and society as a whole, the early intervention and management of this disorder may have important public health implications for the future.

Implications for Maternal and Child Health

An estimated 5 to 14% of women have thoughts of self-harm during pregnancy or post-partum with suicide accounting for up to 20% of post-partum maternal deaths.[4] It is evident that during the third trimester of pregnancy, the prevalence rates of raised Edinburgh Postnatal Depression Scale or EPDS scores[5] are similar to those seen in the first few weeks postpartum suggesting a continuation of pre-existing symptoms into the postnatal period.[6,7,8] This evolution into a chronic depressive state may evoke the more severe condition of puerperal psychosis and has been associated with a trajectory of negative outcomes for the developing infant.[9,10] Hence, these findings highlight the importance of early intervention strategies to minimise the long-term suffering endured by mothers and to thwart any subsequent negative outcomes for their child.

The impact of untreated perinatal depression on the foetus has been shown to induce a myriad of adverse effects including an increased risk of low birth weight [11,12,13] and preterm delivery,[14] while

less well established links include bleeding, maternal hypertension[15] and spontaneous abortion.[16,17] In addition to the physical complications, perinatal depression can also impede on mother-child interaction, leading to maternal disengagement, reduced likelihood of breast feeding, poor sleeping practices and fewer positive enrichment activities like reading, singing and storytelling.[18,19,20] This can have serious implications for the behavioural and cognitive development of the infant which may manifest in psychopathology during adolescence. Interestingly, a recent study by Pawlby *et al* demonstrated that perinatal depression is associated with an increased risk of childhood maltreatment.[21] This may generate a circumvolutory pattern whereby physical or sexual abuse as a child can predispose to psychopathology later in life. However, it is important to note that maternal depression is only an additive risk factor for adverse affects to the child and not a definitive antecedent, due to paucity in data and confounding variables like socio-economic status, co-morbidities and postnatal events.

Evidence suggests that poor pregnancy outcomes are precipitated more by depressive symptoms in women already at higher risk. For example, a study by Hoffman *et al* demonstrated that in the overall study sample there was no significant association between depression scores and foetal growth, however among study participants from lower occupational status households, higher depression scores correlated significantly with lower birth weights.[13] Interestingly, there is also some incongruity between different ethnic groups with a significant association between depression scores and preterm birth in African-American but not white mothers.[13] It seems likely that Perinatal depression may differentially affect women from an array of cultural or socio-economic groups. Further work by Halbreich and Karkun (2006) involved a review of 143 studies into perinatal depression across 40 countries and found a broad range of prevalence rates across different continents.[22] This may be posited by factors like biological vulnerabilities, poverty, stress, protective factors like social support, levels of stigma and conceptualizations of mental illness. Strikingly, a recent survey of 2000 new mothers in the UK found that 49% of women who suffered with postnatal depression had not sought professional treatment. The most common reasons for this was due to mothers not being aware of their diagnosis and the stigma associated with mental illness in pregnancy.[23] These results illustrate the fundamental need for patient education, public awareness campaigns and early screening strategies to enter patients into intervention pathways.

Screening for Perinatal Depression

A Key public health question is whether or not the evidence supports a screening program for depressive symptoms during pregnancy and the post-partum period, and moreover, will it be effective at reducing disparities in adverse pregnancy outcomes. Before designing an archetypal screening strategy for perinatal depression, it is important to consider some of the principles and guidelines of screening published by the United Kingdom National Screening Committee[24]:

1. The condition should be an important health issue, based on prevalence and associated risks if untreated.
2. The screening tool should be valid, cost-effective and acceptable to users
3. Treatment should be available and efficacious.

With regard to the first guideline, prevalence data provides substantial support for the screening of perinatal depression (10-15% of pregnant women) compared with the prenatal screening for gestational diabetes (4.8% of pregnant women), and hypertension (5% of pregnant women) already being routinely implemented.[25] Furthermore, untreated perinatal depression is strongly associated with maternal morbidity and mortality, albeit there is more controversy about whether perinatal depression directly causes adverse affects in the child.

The presence of a robust screening tool with reliable predictive properties is an essential prerequisite for any screening program. However, diagnosing depression in pregnant women may prove to be particularly challenging due to the overlap of diagnostic depressive symptoms with those of normal pregnancy (e.g. fatigue, decreased libido and sleep or appetite change). Nevertheless, there is a strong case for employing the 10 item, self-report, Edinburgh Postnatal Depression Scale (EPDS) as a screening tool for depression in pregnant women. Validation studies have demonstrated 68%–86% sensitivity and 78%–96% specificity[5], combined with its cheap cost, user-friendly interface and cross-cultural applicability, one can see why it makes an attractive tool for studying peripartum populations. Despite other general depression screening tools like the PHQ-9 and Beck depression inventory appearing to have acceptable validity in post-partum populations, they have not been validated for use in pregnant women.[5] Interestingly, the EPDS has already been implemented in the National *beyondblue* Postnatal Depression Program in Australia, to assist health care professionals in the early detection and treatment of affected mothers.[26] Such programs have demonstrated markedly improved detection rates and have proven that widespread screening initiatives are both economically feasible and acceptable to both patients and healthcare

professionals. An important consideration when implementing the EPDS in screening programmes is the positive predictive value for clinical depression. Various studies have examined the threshold "cut off" point for the EPDS and concluded that a score of >12 is deemed positive.[27,28] A lower positive predictive value will augment the catchment population and identify women with distress and minor depression for which there is less certainty about treatment. Perhaps by adopting a higher cut-off score (e.g. >12 rather than >10) the chance of detecting false positive results and sub-syndromal depression is greatly minimised. On the other hand, despite the risk of overwhelming health service capacity, the identification of women suffering from postnatal distress may be of added benefit to prevent progression to moderate or severe depression. There is also the danger of women receiving false positive results and becoming anxious, consequently making them worse. This can be minimised if the EPDS is correctly described as a screening tool to establish a subsequent intervention care pathway and not as a diagnostic tool.[27] Another caveat is user bias when filling in the EPDS, which is inherent to self-report style questionnaires. However, by using the midwife's interview in parallel with psychosocial assessment and the EPDS, clinicians have reported they are much more capable of choosing specific intervention pathways. (ref)

With regard to guideline #2 there is currently a plenitude of interventional treatment therapies for women suffering with perinatal depression. In theory, an appealing proposition is 'selective' perinatal interventions aimed at preventing post-natal psychological morbidity in women with risk factors antenatally. In practice, this has proven to be very difficult due to the lack of a validated diagnostic tool that reliably predicts post-natal depression. Another obstacle is the hard task of convincing virtually symptom free subjects to participate in a preventative trial, usually attributing to high attrition rates.

There is a great deal of evidence for the efficacy of both antidepressant medication (e.g. SSRI's, Tricyclins) and psychological interventions (e.g. CBT, counselling, DBT) for depression.[29,30] Albeit there are some lines of evidence suggesting treatment for perinatal depression may take longer, possibly due to co-morbid anxiety associated with parenting stresses.[31] Furthermore, pharmacological treatment provokes a paradigm between adverse outcomes to offspring in un-treated perinatal depression and the safety for the developing foetus in women on antidepressant medication during pregnancy and breastfeeding. This can result in women discontinuing their antidepressant medication when pregnant, thus precipitating a relapse of their illness. Cohen *et al* reported that 68% of 44 women who discontinued their antidepressant medication had a relapse of their depression, compared with 26% of 82 women who maintained their antidepressant through

pregnancy.[32] In addition to this, clinicians themselves may attempt to limit foetal exposure by prescribing antidepressants below therapeutic dosage levels; this is complicated further by the fact that most women actually require higher doses of antidepressant medication during pregnancy.[33] Further systematic studies of the long-term developmental effects of exposure to both untreated illness and antidepressant medication are needed to design the most appropriate care plan.

Discussion

A recent report commissioned by the charity 4Children called for a major review of antenatal screening for depression in the UK. It concluded the status quo was unacceptable because it was characterised by: late or mis-diagnosis of postnatal depression by GPs and other primary care professionals, a postcode lottery in the availability of in-patient care for mothers with acute postnatal depression and a chronic lack of awareness of symptoms of postnatal depression among expectant parents.[23] Unfortunately, in this uncertain economic climate, a major obstacle preventing the implementation of this change is the difficulty financing such a project. Nevertheless, studies have suggested that improved mental health assessment skills and changes in clinical practice of health visitors can be achieved without an increase in cost. Health visitors who had received brief training in cognitive behavioural counselling were found to conduct more mental health assessments, detect more symptoms and treat more patients themselves using learned therapeutic techniques, thus reducing the burden on other services.[33] Women at higher risk of perinatal depression, including those with a past history of depression, recent stressors, poor self-esteem and social support can be assigned to an agreed pathway of care, where a diagnosis can be established and specific treatment initiated if required. To date, obstetric services have done this on an informal basis, with no real consensus among service providers in different trusts.

Although sound research is lacking in perinatal depression, an extensive review of RCTs of screening for depression in adult populations concluded that the overall evidence suggests screening reduces the risk of persistent depression.[34] In contrast to this, the most recent research suggests that this screening process may not be leading to effective identification of postnatal depression, with one academic study finding that more than half the cases of postnatal depression are unrecognised by GPs and health visitors.[23] This finding is supported by a survey by the charity Children4u (discussed above) which shows many women are slipping through the net. Interestingly, several screening programs using the EPDS are currently in action across other continents, including the Australian

Postnatal Depression Program[26] and the Singapore Early intervention Scheme. Although both have proven to be well accepted by women and economically feasible, it is well documented that a proportion of women (37%) who are positively screened as depressed go on to decline referral or do not seek help. Consistent with prior research, the most significant obstacles to treatment were the mothers themselves and the stigma associated with mental illness in pregnancy. Therefore, it is imperative that any screening program should be implemented in conjunction with a national awareness campaign to improve public education of the illness and to challenge the associated stigma. Perhaps this may make women more engaging with primary services and may help prevent them slipping through the net. According to NICE guidelines, all pregnant women in primary care and subsequently postnatally should be routinely asked about low mood and anhedonia. However, this method is subject to individual interpretation and extremely susceptible to bias. A screening program utilizing a questionnaire like the EPDS provides the capacity to obtain standardized data, and should routinely be considered in conjunction with other information collected like obstetric and drug/alcohol history. Logistically, health visitors and GPs are best positioned to provide early screening and primary intervention to vulnerable women, given postnatal depression usually becomes evident between four and six weeks after birth. By providing appropriate training to these professionals, it may offer a unique opportunity to identify at risk women early in disease progression and administer effective interventions.

Conclusion

Although there are major challenges inherent to implementing such a program, screening for perinatal depression is likely to be favourable because of its high prevalence and efficacious treatment options. Early intervention and education can empower women to seek help and engage with available resources to better themselves. However, it is important that this is performed in conjuction with Public health initiatives to raise awareness and reduce the stigma so enduringly affiliated with perinatal depression. This can stop women ‘suffering in silence’ and may have wider benefits for family and friends.

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