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Case Report

CASE OF MANAGING POSTPARTUM HYPERTENSION IN BREASTFEEDING WOMEN IN PRIMARY CARE

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Abstract: *Postpartum hypertension requires careful management, particularly in breastfeeding women, to prevent complications like eclampsia and future cardiovascular issues. This case involves a 40-year-old Southeast Asian woman, G3P3, who presented at a primary care clinic for a 6-week postnatal check-up. The patient, with a history of gestational hypertension, managed with labetalol during pregnancy, reported elevated blood pressure (average 140/90 mmHg) while breastfeeding. Postpartum management initially included nifedipine, which was tapered due to concerns about drug transfer into breast milk. Her blood pressure was 145/95 mmHg at the clinic without significant symptoms. Guidelines suggest that beta blockers like labetalol, propranolol, metoprolol, and calcium channel blockers like nifedipine and verapamil have minimal transfer into breast milk and are generally safe. Caution is advised with atenolol and acebutolol due to higher transfer levels. ACE inhibitors like enalapril are considered safe but require monitoring of infant hemodynamics. High-dose diuretics may reduce milk production and are typically avoided. In managing postpartum hypertension in breastfeeding women, it is crucial to balance maternal health needs with infant safety. The use of antihypertensive agents with the lowest transfer into breast milk is recommended. International guidelines suggest a multidisciplinary approach involving pediatricians to monitor and ensure the well-being of both mother and infant. Individualized care and adherence to current guidelines are essential in these cases.*

Keywords: Breastfeeding woman and management of postpartum hypertension.

Introduction:

Management of postpartum hypertension is a common scenario in a primary care setting. It is essential to manage and monitor postpartum hypertension due to the increased risk of eclampsia in the postpartum state. Additionally, it is associated with an increased likelihood of developing hypertension in subsequent pregnancies and later in life (1). There are varying recommendations regarding switching antihypertensive medications in the postpartum period.

Case Report:

Case Presentation: A 40-year-old Southeast Asian woman who has given birth three times came to the primary care clinic for her 6-week postnatal checkup. She had a cesarean delivery at 38 weeks and has been breastfeeding her baby. Her blood pressure at home has been averaging 140/90, and she's been taking ferrous fumarate for iron deficiency anemia after the delivery. She had gestational hypertension in her previous pregnancies.

During her second trimester, she was diagnosed with gestational hypertension and was put on Labetalol 200mg twice daily. Her blood pressure was high primarily during the third trimester, and she received close monitoring in secondary care. After delivery, she was started on Nifedipine due to her blood pressure readings being around 150/90, but she was gradually taken off it after two weeks. In the clinic, her blood pressure was 145/95, and she reported no significant symptoms.

She expressed her desire to continue breastfeeding and reluctance to change medication due to concerns about potential side effects and the presence of the drug in breast milk. We also needed to consider the appropriate dosage to manage her hypertension within an optimal range and determine the equivalent dose of the new medication if a switch were to be made.

This brought up the need to discuss changing her medication from Labetalol, primarily used during pregnancy, to a more suitable medication for postnatal breastfeeding women. This is a common scenario in a primary care setting, and there is often uncertainty about selecting antihypertensive medicines in the postpartum period. We decided to review different available guidelines to compare with our current practice.

Discussion and treatment options: After reviewing guidelines from the National Institute of Clinical Excellence (NICE UK) and up-to-date guidelines, it was established that the primary goal in managing hypertension in breastfeeding women is to achieve optimal blood pressure control while minimizing risks to both the mother and the infant. This requires careful consideration of medication choices, close monitoring, and active involvement of the patient in the decision-making process.

The summary of Drug options during breastfeeding is as follows:

Beta-blockers and calcium channel blockers enter breast milk; however, most appear safe for the infant (2) and are considered compatible with breastfeeding by experts (see individual drugs in the drug program included with UpToDate or LactMed). It is prudent to consult with the infant's pediatrician before initiating maternal antihypertensive drugs in breastfeeding patients.

Within each class of antihypertensive agents, physicians should select the medication with the lowest transfer into human milk (3).

A brief synopsis is presented below:

●*Beta blockers and alpha/beta blockers* – Propranolol, metoprolol, and labetalol have the lowest transfer into the milk of this drug class, with relative infant doses of less than 2 percent. None have been associated with adverse events in infants.

By contrast, atenolol and acebutolol are more extensively excreted into breast milk, and beta-blockade in nursing infants has been reported (4-6); therefore, other beta-blockers are preferable for patients on a high dose of these drugs or who are nursing an infant less than three months of age or a preterm infant.

Because there is little to no published experience with carvedilol or bisoprolol during breastfeeding, other agents are preferred, especially when nursing a newborn or preterm infant.

●*Calcium channel blockers* – Diltiazem, nifedipine, nicardipine, and verapamil are associated with a relative infant dose of less than 2 percent, which is acceptable.

●*ACE inhibitors* – These drugs are transferred into milk at deficient levels. Captopril and enalapril may be used in lactating patients. However, newborns may be more susceptible to the hemodynamic effects of these drugs, such as hypotension, and sequelae, such as oliguria and seizures. Therefore, we suggest that the hemodynamic status of the infant be considered when deciding whether patients taking these drugs should breastfeed.

There is no information on the use of angiotensin II receptor blockers (ARBs) during breastfeeding.

●*Diuretics* – Theoretically, diuretics may reduce milk volume. Hydrochlorothiazide <50 mg/day is considered safe for the newborn during lactation.

Intense diuresis from a loop diuretic may decrease milk production when lactation is established, but low doses with more gradual diuresis are less of a concern. The effects of loop diuretics on established lactation have not been studied.

●*Methyldopa and hydralazine* – Both of these drugs appear to be safe for the newborn. Because maternal depression has been reported following methyldopa administration and postpartum patients are already at risk for postpartum depression, ACOG suggests avoiding the use of methyldopa in postpartum patients (7).

Conclusion and recommended treatment options:

Antihypertensive treatment during the postnatal period, including breastfeeding, involves maternal health and infant safety considerations. While most antihypertensive medications can pass into breast milk, the levels are generally low and unlikely to cause clinical effects in infants. The Medicines and Healthcare Products Regulatory Agency (MHRA) suggests caution but does not contraindicate ACE inhibitors and angiotensin Il receptor antagonists during breastfeeding. However, careful monitoring of infants for signs of hypotension is advised. (8)

For women with hypertension during the postnatal period, treatment options include enalapril, nifedipine, or amlodipine, with considerations for individual patient history and preferences.

Combination therapy with nifedipine (or amlodipine) and enalapril may be necessary if blood pressure is not adequately controlled with a single medication. However, diuretics and angiotensin receptor blockers should generally be avoided in breastfeeding mothers due to potential risks to the infant.

Beta-blockers and calcium channel blockers are generally considered safe for breastfeeding infants, with propranolol, metoprolol, labetalol, diltiazem, nifedipine, nicardipine, and verapamil having low transfer into breast milk. However, caution is advised with atenolol and acebutolol due to higher transfer levels and potential adverse effects in infants, particularly in newborns or preterm infants.

Methyldopa and hydralazine are considered safe options, although methyldopa use in postpartum patients may warrant consideration due to reported maternal depression. Loop diuretics may affect milk production, especially during lactation establishment, but low doses with gradual diuresis are generally less concerning.

Physicians should select antihypertensive medications with the lowest transfer into breast milk and consider the infant's health status before initiating maternal treatment. Collaboration with the infant's pediatrician is recommended to ensure the safest treatment approach for both mother and child.

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Authors Contribution

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