

Parathyroid Adenoma diagnosed in the third trimester; a case report

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Background:

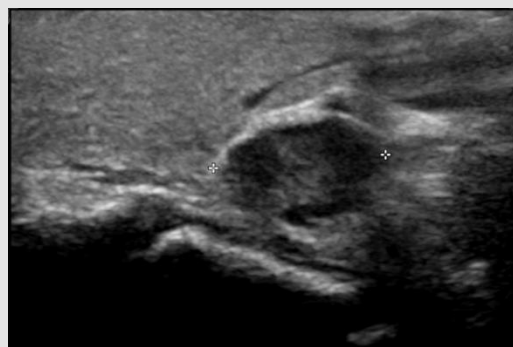
Primary hyperparathyroidism is the state in which there is inappropriately increased parathyroid hormone (PTH) and increased serum calcium levels which can be secondary to adenoma, parathyroid hyperplasia, and carcinoma. Its presentation is rare in pregnancy with nonspecific symptoms and often disguised by physiological changes occurring during pregnancy, however, carries the risk for complications for both mother and foetus including pre-eclampsia, miscarriage, and intrauterine growth restriction.³ Further investigation is complicated by physiological changes of calcium metabolism in pregnancy.

Case Presentation:

A 35-year-old otherwise well primip at K35+5 was referred and reviewed at RBWH Obstetric Review Centre for blood pressure monitoring with new diagnosis of pre-eclampsia was found to have asymptomatic hypercalcemia (3.36mmol/L) [2.10 – 2.60].

Investigation:

Following involvement of Obstetric Medicine team, further investigation showed elevated PTH (21 picomol/L) [2.0 – 9.3] and a 9 x 9 x 13 mm solid hypoechoic lesion with vascularity posterior to the left thyroid, suspicious for a parathyroid adenoma on ultrasound.



Hypoechoic lesion posterior to left thyroid on ultrasound

Management:

She remained an inpatient and was medically managed with intravenous fluids with intermittent diuresis and daily biochemical monitoring until induction at 37 + 3 weeks gestation, resulting in an emergency LUSCS due to failure to progress. She did not show symptoms of hypercalcemia during admission, however required escalation of antihypertensive therapy. The foetus was normally grown on the 56th centile, was delivered with APGARs of 9 and 9, and normal serum calcium.

She had an uncomplicated left inferior parathyroidectomy post partum resulting in a normalisation of both serum calcium and PTH levels. Histology showed a hypercellular parathyroid gland favouring adenoma.



Discussion:

Primary hyperparathyroidism is an uncommon condition of pregnancy which should prompt early investigation to allow consideration of surgical management which has been shown to prevent complications of early miscarriage and pre-eclampsia. This population should be offered genetic testing for familial hyperparathyroidism.

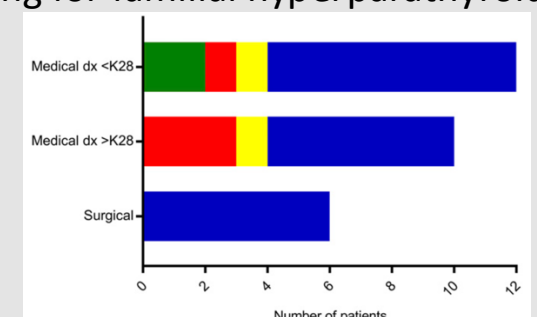


Figure 1. Pregnancy outcomes for women with primary hyperparathyroidism treated at the RBWH, 1 January 2000 through 31 December 2015. dx, diagnosed. Blue denotes delivery >K37 no PE; yellow, delivery >K37 PE; red, delivery <K37 PE; and green, miscarriage. PE, preeclampsia.

Outcomes for women with hyperparathyroidism surgical vs medical management*

References:

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- Rigg J, Gilbertson E, Barrett HL, et al. Primary Hyperparathyroidism in Pregnancy: Maternofetal Outcomes at a Quaternary Referral Obstetric Hospital, 2000 Through 2015, *The Journal of Clinical Endocrinology & Metabolism*. 2019; 104(3): 721-729. https://doi.org/10.1210/jc.2018-01104