A Case of Severe Primary Hyperparathyroidism in Pregnancy

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Introduction

- Primary hyperparathyroidism is a fairly common endocrine problem; the prevalence in general population is around 0.15% [1]
- However, it is rarely diagnosed in pregnancy due to being masked by the physiological changes of pregnancy[2] and 80% of pregnant patients with this condition are asymptomatic[1]

Case Report

- 29 years old lady who was referred to the endocrine clinic from inpatient admission for her high adjusted calcium levels (3.27mmol/L) and high Parathyroid Hormone (PTH) levels (58.9pmol/L), while she was 12 weeks pregnant..
- Her past medical history was significant for previous still birth at 25 weeks and depression.
- Her first serum calcium levels were done by her GP, 6 months after she delivered a dead fetus at 25 weeks gestation. Then, she presented to her GP with increasing lethargy.
- In endocrine clinic, she complained of persistent tiredness and increased thirst, but denied polyuria.
- She also had ill-defined abdominal pain, and complained of low mood for which she was on Citalopram.
- She did not report of any family history of high calcium levels.
- Examination of neck and abdomen was unremarkable.
- Investigations done in Endocrine clinic: Adjusted calcium (3.42 mmol/L), PTH (54.4 pmol/L), 25 OH Vitamin D (27.1 nmol/L), Free T4, Insulin like growth Factor 1(IGF 1), and serum cortisol were all in normal range. Luteinizing Hormone (0.65 IU/L) and Follicle stimulating hormone (> 0.05 IU/L) were keeping in view with the pregnant state.
- 24 hour urinary calcium was 12.4 mmol/24 hours.
- Ultrasound of Parathyroid did not reveal any adenoma.
- Sestamibi scan could not be done due to pregnancy.
- She was referred to a tertiary center for urgent parathyroidectomy in her early 2nd trimester. After parathyroidectomy her PTH normalized to 4.42 pmol/L and corrected calcium to 2.58 mmol/L.
- Histology of the parathyroid gland was consistent with hyperplasia.
- She was progressing well with her pregnancy after her parathyroidectomy and delivered a healthy baby girl at full term.
- In the follow up clinic her adjusted calcium was raised again at 2.71 mmol/L. She is currently followed up for the possibility of recurrent primary hyperparathyroidism and MEN 1 associated conditions.

Discussion

- Serum calcium could be considered as a routine investigation in pregnancy, as appropriate treatment of primary hyperparathyroidism could result in avoidance of high incidence of fetal and maternal complications of hyperparathyroidism including pre-eclampsia, miscarriage, intrauterine growth restriction, low birth weight, neonatal hypocalcaemia and tetany, preterm delivery, and intrauterine fetal demise.[1,3]
- Hyperparathyroidism should be suspected in females who present with depression, especially when they have a history of previous pregnancy complications.
- The current recommendation to treat severe primary hyperparathyroidism in pregnancy is to perform parathyroidectomy during the second trimester due to incomplete organogenesis in first trimester, and risk of preterm labor in the third trimester[4,5]. Cinacalcet is currently not licensed for treatment of hyperparathyroidism in pregnancy.

References

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