

Hyperthyroidism in pregnancy: The hidden culprit for severe hyperemesis gravidarum in an Indigenous girl

Case: AG is a 19 years old Aboriginal girl G2P0M1 K22+5 who presented to a regional emergency department in Queensland with severe hyperemesis gravidarum (HG), suffering a Mallory-Weiss tear, palpitations and weightloss of 30kg over the course of her pregnancy thus far. She had a normal morphology and first trimester screening. On assessment she was found to have a severely growth restricted baby in the second trimester. She had travelled from a rural town for the fifth time this pregnancy seeking help, but had recurrent discharges against medical advice.

Management: She was admitted to the medical ward, given intravenous support and had aggressive management of her hyperemesis and malnutrition. Routine testing, as recommended by RANZCOG and SOMANZ found severe hyperthyroidism, with negative antibodies and normal US Thyroid. She was given supportive treatment for her hyperemesis, as well as symptoms related to her hyperthyroidism. She was able to tolerate oral intake and her T4 began to improve spontaneously. She had an induction at another rural centre closer to home at K40+2 and had a 2.1Kg successful vaginal birth, suffering a postpartum haemorrhage where she required a blood transfusion and medical management only. She was not given a follow-up plan for her GTT or instructions on risks in future pregnancies.

	K 8	K22	K22+6	K27+4	K38
ft4		50.5	25.8	11.4	12.7
TSH	0.92	0	0	0.15	0
hCG	7159		83731		

Table: TFTs Vs hCG for AG during her pregnancy, note TFTs were done on assessment in K8, but not again until K22 despite multiple presentations to various rural centres.

Gestational transient thyrotoxicosis (GTT) affects 1-5% of pregnancies with hyperthyroidism(1). Clinical course is related to hCG levels and is characterized by **suppressed TSH levels in absence of TRAb or goitre**. GTT is more likely in trophoblastic disease, twin pregnancies and those with history of GTT. This is believed to be due to a hCG isoform that acts like TSH resulting in hyperthyroidism with suppression of TSH (this is shown in the figure right)(2,3).

This case highlights the need for a **Queensland-wide Guideline on how to manage and test for hyperemesis gravidarum**. The SOMANZ and RANZCOG guidelines recommend TFTs, but this is not standard practice in busy emergency departments. **This also highlights the lack of attention given to the burden of disease that HG carries**. Both hyperthyroidism and hyperemesis can negatively impact maternal physical and mental health, as well as fetal growth restriction, malformations and preterm birth (4).

Indigenous health has a special place in Obstetrics and Gynaecology (O&G) as it links the care of generations into one specialty. The care provided today has a direct impact on generations to come.

Furthermore, this case highlighted the **vulnerability of young indigenous people seeking healthcare**. A deeper understanding of Indigenous cultural needs, history and health literacy is essential for provision of effective and meaningful healthcare interactions. The burdens on a resource limited and stretched system can often become a danger to the most vulnerable. Therefore, a more thorough analysis is needed for the current systems in place to look after the specific needs of Indigenous patients. This is particularly important if we are to reach our WHO goals to 'Close the Gap by 2031', it needs to start now.

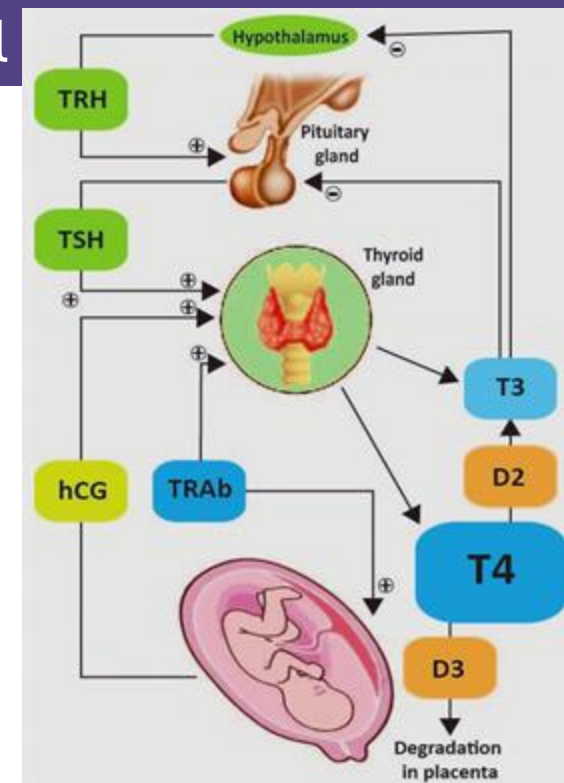


Figure: The pregnancy and hypothalamic pituitary thyroid axis (2)

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