

Neonatal thyrotoxicosis caused by persistently high levels of thyroid stimulating antibodies in autoimmune hypothyroidism.

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BACKGROUND

Neonatal immune hyperthyroidism is a rare but potentially fatal condition. It occurs in 1–5% of infants born to women with Graves' disease (GD). We present a case of neonatal thyrotoxicosis due to maternal hypothyroidism secondary to radioactive iodine treatment for Graves' disease.

CASE STUDY

A new-born female at 13-days of age was readmitted due to maternal concerns. She noted the baby to be jittery, unsettled, tachycardic and tachypnoeic. The infant was born via a spontaneous vaginal delivery at 38 +1 weeks' gestation to a gravida 1, para 1 mother. The infant's birthweight was 2750g. The mother was taking thyroxine. She was commenced on intravenous antibiotics for presumed sepsis, however despite normal inflammatory markers and cultures, the infant continued to deteriorate. The tachycardia persisted and she started vomiting so was admitted to Special Care. Thyroid function test were done which confirmed neonatal hyperthyroidism (TSH <0.05 T4 124) due to high level of TBII (Thyrotropin binding Inhibitory Immunoglobulin) of 6.2. The mother had positive TBII of 17.8 IU/L at 32 weeks gestation during pregnancy. The baby was then commenced on carbimazole and propranolol. Clinically the symptoms resolved and she was feeding well and as her bloods (including TFT) were improving, she was discharged on 13/4/18 with a weaning dose of carbimazole. Last TFTs were normal with TSH 2.1, T3 5.8 and T4 11. She is being regularly followed up as an outpatient and she has been fully weaned off her carbimazole.

DISCUSSION

This case illustrates the importance of measuring TBII during prenatal care and follow up in order to help early diagnosis of neonatal hyperthyroidism and improve neonatal outcomes. Both Obstetricians and paediatricians need to be aware of the importance of a high TBII at the end of pregnancy to predict the risk of neonatal hypothyroidism in autoimmune hypothyroidism secondary to radioiodine treatment.

REFERENCES

1. Smith CM, Gavranich J, Cotterill A, Rodda CP. Congenital neonatal thyrotoxicosis and previous maternal radioiodine therapy. *BMJ*. 2000;320:1260.