

Newborns of Mothers with Graves' Disease – survey of 14 years

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INTRODUCTION AND OBJECTIVES

Graves' Disease (GD) is the most common cause of hyperthyroidism in fertile woman and can cause fetal and neonatal hyper or hypothyroidism. It is associated with transplacental transfer of maternal thyrotropin receptor antibodies (TRAb). The main objective of this study was to characterize the neonates born to women with GD followed in our unit.

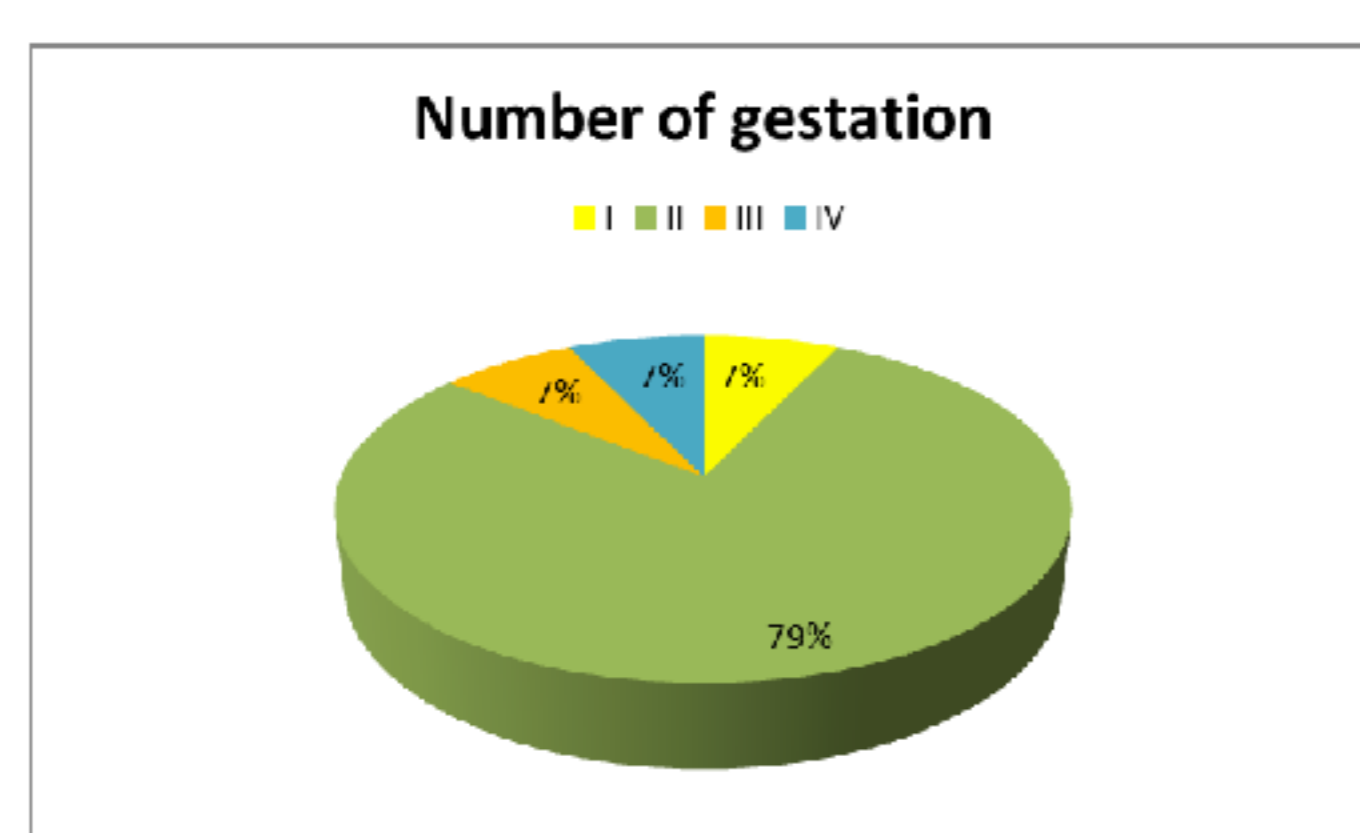
METHODS

A retrospective chart review was done of neonates born to mothers with GD in the last 14 years. The parameters analyzed were: maternal thyroid function and treatment during or before pregnancy, sex, gestational age, birth weight, newborn thyroid function and treatment.

RESULTS AND CONCLUSIONS

n=20 newborns 18 mothers

Pregnancy



- 1 pre-eclampsia
- 2 ultrasound changes (fetal goiter, oligohydramnios and intrauterine growth restriction)

- GD diagnosed 3,1 years before childbirth

Thyroid function 3rd trimester	n
TSH > 8 mU/L	0
TSH < 0,1 mU/L	4
TSH > 0,1 and < 8 mU/L	12

- 4 mothers submitted to ablative treatment with radioiodine
- 11 were treated with antithyroid drugs in the 3rd trimester

Newborns

- 11 ♀
- Median gestational age 37,7 weeks (3 pre-terms 35 and 36 weeks)

Apgar 1' ≥ 7	Apgar 5' ≥ 7
88%	100%

- Mean birth weight 2778,5g (min 1745g)

NB thyroid function (TSH)		n	Mothers positive TRAbs 3rdT (>1 UI/L)		Treatment (3rdT)
Hypothyroidism	> 8 mU/L	4	4 (máx: 4,4 UI/L)	2 (methimazole)	1 (propylthiouracil)
Hyperthyroidism	< 0,1 mU/L	3			
Euthyroidism	>0,1 e <8 um/L	13	3 (máx: >40 UI/L)	3 (methimazole)	

NB thyroid function (TSH)		n	NB Treatment	
Hypothyroidism	> 8 mU/L	4	2 (thyroxine)	
Hyperthyroidism	< 0,1 mU/L	3	1 (methimazole) 4 months*	
Euthyroidism	>0,1 e <8 um/L	13		

1 congenital hypothyroidism

- * 1 NB failure to thrive, irritability, hypertension and tachycardia

There was an elevated number of newborns of GD mothers with abnormal thyroid function, mostly in uncontrolled mothers during pregnancy (all with elevated TRAb). We recommend an optimal follow up of these mothers and the establishment an adequate management protocol for the neonates.

REFERENCES

1. Papendieck P, Chiesa A, Prieto L, Gruñeiro-Papendieck L. Thyroid disorders of neonates born to mothers with Graves' disease. J Pediatr Endocrinol Metab. 2009 Jun;22(6):547-53.
2. Levy-Shraga Y1, Tamir-Hostovsky L, Boyko V, Lerner-Geva L, Pinhas-Hamiel O. Follow-up of newborns of mothers with Graves' disease. Thyroid. 2014 Jun;24(6):1032-9.

Thyroid

