

RADIOIODINE THERAPY FOR GRAVES' DISEASE THE EXPERIENCE OF A PORTUGUESE SINGLE CENTRE



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INTRODUCTION AND OBJECTIVES

Besides surgery, radioactive iodine therapy (RAI) is an effective and safe option to treat children with hyperthyroidism from Graves disease (GD) who cannot achieve euthyroidism with antithyroid drugs. The authors' goal was to present the experience of a Portuguese paediatric unit with the use of RAI in children with GD.

METHODS

The authors performed a review of 7 cases of Graves disease of age under 18 years treated with RAI between 2010 and 2015. A previous trial on methimazole ("block and replace") was attempted in all patients. Indications for RAI were uncontrolled hyperthyroidism with thyroid mass less than 80g and absence of active eye disease. The goal of RAI was to achieve a hypothyroid state, after which, therapy with levothyroxine would be started. Methimazole was routinely stopped 1 week before RAI and therapeutic activity was calculated based on 24h radioiodine uptake and thyroid mass.

RESULTS

ALL PATIENTS WERE FEMALE

	MEDIAN	IQR
Age of onset of GD (years)	10.1	9.9 – 10.8
Duration of methimazole treatment until RAI (months)	41	33 - 52
Age at 1st RAI (years)	13.9	13.5 – 15.1
Activity of I ¹³¹ (mCi)	10	9 - 13

Table 1: Summary of characteristics. IQR - interquartile range

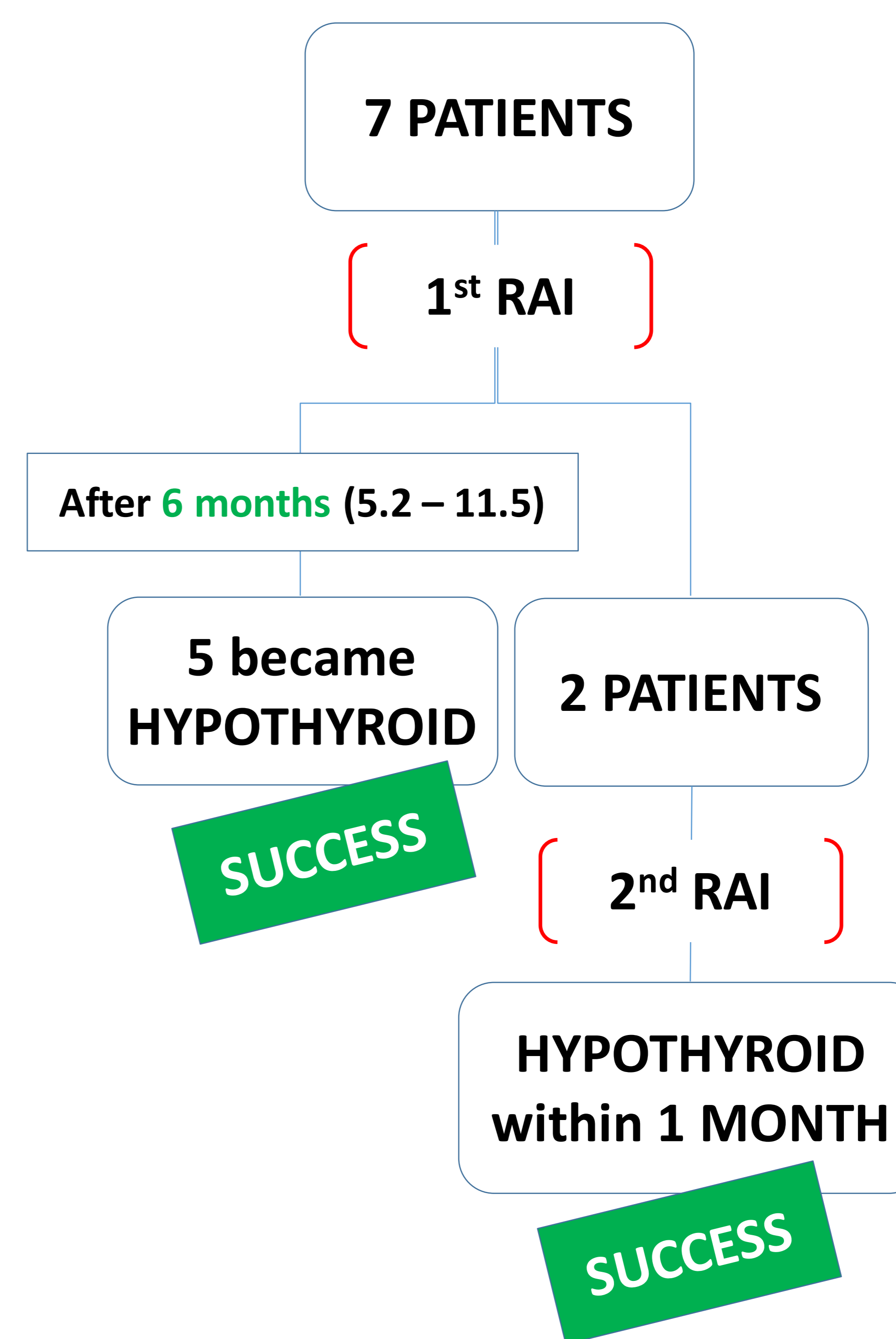


Figure 1: Patient's follow-up after RAI

Effect of RAI activity on hypothyroidism

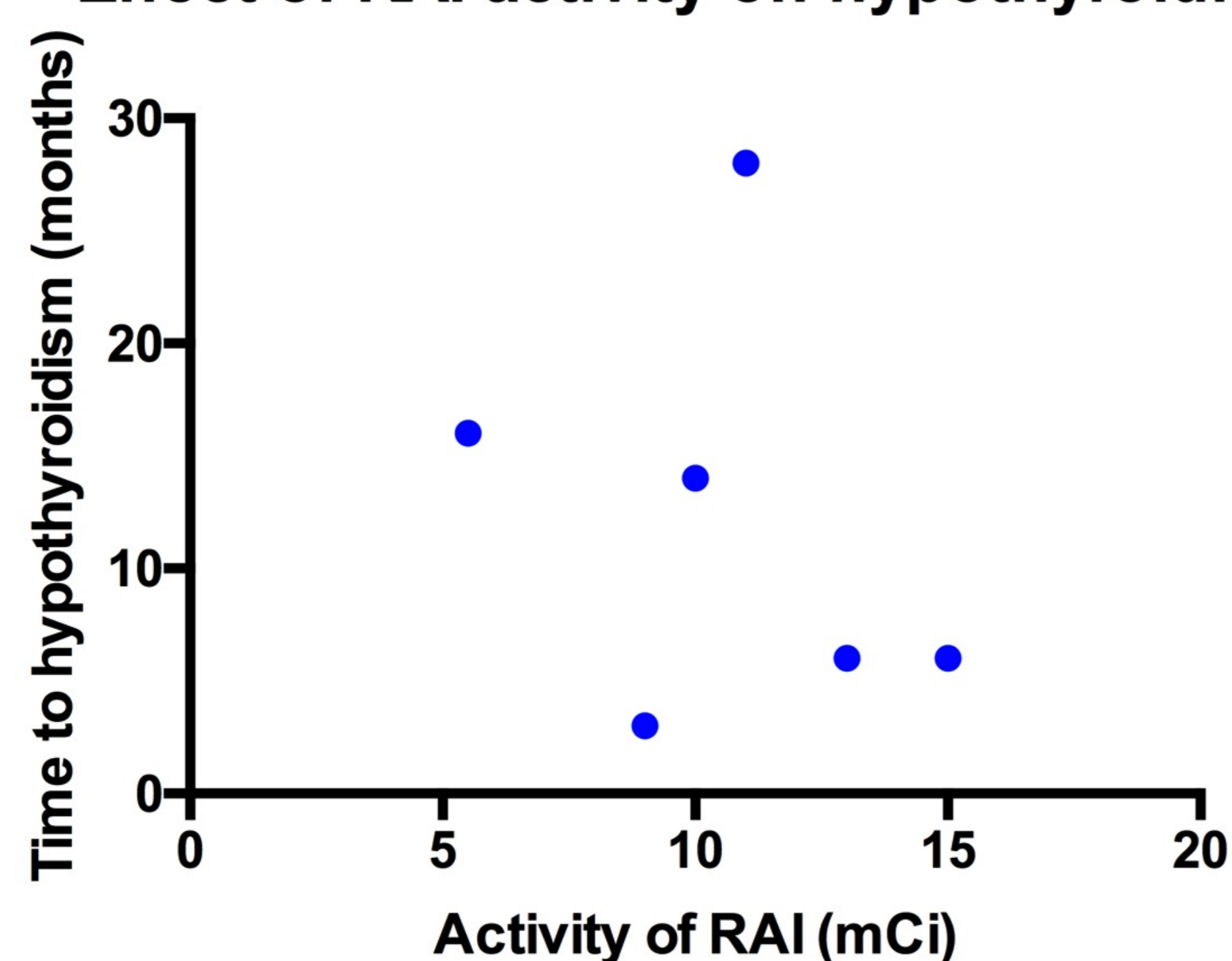


Figure 2

	TOTAL ACTIVITY OF RAI (mCi)	
	MEDIAN	IQR
Single RAI therapy group	11	10 – 13
2 RAI therapy group	17	15.1 – 19.0

Table 2: Comparison of total RAI activity between both groups. IQR - interquartile range

CONCLUSION

RAI has been safely used in our unit with good results (no side effects were related by any patient). Hypothyroidism is achieved in 6 months after 1st RAI and 1 month later, when a second treatment is needed. Higher activities of RAI also seem to be associated with better results (more rapid onset of hypothyroidism).

The authors have no conflicts of interest to declare

