Our experience with low doses of Radioactive Iodine (30 mCi) in patients with Differentiated Thyroid Cancer.

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BACKGROUND

The management of patients with differentiated thyroid cancer (DTC) has been changing in recent years and aggressiveness of treatment depends on the risk of persistent/recurrent disease.

OBJECTIVE

The aim of this study was to assess the efficacy of low doses of Radioactive Iodine (RAI;131I) therapy in patients with DTC.

METHODS

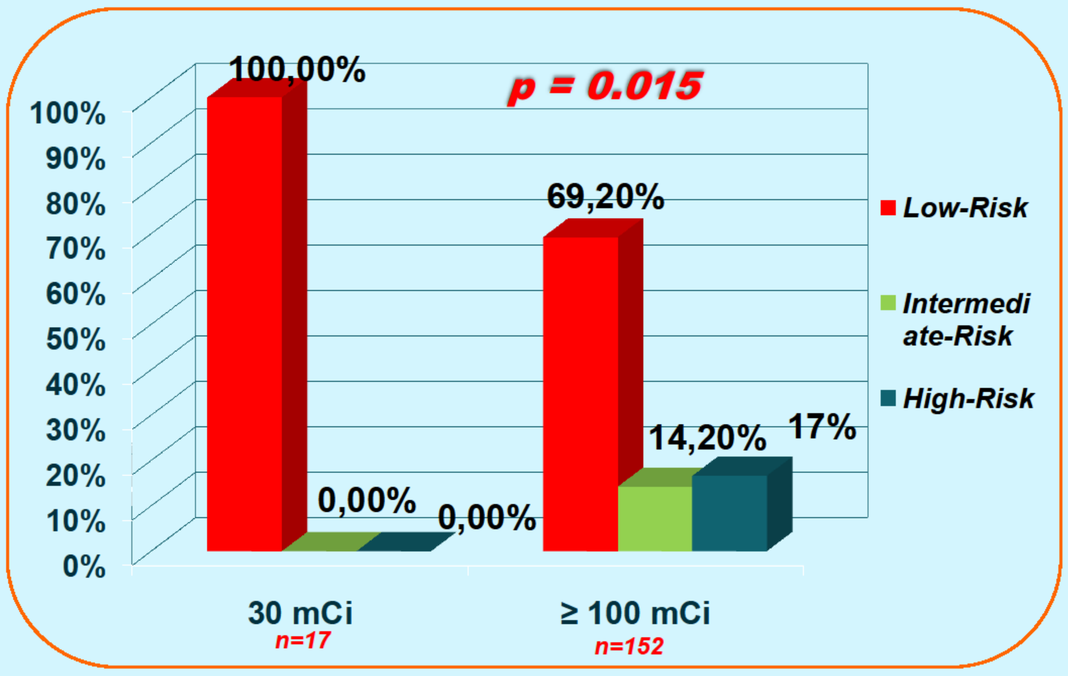
We retrospectively evaluated all patients who were diagnosed with DTC (n=213) at a tertiary hospital center in Cordoba (Spain), between January 2000 and December 2013. The patients who had positive anti-thyroglobulin antibodies (TgAb; n=13) or microcarcinomas (Tumors < 1cm; n = 31) were excluded from the study. In all patients (n=169), initial treatment consisted of total or subsequent completion thyroidectomy, with or without lymphadenectomy, RAI ablation therapy at a dose of 30 mCi (n=17) or ≥100 mCi: 100 mCi (n=143), 150 mCi (n=5), 200 mCi (n=4). Demographic and clinical variables were compared between both groups of RAI therapy.

RESULTS

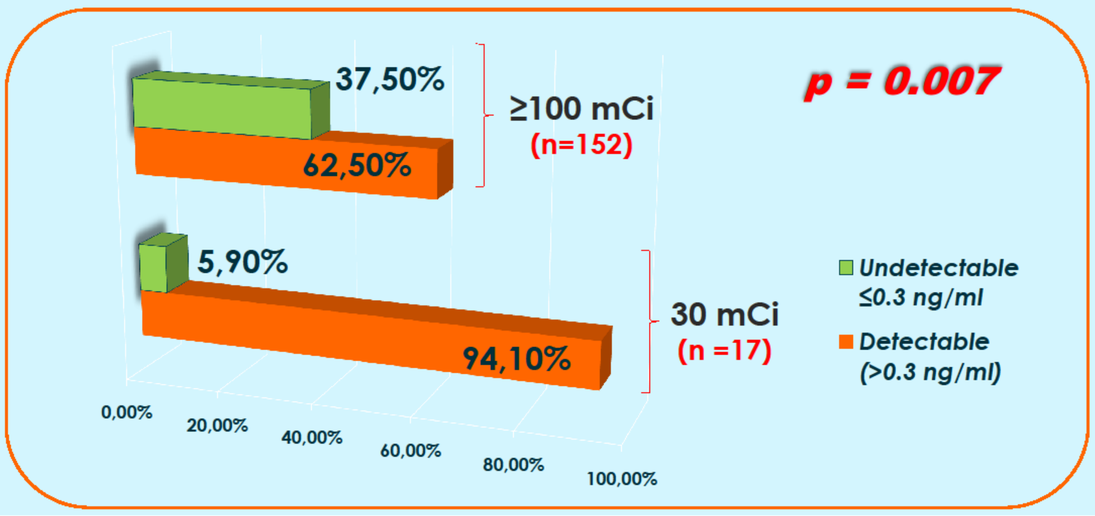
CHARACTERISTIC (n=169)		30 mCi (n=17)	≥100 mCi (n=152)	p
		n (%)		
Gender		10 (58.8%)	119 (78.3%)	0.127
		7 (41.2%)	33 (21.7%)	
Age	≤ 45 yrs	9 (52.9%)	86 (56.6%)	0.801
	>45 yrs	8 (47.1%)	66 (43.4%)	
Histology	Papillary	17 (100%)	134 (88.2%)	0.221
	Follicular	0 (0%)	118 (11.8%)	
Completion Thyroidectomy				
	No	13 (76.5%)	114 (75%)	1.000
	Yes	4 (23.5%)	38 (255)	
Lymphadenectomy	Yes	8 (47.1%)	85 (56.7%)	0.455
	No	9 (52.9%)	65 (43.3%)	
Aggressiveness criteria*	No	17 (100%)	111 (73%)	0.014
	Yes	0 (0%)	41 (27%)	
Stage	I-II	17 (100%)	120 (78.9%)	0.045
	III-IV	0 (0%)	32 (21.1%)	
Final-outcome (Average Follow-up)	Disease-free	17 (100%) (3.59 yrs)	105 (69.1%) (7.79 yrs)	0.004

* Aggressive histological criteria: presence of vascular invasion or unfavourable histology.

CORRELATION: Low doses I^{131} with Risk Stratification

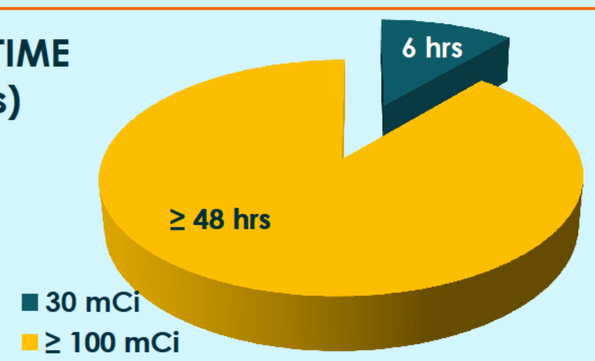


CORRELATION: Low doses I^{131} with Stimulated-Tg



HOSPITALIZATION TIME (Average hours)

p <0.001



CONCLUSIONS: Treatment with low doses of 131I (30 mCi) is an effective treatment in patients with low-risk of recurrence with de advantage of having a lower hospitalization time.