PAPILLARY THYROID MICROCARCINOMA

FOCUS ON **PREVALENCE**, **CHARACTERIZATION** AND **FOLLOW-UP** DURING A 10 YEAR TIME PERIOD

Maria Teresa Pereira[1], André Couto de Carvalho[1], Susana Garrido[1], Ana Rita Caldas[1], Marta Ferreira[1], Raquel Almeida[1], Ana Maia Silva[1], Cláudia Freitas[1], Sofia Teixeira[1], Vitor Valente[2], António Canha[2], Moreira da Costa[2], Paulo Bateira[3], Fátima Borges[1]
[1]Department of Endocrinology, Diabetes and Metabolism; [2]Department of Surgery 2; [3]Department of Pathology
Hospital de Santo António – Centro Hospitalar do Porto - Portugal

European Society of Endocrinology
the European hormone society
ECE2014
3 - 7 May 2014
Wrocław, Poland

introduction

- Recent studies point to an ever increasing papillary thyroid microcarcinoma (PTMC) prevalence, with a percentage range between 20-43% of all differentiated thyroid carcinomas;
- It is many times considered an "incidental" finding discovered at final histology after thyroid resections done for benign pathology;
- Its clinical behaviour is uncertain and no consensus on its malignant potential or its treatment exists.

aims

- To characterize a cohort of patients with PTMC, with reference to clinical and pathological variables and outcomes;
- To evaluate the PTMC prevalence in respect to the total of thyroid cancers diagnosed in the last 10 years.

methods

- Data from patients with histopathologic diagnosis of PTMC during a 10 year time frame (between Jan-2003 and Oct-2013) were retrospectively reviewed;
- PTMC prevalence, demographic data, clinical and histological features were retrieved and final outcome assessed at maximum 10 years follow-up.

results

THYROID CARCINOMAS **n=538**

PTMC **n=216**

PTMC PREVALENCE **40.1%**

216 patients

Gender: Female/ Male	184 (85%)/ 32 (15%)
Age (at diagnosis, median)	57 (19-84)
Female	57 (19-84)
Male	57.5 (30-82)

PREOPERATIVE DIAGNOSIS (cytological *and/or* clinical)	n	%
▪ Benign hyperplasia (multinodular goiter/solitary nodule)	71	33
▪ Follicular neoplasm	70	32
▪ Papillary carcinoma	36	18
▪ Hurthle cell tumor	12	
▪ Toxic goiter/adenoma	4	
▪ Graves disease	3	
▪ "Suspicion for malignancy"	8	
▪ Other	12	

TYPE OF THYROID SURGERY	n (%)
Total thyroidectomy	172 (79.6)
Lobectomy	27 (12.5)
Completion thyroidectomy	12 (5.6)
Total thyroidectomy plus ganglionar neck dissection	5 (2.3)

HISTOLOGICAL FEATURES OF PTMC	n (%)
Tumor size (mm)	
< 5 mm	86 (40)
≥ 5 mm	122 (56)
Unknown	8 (4)
Variant type	
Classical/ papillary	171 (79.2)
Follicular	39 (18.1)
Oncocytic	5 (2.3)
Encapsulated	1 (0.5)
Unicentricity	154 (71)
Multicentricity	62 (29)
Intraglandular	195 (90)
Extrathyroidal extension	21 (10)
Lymph node metastases	8 (4)
Distant metastases (timus)	1 (0.5)

THYROID RADIOIODINE ABLATION	
▪ Radioactive iodine (RAI) ablation	43 patients (20%)
> Undetectable stimulated TG levels	4 patients (9%)
> Median RAI activity (MCi)	100 (80-150; min-max)
> Median follow-up time (surgery-RAI ablation)	4.5 months (1.6-28; min-max)
▪> 1 radioiodine ablation therapy	7 patients (16%)
> Median follow-up time (1st-2nd RAI ablation)	13 months (7-26; min-max)

FOLLOW-UP:

MEDIAN FOLLOW-UP TIME

3.5 yrs (1.1 mo-10.4 yrs)

31% of the patients with undetectable serum TG levels (<0.1 ng/mL) on the last visit

RECURRENCE

2 patients (0.9%) with cervical lymph node metastases

Time to relapse: 2 and 3.5 yrs

There were no deaths attributed to thyroid cancer during this period

conclusions

- In this 10-year study, most of the diagnosed PTMC were incidentally found in benign thyroid disease (multinodular goiter);
- The relatively uneventful course of PTMC, with low rates of cervical node metastases at diagnosis and recurrence during this time, may justify a less intense follow-up.

References: Papillary thyroid microcarcinoma in Denmark 1996-2008: a national study of epidemiology and clinical significance. *Thyroid*. 2013; Hay ID *et al.* Papillary thyroid microcarcinoma: A study of 900 cases observed in a 60-year period. *Surgery*. 2008; Lin JD *et al.* Increased incidence of papillary thyroid microcarcinoma with decreased tumor size of thyroid cancer. *Med Oncol*. 2010; Papillary Microcarcinoma of the Thyroid – Prognostic Significance of Lymph Node Metastasis and Multifocality. *Cancer*. 2003