#### Identification of high risk patients with Incidental Papillary Microcarcinoma of Thyroid helps in deciding appropriate management.

Dr M Devaraj and Dr N Siddaramaiah S. Artham, S. Nag Dept. of Cellular Pathology & Dept. of Diabetes and Endocrinology The James Cook University Hospital, Middlesbrough,UK

#### Introduction

- Incidence of papillary microcarcinoma (PMC) is increasing
- 30-46% of all papillary carcinoma of thyroid
- Better FNA sampling under ultrasound guidance
- Management lack of consensus for surgical management due to excellent prognosis
- Disease specific survival 99% at 10 and 15 yrs

# Introduction

- In a large series Multifocal papillary microcarcinoma – 40%, Lymph node metastasis – 50%, higher incidence in women
- High risk factors associated with higher risk of disease related death
- Identification guide targeted aggressive therapy

# Methods

- Retrospective review all cases of PMC
- 9 year period -2006 to 2014
- SNOMED histopathology coding
- Histology reports size of tumour (10mm or less)
- Clinical notes, lab reports and Trust's MDT software portal – relevant information

- Total papillary microcarcinomas n=30
- Total papillary carcinomas n=113
- PMC = 30 of 113 (26%)
- F:M 23:7
- Mean age 49 yrs (20 to 74)

#### **Clinical reason for evaluation**



- History of previous irradiation to neck =1 (laryngeal carcinoma)
- Family history of thyroid cancer =1
- FNAC 1/patient (Thy3 to Thy5 , n=11)
- Repeat FNA (n=10): Change to higher category n=3
- Biopsy (n=5): no change in category

• Initial surgeries

Total Thyroidectomy +/- lymph node dissection

Lobectomy +/- isthmectomy

Incidental papillary microcarcinoma N=21 (after exclusion of those with suspicious cytology/histology)

- Presence of risk factors 9 of 21 patients
  - size 6-10mm
  - multifocality
  - extrathyroidal spread
  - -Infiltrative growth pattern

Number of risk factors varied between 1 to 4, commonest were size and multifocality

**Frequency of high risk features** 



- Lymph node dissection n=3 (2 with risk factors)
- Evidence of spread; n=1
- Management of patients with risk factors Initial total thyroidectomy n=5 Total thyroidectomy n=4 Radio active ablation therapy n=4

(another patient without risk factors received RAI due to associated oncocytic neoplasm)

- TSH suppression therapy: 17 of 21 patients
- TSH <0.1 was achieved n=6
- Only 4 patients with risk factors achieved this in first 12 months
- 2 deaths recorded: unrelated non-thyroidal malignancies

# Discussion

- Patients with papillary microcarcinoma excellent prognosis
- Disease specific survival 99.9% at 10 and 15 years
- Not influenced by extent of thyroidectomy and / RAI therapy
- Two or more risk factors associated with cancer related mortality.
- Large US study: age >45yrs, Male patient, African race, nodal metastasis, extrathyroidal spread – affect overall survival

# Discussion

• Our study

- Incidence of papillary microcarcinoma and disease specific survival similar to published results

- No consistency was observed in deciding further treatment in the presence of risk factors
- Not all patients with 2 or more risk factors had total thyroidectomy and/ or RAI therapy
- Low risk factors or no risk factors had total thyroidectomy

## Discussion

 All patients discussed at regional Thyroid cancer MDT

# Conclusion

- To separate incidental papillary microcarcinoma associated with non-malignant lesions from other malignant lesions
- Risk factors: effect disease specific survival. These factors should be considered to decide extent of surgery followed by RAI therapy
- All patients with incidental papillary microcarcinoma - should be discussed at Thyroid cancer MDT for appropriate management

# Conclusion

- Clear documentation and communication regarding TSH suppression therapy and target TSH level from MDT should be a standard
- Standardisation of histological reporting to include size, multifocality, vascular invasion, capsular and extrathyroidal spread will aid these decisions

# References

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## Thank you