



Case Report:

Sporadic Medullary Microcarcinoma in a Young Patient - A Rare Case

Vijayshankar S Assistant Professor, Department of Pathology,

Amita K, Assistant Professor Department of Pathology,

Abhishek M, Assistant Professor, Department of Pathology,

Manjunath D, Assistant Professor, Department of ENT,

Adichunchanagiri Institute of Medical Sciences, BG Nagara, Bellur cross, Mandya district, Karnataka, India.

Address For Correspondence:

Dr. Amita K,

Assistant Professor,

Department of Pathology,

Adichunchanagiri Institute of Medical Sciences,

BG Nagara, Bellur cross,

Mandya district, Karnataka, India.

E-mail: dramitay@rediffmail.com

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Abstract:

Sporadic medullary microcarcinoma of thyroid is a rare disease detected usually in 0.15% of all thyroid malignancy. We report a case of sporadic medullary microcarcinoma (MMC) of thyroid in a 24 year old male presenting as solitary thyroid nodule. There was no family history of medullary carcinoma of thyroid. Although medullary carcinoma in a familial setting have been reported, sporadic MMC is rare especially in a young patient.

Key Words: Medullary microcarcinoma; Sporadic; Solitary thyroid nodule

Introduction:

Sporadic medullary microcarcinoma of thyroid is a rare disease detected usually in 0.15% of all thyroid malignancy. Usually these cases have been diagnosed in thyroidectomies performed for other benign thyroid diseases. Medullary microcarcinomas are common in familial settings. Case reports of sporadic MMC is rare especially in a young patient.

Case Report:

A 23 years old male presented with a right sided solitary thyroid nodule (STN) measuring 2 x 2 cm. On examination, no lymphadenopathy was noted. Ultrasound (USG) neck revealed a solitary hypoechoic lesion measuring one cm in greatest dimension with fine specks of calcification.

FNAC was performed. Smears showed round to polygonal cells in clusters showing overcrowding, overlapping and fine stippled chromatin. Possibility of medullary carcinoma was considered after which serum calcitonin was done which was found to be elevated.

Total thyroidectomy was done. Gross examination revealed a well circumscribed, solid grey white nodule one cm in greatest dimension in mid portion of lateral lobe (Figure 1).

Histopathological examination showed a well encapsulated tumor with cells arranged in papillary pattern with amyloid and calcification (Figure 2). Cells showed moderate amount of amphiphilic cytoplasm and stippled nuclear chromatin. Full thickness capsular and vascular invasion was demonstrated

(Figure 3). Surrounding thyroid tissue showed non nodular C cell hyperplasia.

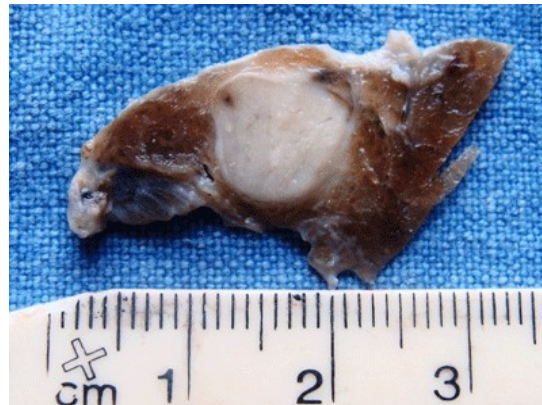


Figure 1: A well circumscribed, solid grey white lesion in the mid portion of lateral lobe of thyroid

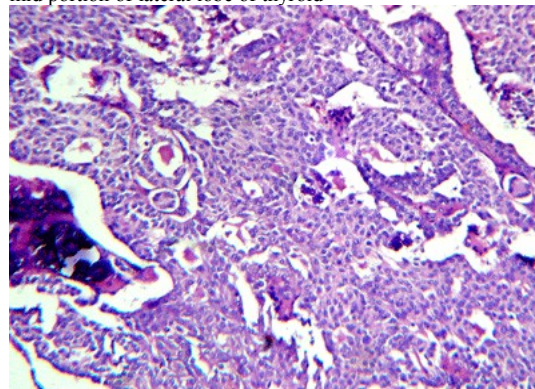


Figure 2: Photomicrograph showing solid and papillary pattern along with amyloid deposition and calcification. (Haematoxylin and Eosin, X 400)

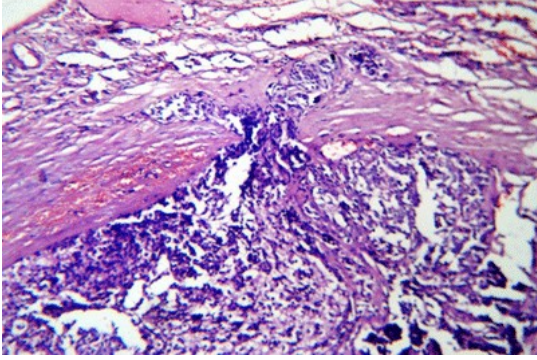


Figure 3: Photomicrograph showing capsular invasion. (Haematoxylin and Eosin, X 400)

Family history of thyroid disease, pheochromocytoma, sudden death, hypercalcemia or history of neck surgery was absent.

A final diagnosis of sporadic MMC of thyroid – papillary variant with capsular and vascular invasion was made.

A central compartment neck dissection was performed. There was no evidence of lymph node metastasis. Patient is doing well eight months postoperatively.

Discussion:

Incidence of MMC of thyroid is 0.20% in patients treated surgically for benign thyroid disease. S-MMC usually occurs in older age group, mean age being fourth to fifth decade.¹ Sporadic MMC in younger age group is rare.

Most of the cases are diagnosed usually in thyroidectomies performed for other reasons or at autopsy. Very few cases are symptomatic, present as STN and have unfavourable outcome.² Other common symptoms being diarrhoea and cervical lymphadenopathy. As a result the diagnosis is usually delayed. However ultrasound and FNAC has immensely contributed to the preoperative diagnosis of MMC.³

At histopathology, the presence of amyloid indicates unfavourable outcome as is capsular and vascular invasion.²

Studies have suggested that most of the MMC behave in benign fashion. However, presence of capsular and lymph angio invasion indicates bad prognosis and needs prophylactic central compartment neck dissection.

Conclusion:

MMC is an uncommon challenging malignancy. The present case report underscores the utility of USG and FNAC in the diagnosis and planning management in these cases. We report this case because of its rarity in young patients and to illustrate the necessity of total thyroidectomy with modified neck dissection in such cases.

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