Follicular Carcinoma Of The Thyroid Presenting As Distant Metastases: A Case Report And Review Of The Literature.

P Krishnappa, S Ramakrishnappa, M Kulkarni ., S Giriyan

INTRODUCTION

Follicular thyroid carcinoma is the second most common thyroid cancer and is a slow growing tumor\(^1\). It accounts for 10-20% of all thyroid malignancies\(^2\). The lesion tends to occur in older age groups, with a peak incidence in the fifth decade. It is three times more common in females than in males. The tumor usually presents as an asymptomatic solitary intra-thyroid nodule. These neoplasms tend to metastasize hematogenously, with lung and bone most commonly affected\(^1,2\). The incidence of distant metastasis of follicular thyroid carcinoma has been reported as between 11 and 25%\(^3,4,5\). However, Follicular thyroid cancer presenting with metastases as initial presentation is very rare. We report and discuss the unusual presentation of this case.

CASE REPORT

A 42-year old female, presented with fracture tibia (left) after a trivial trauma. Radiological studies were suggestive of a pathological fracture (Image 1). The patient was examined for general survey and health. On general physical examination, she appeared to be in mild distress, poorly built and nourished. The vital signs were stable. The systemic examination was apparently normal. Examination of the neck revealed prominent right lobe thyroid.

Abstract

Context: Follicular carcinoma of the thyroid presenting as a distant metastases is rare. Case Report: We present a rare case of a 42 year old patient with follicular carcinoma of the thyroid who presented with pathological fracture of the tibia at the time of diagnosis. The cytological samples from the fracture site showed follicular neoplasm. Histopathological study of the resected thyroid specimen showed a tumor with capsule and vascular invasion. Conclusions: The present case emphasizes that it is unusual for this neoplasm to initially present as distant metastases, although metastases in the late stages of the disease is more common presentation. Thyroid follicular carcinoma should be included in the differential diagnosis in cases of extrinsic tumoral lesions.
Follicular Carcinoma Of The Thyroid Presenting As Distant Metastases: A Case Report And Review Of The Literature.

The patient was further evaluated with ultrasound neck, which showed a well delineated lesion of 2cm in right lobe of thyroid (Image 2). The blood tests for thyroid hormones levels were in normal range. A working diagnosis of thyroid malignancy with metastases was made.

Further workup was initiated.

Fine needle aspiration was done from fracture site of tibia which showed features of follicular neoplasm (Image 3). Biopsy from the fracture site of tibia revealed metastatic follicular carcinoma thyroid.
The pathologic fracture of the left tibia was operatively repaired. She then underwent resection of the thyroid.

**HISTOPATHOLOGY**

The thyroidectomy specimen measured 5x4x4cm. The external surface was smooth and showed congested blood vessels. On sectioning, the right lobe of thyroid showed a single encapsulated lesion measuring 1.8 cm in diameter, two tiny satellite lesions around the main lesion each measuring 0.2cm.

The biopsy specimen from the fracture site of the tibia consisted of multiple pieces of bony fragments largest measuring 0.2x0.2x0.1cm. Histological study of all the specimens confirmed the diagnosis of follicular thyroid carcinoma. Capsular and vascular invasion was evidently seen.

**DISCUSSION**

In our case, the patient presented with metastatic disease i.e pathological fracture of the tibia as the chief complaint and later work up guided to the diagnosis of the thyroid malignancy. The unusual presentation delayed the diagnosis thus delaying the treatment for the patient. It demands a high clinical awareness and suspicion when encountered with pathological fracture. In such cases of metastasis of thyroid carcinoma, the literature emphasizes on treatment like total thyroidectomy and complete removal of metastatic foci. In summary, we present a rare case of a follicular carcinoma of the thyroid presenting as a metastatic disease in a relatively young patient.

**CONCLUSION**

Follicular carcinoma of the thyroid occasionally presents as metastatic disease with an occult primary. Metastatic thyroid carcinoma should be included in the differential diagnosis when evaluating a pathological fracture of the bone.

**References**

Author Information

Purushotham Krishnappa, M.B.B.S.,M.D.
Department of Pathology, International Medical University

Sowmya Ramakrishnappa, M.B.B.S
Department of Anatomy, Malaysian Allied Health Sciences Academy

Mohan H Kulkarni, M.B.B.S.,M.D
Department of Pathology, Karnataka Institute of Medical Sciences

Sujatha Giriyan, M.B.B.S.,M.D.
Department of Pathology, Karnataka Institute of Medical Sciences