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

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Citation

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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.

INTRODUCTION

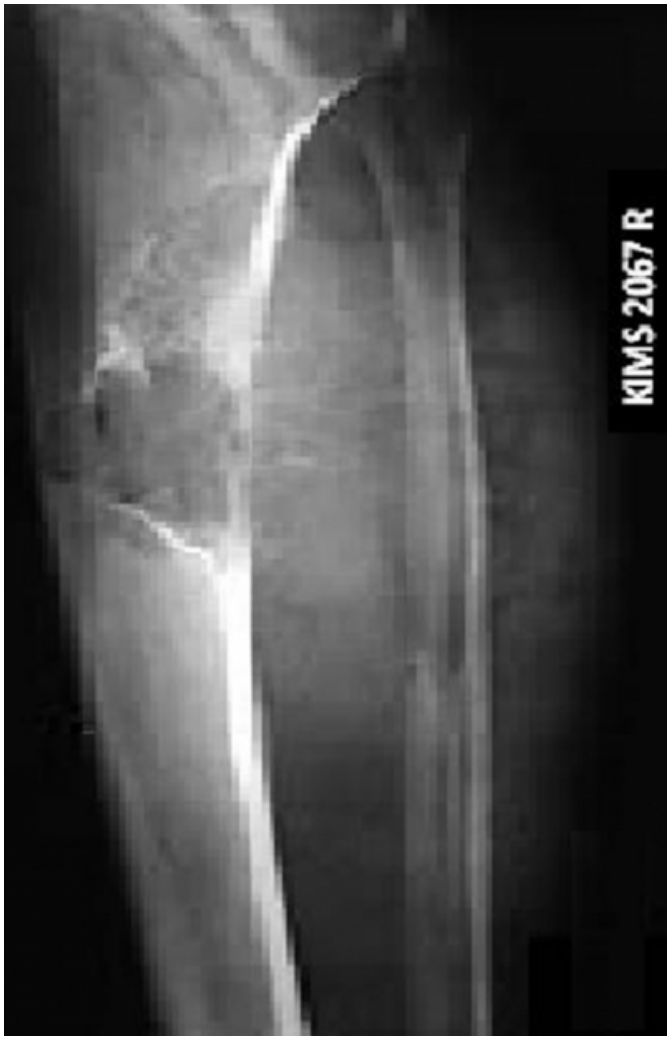
Follicular thyroid carcinoma is the second most common thyroid cancer and is a slow growing tumor[1]. It accounts for 10-20% of all thyroid malignancies[2]. The lesion tends to occur in older age groups, with a peak incidence in the fifth decade. It is three times more common in females than in males. The tumor usually presents as an asymptomatic solitary intra-thyroid nodule. These neoplasms tend to metastasize hematogeneously, 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 intial 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.

Figure 1

Image 1: X-ray left leg (showing pathological fracture in left tibia)

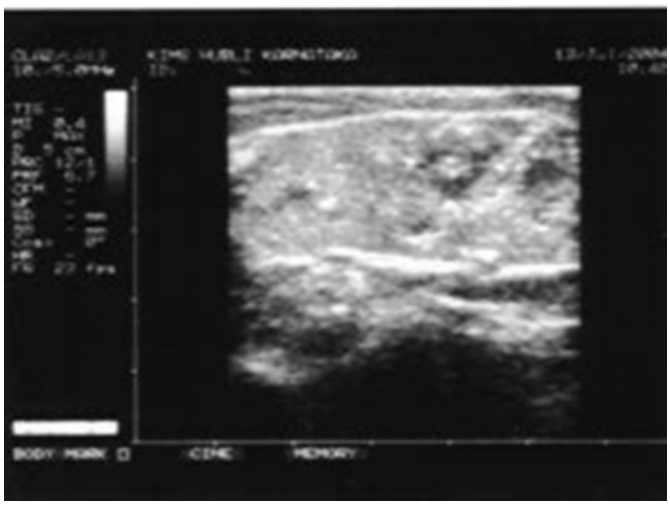


The patient was further evaluated with ultrasound neck, which showed a well delineated lesion of 2cm in right lobe of thyroid (Image 2). The blood tests for thyroid hormones levels were in normal range. A working diagnosis of thyroid malignancy with metastases was made.

Further workup was initiated.

Figure 2

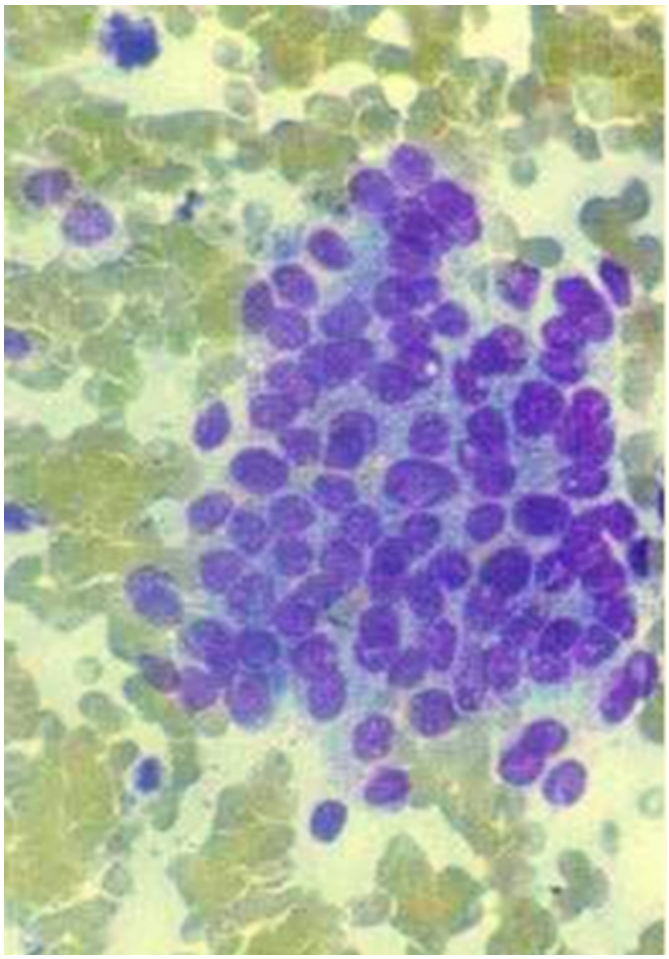
Image 2: Ultrasound Thyroid (Showing well delineated lesion in the right lobe of thyroid)



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.

Figure 3

Image 3: FNAC Thyroid lesion (x40 Wright's stain)



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

Carcinoma of thyroid accounts for approximately 1% of malignancies[1]. Follicular carcinoma is the second common malignancy of the thyroid only after papillary carcinoma[7]. Follicular carcinoma is more common in women, and tends to occur in patients in the fifth decade[8]. Follicular carcinoma has the higher mortality rate in comparison to papillary variant[9] and is known for vascular invasion and metastases. It has been reported that the incidence of presentation with distant metastases of follicular carcinoma thyroid ranges from 11% to 25%[3,4]. Disseminated metastases from follicular carcinoma thyroid as an initial presentation at the time of diagnosis is rare. Okutan et al presented a case of metastatic follicular carcinoma thyroid to the lumbar vertebrae[11].Shamim et al reported two cases of follicular carcinoma thyroid presenting as solitary skull metastasis[12]. Tazi et al reported a case of thyroid carcinoma presenting as a dural metastasis mimicking a meningioma[13].

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[14,15,16]. 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.

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