Case Report

Multiple primary extramedullary plasmacytomas involving thyroid gland — a rare entity

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Extramedullary plasmacytomas are rare localized tumors. Involvement of the Thyroid gland in the spectrum of primary extramedullary plasmacytoma is extremely rare and less than 75 cases of extramedullary plasmacytoma of the thyroid gland have been reported in the literature till date. We report a rare case with review of literature of multiple primary extramedullary plasmacytomas of thyroid gland found in an euthyroid patient with rapidly growing thyroid nodule. Fine needle aspiration from thyroid lesion with immunohistochemistry confirmed the diagnosis of plasmacytoma.

[*J Indian Med Assoc* 2018; **116:** 38-9]

Key words **: Extramedullary, primary plasmacytoma, thyroid gland.**

Primary extramedullary plasmacytoma a rare disorder should be distinguished from multiple myeloma on the basis of radiological and hematological investigations. Multiple primary extramedullary plasmacytoma of the thyroid gland is rare and few cases reported till date[1]. We discuss a case and review articles of primary extramedullary plasmacytoma of thyroid gland.

Case Report

A 60-year-old man came with complaints of nasal blockage and painless swelling on left side of the neck since 1 month.

Examination — A non tender lump of size 3 x 4 cm was palpable in the left lobe of the thyroid.

Investigations — Computed Tomography (CT) of neck region showed multiple homogeneously enhancing lesions seen in left and right lobe of thyroid gland without calcification and invasion of adjacent structures (Fig 1).

On USG, the lesions in the thyroid gland were iso-echoic showing vascularity on Doppler.

Fine needle aspiration cytology from the lesions (Fig 2) showed, plasmacytoid cell with high nucleus to cytoplasm ratio and few showing 'cartwheel' appearance.

Bone marrow aspiration showed only 3% of plasma cells. IgA was raised in serum electrophoresis study. No increase in light chain proteins was seen. Bens Jones proteins were not seen in urine electrophoresis study.

Normal skeletal survey.

Treatment **—** Patient underwent radiotherapy for the thyroid lesions which shows remission on follow up scan**.**

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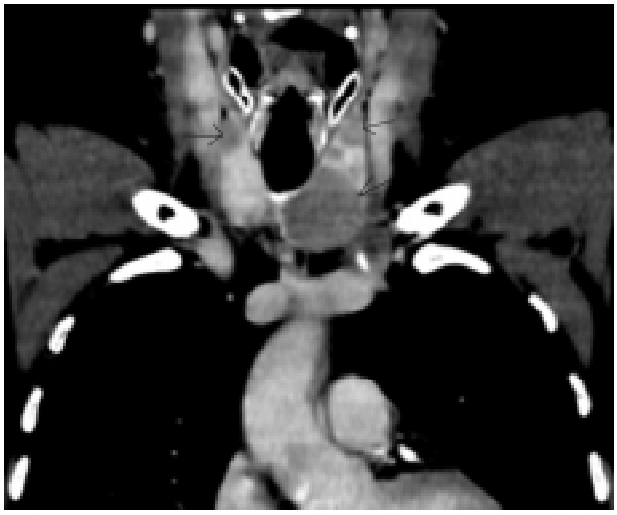

Fig 1 — Post contrast reconstructed coronal image showing multiple lesions (Arrows) in both the lobes of thyroid gland which show enhancement less than normal gland

Discussion

Plasmacytoma can be primary or secondary and medullary or extramedullary[2]. Primary extramedullary plasmacytoma is seen in 4% of all plasma cell tumors. Primary plasmacytoma should be distinguished from multiple myeloma by the absence of hypercalcemia, renal insufficiency and anemia, normal skeletal survey, absence of bone marrow plasmacytosis, and serum or urinary paraprotein level of less than 2 g/dl[3]. Our case satisfy all these criteria.

Thyroid gland involvement by the extramedullary plasmacytoma is extremely rare, less than 75 cases are reported[1,4,5].

Extramedullary plasmacytoma of the thyroid gland presents with painless slowly growing, soft to firm lump resembling goiter on imaging[4].

Patients may have normal thyroid function or show hypothyroidism and increased antithyroid antibodies[4,6]. Thyroid plasmacy-

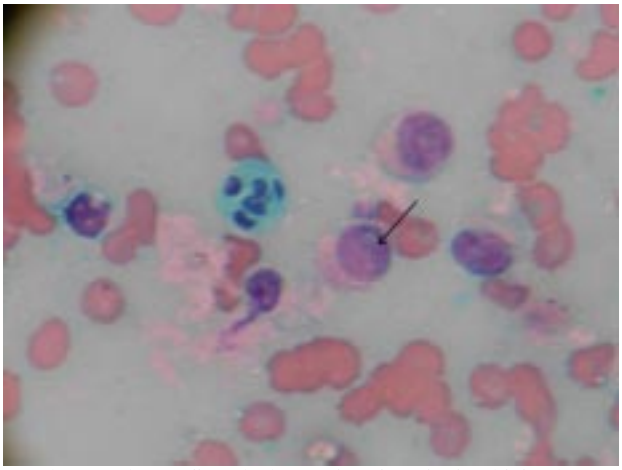

Fig 2 — Fine needle aspiration cytology from the thyroid showing multinucleated plasma cells (arrow), (pap stain with x 200 magnification)

toma is frequently associated with autoimmune thyroiditis[5].

Reported cases in the literature states Fine needle aspiration cytology is the only diagnostic test[3]. In our case, the diagnosis was made on Fine needle aspiration cytology. Bourtsos EP, *et al,* proposed that Primary Extramedullary Plasmacytoma should be included in the differential diagnosis of a neck lesion showing abnormally arranged cells[6]. In a case series of 40 cases of solitary extramedullary plasmacytoma by Rubin *et al*, found that involvement of thyroid gland in this spectrum had no sex predilection, most of the patients are hypothyroid with underlying auto-immune etiology associated with cervical lymph adenopathy[7]. The treatment options are radiotherapy, surgical resection, or both. Systemic therapy, ie, chemotherapy or autologous stem cell transplantation, is recommended for intractable, recurrent and multiple plasmacytomas[2,8].

Primary Extramedullary Plasmacytoma should be considered in the differential diagnosis of enlarging painless thyroid nodule especially in a diagnosed extramedullary plasmacytoma at other sites. Clinical correlation and immunocytochemistry are essential in diagnosis.

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