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Case Report

Rare presentation of thyroid cancer in terrtiary hospital in andaman and nicobar islands.

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ABSTRACT:
Rare presentation of a differentiated Thyroid carcinoma with atypical bony metastasis andintravascular direct spread, in a tertiary hospital (ANIIMS, Port Blair) in remote islands of Andaman and Nicobar.

Keywords: Thyroid cancer and bone metastasis

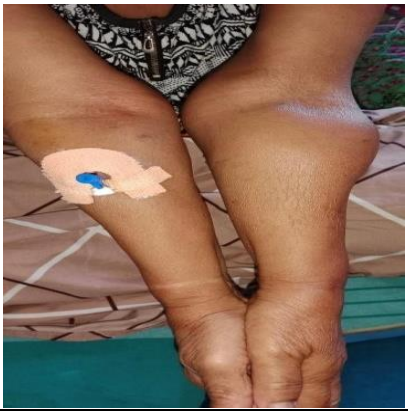
INTRODUCTION:

Incidence of thyroid carcinoma is increasing worldwide and over a decade, the incidence rate of this cancer in India had a relative increase of 62% in women and 48% in men[1]. Among all thyroid carcinomas, distant metastasis are uncommon in Papillary Carcinoma Thyroid and are present in approximately only 5% patients on initial presentation, and another 2.5% to 5% will develop distant metastasis after initial therapy. The most common sites of metastasis in differentiated thyroid cancersare lung(50%) and bone(25%), followed by both bone and lung(20%) and other tumor sites (5%)[2].
According to another study, Thyroid carcinoma can present with bone metastasis in its early stage [3].

CASE HISTORY:

A 67 year old hypertensive lady presented with complains of pain and swelling over the left upper third of forearm since 3 months. Pain over the forearm was gradual in onset, dull aching continuous, non radiating associated with a swelling over the upper third of left forearm which was initially around 4x4 cm which gradually increased over 3 months to reach a size of around 10x 12cm [figure 1]. There was no history of trauma, fever, preceding insect bite or any history of coagulopathy disorders. Inspite of the pain and swelling, patient faced no functional disability and was able to work with the same limb. There is a history of loss of appetite and loss of weight since past 3 months.

Figure 1 swelling over the proximal 1/3rd of Left forearm



On General examination, a fullness over anterior aspect of neck was noticed(Right more than left side) with no visible dilated veins or any scars or sinus. On local examination of the neck, a hard butterfly shaped swelling of size 8 x 6 cm was noted which extended from anterior border of Right Sternocleidomastoid muscle to Left Sternocliedomastoid. Lower border of gland was extending upto suprasternal notch and was not separately felt. Swelling moved with deglutition. Bilateral carotids were palpable in anatomical position with no bruit heard. No cervical lymph nodes palpable. On local examination of left forearm swelling , a 10x15 cm swelling seen in proximal 1/3rd of forearm with no skin changes or external wound over it. The swelling was spherical, firm, tender, not warm or pulsatile and mobility was possible in vertical and horizontal planes with the swelling becoming prominent on extension of the elbow. Peripheral pulsation and sensation intact. Range of movement at left elbow joint revealed a fixed flexion deformity at 50 degree and then upto 90 degree. Xray Left Forearm AP and lateral was ordered which revealed a massive loss of proximal 1/3rd of radius bone along with a soft tissue swelling[figure 2]. Xray Neck revealed no calcifications of thyroid and Chest Xray showed metastatic mottling. FNAC thyroid swelling revealed Papillary Carcinoma of thyroid gland. NCCT Neck showed Invasive Carcinoma thyroid with midline shift of trachea and Oesophagus compromising lumen along with Right IJV - vascular invasion seen.

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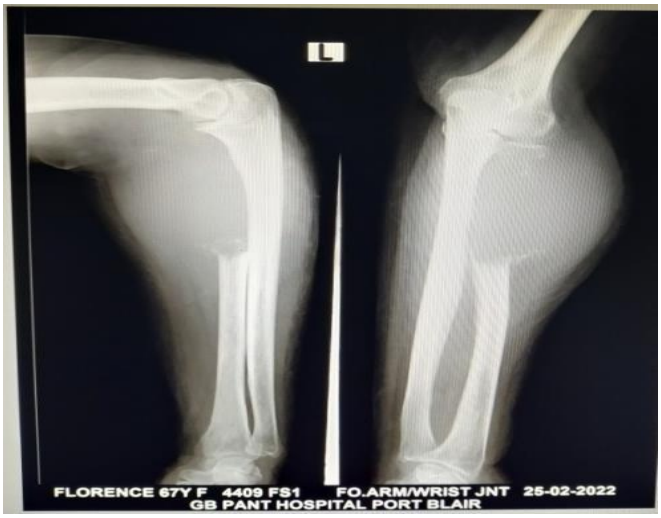

Figure 2. Xray Left Forearm AP and lateral

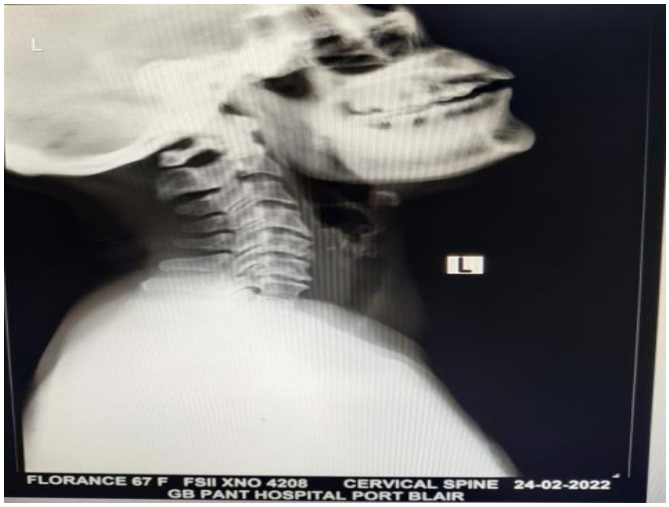

Figure 3. Xray Cervical spine lateral

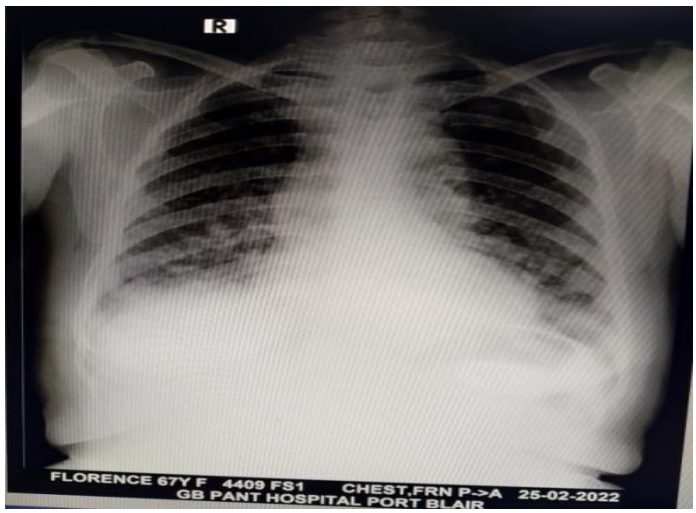

Figure 4. Metastatic mottling in CXR

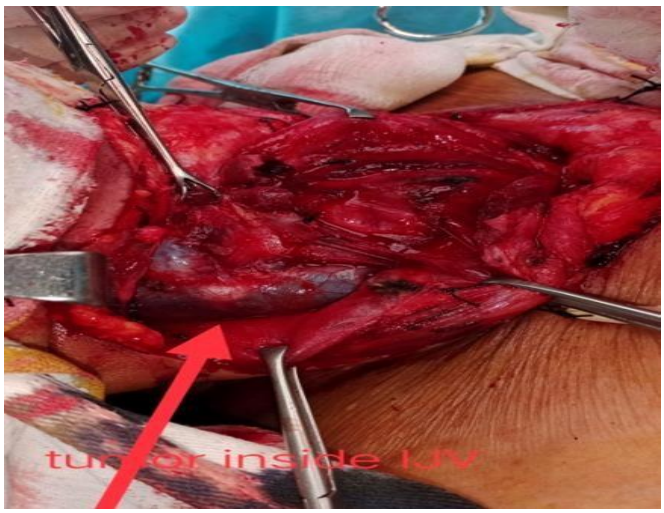

Figure 5. 2x2cm tumor infiltrating the Right IJV

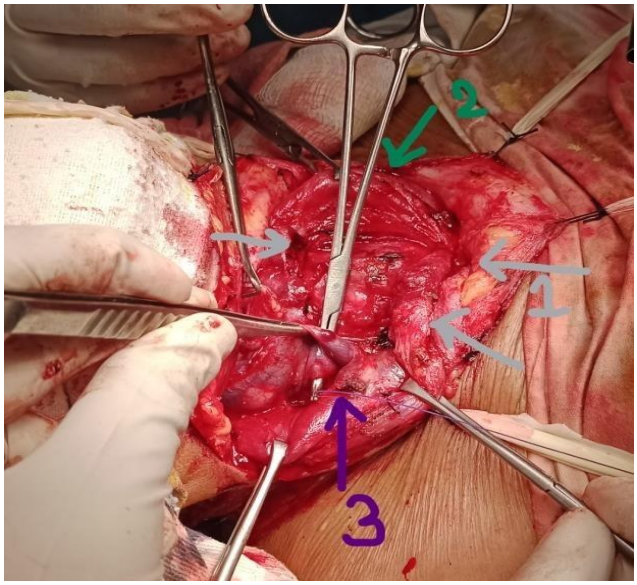

Figure 6. Intraoperative finding showing thyroid gland arrows(1) , Strap muscles with green arrow(2) and Right IJV being isolated with violet arrow(3).

Figure 7. Patient in Post operative period. with gray

Patient was taken up for Complete thyroidectomy in which, Kochers incision was given with right side of the incision extending superiorly for isolating internal jugular vein, followed by raising superior and inferior flaps. Intra-operative assessment showed a malignant locally advanced carcinoma of thyroid in which, right side of superior part of the thyroid was infiltrating right Internal Jugular vein with intravascular extension of a hard tumor measuring 2x3 cm[Figure 5]. In view of that, Right IJV was then skeletonised in entirety [Figure 6], superior and inferior controls of the Right IJV was obtained and it was taken down. This was followed by mobilizing right lobe of the gland medially towards trachea. Later on, it was found that the trachea was fully infiltrated and encased hence, further progress was not made as it was inoperable and the procedure was abandoned. Hemostasis achieved and incision closed in layers with drain placement. Resected specimen was sent for Histopathological examination (HPE No. HP-205/2022, Department of Pathology, ANIIMS) which revealed Histological Type – Differentiated High Grade Thyroid Carcinoma(DHGTC) , Papillary Carcinoma, solid ,trabecular variant (60-70%) and Papillary Carcinoma, and infiltrating follicular variant(30-40%) with foci of necrosis. Mitotic rate 1-2 per $2mm^2$. Tumour necrosis was present . Vascular invasion: present, extensive (>4 vessels).Pathological staging - pT3NXMX .

DISCUSSION:

The following case is rare presentation of a differentiated thyroid carcinoma since the patient sought medical attention for the pain and swelling of Left proximal forearm and not the thyroid swelling itself. Our patient neither mentioned regarding any discomfort in neck nor had noticed any neck swelling or any symptoms of thyroid disorder. Only after a careful examination, was the thyroid swelling noticed and furthermore investigations were carried out. This case reemphasizes on how relevant history taking and careful examination still are the pillars of treating a patient and also acts as a reminder that patients might not always seek medical attention for their primary disease but rather a complication or a sequel of the disease itself. The spread of this papillary carcinoma thyroid was also worthwhile noting as, distant spread of the carcinoma is usually to the Lymph node[4,5], but the spread to the Left radius was even quite rare. Bone metastases are more commonly found in follicular carcinoma than papillary carcinoma and the predilection sites are in the spine (34.6%) along with the pelvic bone(25.5%) whereas thoracic bones and extremities are rare compromising 18.3% and 10.2% of total bone metastases respectively[6]. Along with that, the direct spread to the regional great veins in PTC and other differentiated thyroid carcinoma is also infrequent but has a high mortality rate[7]. PTC can sometimes show microscopic vascular invasion, and rarely cause tumor

thrombus in the IJV or other great veins of the neck[7,8]. The following case intraoperatively revealed tumour infiltrating Right Internal Jugular vein with intravascular extension of tumor measuring 2x3 cm, another of an occasional finding.

CONCLUSION:

The case is a typical example of one where the primary source of carcinoma could have been easily missed if it was not for a detailed history and clinical examination that was performed right in time and yet, atypical in several ways including its presentation as well as spread. In an era where medical professionals heavily rely on imaging reports, through this case report, we want to emphasize that there is no substitute to a good history taking and relevant clinical examination, which goes a long way in timely diagnosis and management of thyroid malignancies.

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