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CASE REPORT

Metastatic papillary carcinoma thyroid co-existing with oral cavity squamous cell carcinoma: A case report and review of literature

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Abstract The incidental discovery of metastatic papillary carcinoma thyroid in lymph node while the patient is being investigated for primary squamous cell carcinoma of the oral cavity is an unusual clinical situation and the appropriate management in such clinical situation is controversial and confusing. We report a case of a 65 year old male with primary squamous cell carcinoma of alveolus with bilateral neck nodes. Fine needle aspiration cytology showed metastatic squamous cell carcinoma in lymph nodes on the left side and metastatic papillary carcinoma in the lymph node on the right side. We present the diagnostic dilemma and the confusion in planning the treatment of such difficult situation.

1. Introduction

The incidental discovery of metastatic thyroid carcinoma in lymph nodes during neck dissection being done for separate primary head and neck carcinoma is a rare clinical situation. Incidental thyroid carcinomas may occur in 1–10% of the population.[1] However its prevalence is found to be 6–35% in various autopsy studies.[2]

Most authors believe that thyroid carcinoma of the lymph nodes is metastatic and arises from focus of occult malignancy in the thyroid gland.[3,4] It is because occult thyroid carcinomas were not only detected from the lymph node but also from the thyroid tissue obtained from surgically removed tissues or from autopsy.[5] Therefore the metastatic lesion in thyroid is pursued more aggressively because they represent an advanced stage lesion. However, not all the incidental thyroid carcinomas found in the lymph nodes arise from occult malignancy in thyroid.

Few authors like Butler et al. believe that sometimes accidental thyroid carcinoma in the lymph nodes detected after

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neck dissection may represent malignant transformation of aberrant thyroid tissue in the node and apparently normal thyroid gland.[6] In such cases it is dilemma with regard to appropriate surgical intervention for differentiated thyroid cancer in presence of oral malignancy.

We report a case of a 65 year old male who presented with carcinoma alveolus with bilateral neck node. Fine needle aspiration cytology from both sides of neck showed metastatic carcinoma on the left side while FNAC from node on the right side showed papillary carcinoma metastatic. We present the dilemma faced with regard to treatment.

2. Case report

A 65 year old male, presented with ulcer over the left side lower alveolus (inner aspect) for 6 months, insidious onset, gradually progressive, associated with pain and decreased mouth opening for 4 months. The overlying skin of the lower jaw ulcerated and presented with wound over the lower part of face for 1 month, associated with loosening of tooth. He was a chronic smoker and gutkha chewer since 30 years. He had no other co-morbid illness.

On clinical examination an ulceroproliferative lesion was present over skin on left side lower alveolus, 1.5×1.5 cm, with induration of 2 cm all around (Fig. 1). Intra-orally 5×4 cm lesion was present over the left lower alveolus extending from the left central incisor till 2nd molar and was involving lower gingivobuccal sulcus. On examination of neck it was found that 3×3 cm hard mobile node was palpable on the left side level II and another node 2×2 cm was palpable on the right side in level II. A clinical diagnosis of carcinoma Alveolus with bilateral neck metastases was made and staged clinically as T4aN2cMx (Fig. 1).

X-ray chest was normal and routine blood investigations were normal. Fine Needle aspiration cytology from both palpable nodes in the neck and biopsy of the primary lesion was done. Biopsy of lesion from alveolus was squamous cell carcinoma keratinizing type. FNAC from the left side of neck was reported as metastatic squamous carcinoma, while FNAC from the right side of neck was reported as metastatic papillary carcinoma (Fig. 2). Ultrasound of the neck was done to visualize the thyroid and revealed hypoechoic lesion in the left lobe of thyroid.

Figure 1 Preoperative photograph of the patient showing induration of the skin over the mandible 173×130 mm (300×300 DPI).

Positron emission computer tomography (PET CT) scan was done and FDG avid lesion in the left lower alveolus extending from the left canine to the left retro-molar region, with cortical destruction of mandible and extension to gingivo-buccal sulcus and involving the floor of mouth was seen. Multiple bilateral level I b and level II lymph nodes are seen. Non-FDG avid hypo dense lesion was noted in the left lobe of the thyroid gland (Fig. 3).

Patient underwent wide local excision with segmental mandibulectomy left radical neck dissection for oral cavity lesion. During surgery, the frozen section was sent by removing the right sided lymph node and from a suspicious nodule in the left lobe of thyroid. The frozen section was reported to be papillary carcinoma thyroid both from right sided lymph node and from the thyroid gland. So, total thyroidectomy with clearance of central compartment lymph nodes of the neck was done. Oral cavity defect was reconstructed with deltopectoral fascicutaneous and Pectoralis Major myocutaneous flap and reconstruction with titanium plate was done.

Post operative histopathology showed squamous cell carcinoma of the alveolus with involvement of mandible. 3/10 Lymph nodes on the left side of neck showed metastatic squamous cell carcinoma while on the right side level II and level IV showed metastatic papillary carcinoma thyroid. A focus of papillary carcinoma thyroid was seen in the left lobe of thyroid.

Patient was sent for radionuclide therapy and received 50 millicuries of radioiodine six weeks after surgery. Patient was also sent to radiotherapy department and he received a full course of radiotherapy. Post operatively he was followed up every three months and is disease free.

3. Discussion

The accidental discovery of metastatic papillary carcinoma in the lymph node of a patient being investigated for primary carcinoma of oral cavity or oropharynx is a rare clinical situation. A total of 42 cases of papillary carcinoma thyroid in lymph nodes dissected surgically for treatment of primary squamous cell carcinoma of oral cavity have been reported.[7] Vassiloplou-Sellin and Weber found the incidence of incidental thyroid metastasis to cervical nodes was 0.3% (eight cases of 2855 patients).[8] Butler et al. have in their studies reported that up to 3% of patients with head and neck cancer may harbor clinically unsuspected thyroid cancer.[6] The most common lymph nodes involved by metastatic thyroid carcinoma are level IV, level III, and level II. In our case we had involvement of level IV and level II lymph nodes.[9]

There exists controversy with regard to the origin of these metastatic thyroid lesions in the lymph nodes. Some authors believe that these lesions arise from benign lateral aberrant thyroid tissue in the lymph nodes which have undergone malignant transformation.[10,11] According to Gerard-Marchant these benign thyroid inclusions represent small collections of histologically normal thyroid follicles in lateral cervical lymph nodes.[12] These may remain benign or may undergo malignant transformation with incidence .03%. In such cases the thyroid gland may remain free of disease.

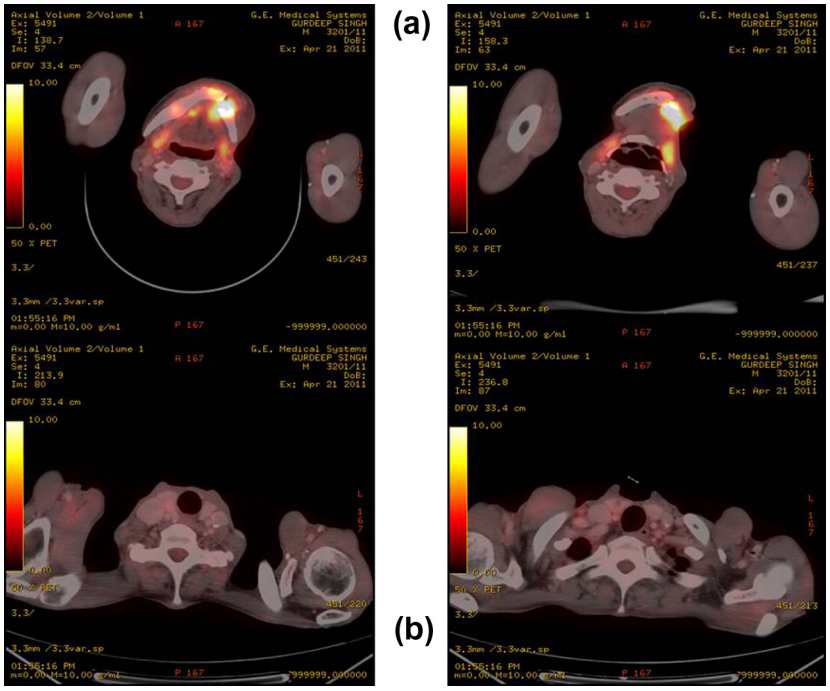

Figure 2 (a). Low power view showing lining by stratified squamous epithelium with tumor cells showing invasion (hematoxylin and eosin stain 20×). (b) High power view thyroid showing papillary pattern with nuclear grooving and overlapping (hematoxylin and eosin stain 40×) 254 × 190 mm (96 × 96 DPI).

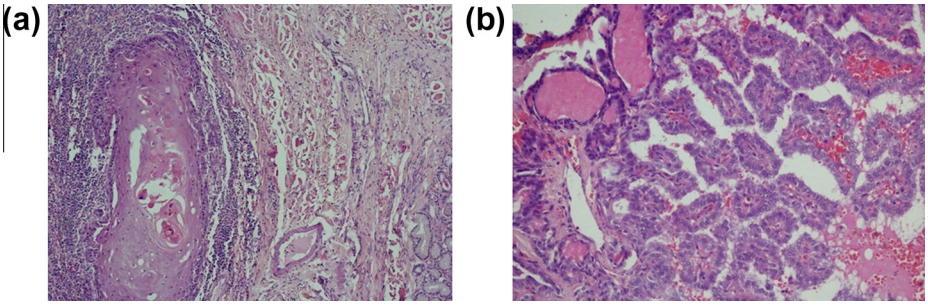

Figure 3 (a) Positron emission computed tomography (PET CT) showing FDG avid lesion in the mandible. (b) Non avid FDG lesion in the left lobe of thyroid gland 254 × 190 mm (96 × 96 DPI).

Ibrahim et al. advocate that in the presence of metastatic thyroid carcinoma in the lymph nodes, if thyroid gland is clinically normal and technetium thyroid scan is normal, total thyroidectomy is avoided and the patient can be kept on regular follow up.[13] Meyer and Steinberg in a systematic autopsy investigation identified microscopically normal thyroid follicles within lateral cervical lymph nodes in 5% of autopsied patients but were not able to identify a synchronous primary cancer in the ipsilateral thyroid lobe in any case, justifying avoiding total thyroidectomy in such cases.[14]

Many authors consider lateral aberrant thyroid tissue presenting as cervical lymphadenopathy to represent metastasis from primary undetected thyroid carcinoma despite the presence of a normal thyroid gland.[15,16] Clark et al. in their study have concluded that clinically normal thyroid gland in the presence of metastatic papillary carcinoma is not sufficient evidence to rule out small focus of carcinoma in the thyroid gland and so he advocates total thyroidectomy in all such cases.[17] In our case, a similar protocol was followed and focus of papillary carcinoma was detected in a clinically normal thyroid gland.

The significance of accidentally discovered metastatic thyroid lesion in the lymph nodes is not much when compared to the more aggressive primary squamous cell tumor. Hence more effort should be directed toward the primary tumor. Vassiloplou-Sellin and Weber believe that the ultimate outcome of such cases depends on tumor behavior of the primary squamous tumor and not by the clinical outcome of well differentiated carcinoma of thyroid.[8] He advocates conservative treatment of thyroid gland in the presence of aggressive primary lesion.

However we suggest, in the presence of metastatic thyroid lesion in lymph nodes in the presence of non-thyroid primary squamous malignancy of head and neck, a search should be made to look for primary focus of carcinoma in thyroid. An USG neck, thyroid scan and intra operative frozen section from

the suspicious thyroid nodule should be sent. If malignancy of thyroid is suspected, total thyroidectomy should be done along with the removal of the primary tumor of the head and neck. More attention should be focused toward the management of primary head and neck tumor and should receive post op chemo radiotherapy in addition to the radionuclide therapy.

4. Conclusion

Metastatic papillary carcinoma thyroid in the presence of squamous cell carcinoma of oral cavity is a rare clinical phenomenon. In such cases outcome of the patient depends on the behavior of the primary tumor and not by thyroid lesion so in such cases aggressive treatment of primary squamous cell carcinoma oral cavity should take precedence. Total thyroidectomy should be done in the presence of clinically palpable nodule in thyroid, or the presence of a suspicious nodule in the thyroid on ultrasound neck, positive thyroid scan, or suspicious lesion on intraoperative frozen section from the thyroid gland.

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