American Journal of Otolaryngology and Head and Neck Surgery

Case Report
Published: 19 Jul, 2022

Metastasis of Papillary Thyroid Carcinoma to Larynx: A Rare Case Report

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Abstract

Introduction: Papillary thyroid carcinoma has lymphatic metastases to regional lymph nodes which is very common but lymphatic or vascular metastases to larynx is extremely rare although direct infiltration to larynx, trachea and esophagus is well recognized.

Case Report: A 65 year old male presented with progressive hoarseness of voice for 4 months without any sore throat, dysphagia, stridor or neck lump. Indirect and fibreoptic laryngoscopy revealed a fleshy smooth lesion in left vocal cord with mobile left cord. Micro-laryngoscopy and excision of the whole lesion was done and histopathology report revealed papillary thyroid carcinoma.

Conclusion: Papillary thyroid carcinoma commonly spreads through lymphatic's to regional lymph nodes and vascular spread is uncommon to bones, brain, lungs and soft tissue. Extra nodal metastases usually require total thyroidectomy with radioiodine ablation.

Keywords: Papillary thyroid carcinoma; Metastasis; Larynx

Introduction

The incidence of thyroid cancer has rapidly increased in the United States and other developed countries over the past 30 years and among them more than 90% are papillary carcinoma [1]. Papillary thyroid carcinoma has erratic behavior and it commonly spreads through lymphatic's and unlike follicular carcinoma vascular spread is rare, bone, lungs, brain and skin are the common sites of distant metastasis and involvement of the trachea, esophagus, larynx, pharynx, recurrent laryngeal nerve occurs due to direct infiltration [2,3]. Different sites of distant metastasis to lung [2], kidney [4], cerebellum [5], skin [6] and esophagus [7] have been reported. Multiple primary tumors like papillary carcinoma of the thyroid and squamous carcinoma of the larynx manifesting as a collision tumor of the neck has been reported [8]. There are several reports of synchronous association between squamous cell carcinoma of the upper aero digestive tract and lymph node metastasis from occult papillary thyroid carcinoma [9,10].

Although a first report of extra nodal metastasis of papillary carcinoma of thyroid to larynx and hypopharynx was described [2], but that was extension from the thyroid cancer but in our case there was no obvious thyroid swelling and patient presented with hoarse voice so we believe this to be the first reported case of extra nodal metastasis of papillary thyroid carcinoma to larynx from occult thyroid cancer.

Case Presentation

A 65 year old male, nonsmoker attended to outpatient clinic with progressive hoarse voice for the last 4 months. He did not notice any sore throat, dysphagia, stridor, referred otalgia or any neck lumps or any neck nodes. Examination of nose throat and ear revealed no abnormalities except a fleshy smooth lesion in left vocal cord (Figure 1) with normal vocal cord mobility. Clinically we did suspect laryngeal tuberculosis or amyloidosis. All routine investigations including chest X-ray was normal. Microlaryngoscopy was done and the whole lesion was excised and sent for histopathology. Histopathology revealed a papillary carcinoma of thyroid (Figure 2). The papillae are lined by cuboidal cells with clear nuclei and central core. Lymphovascular invasion was not seen and outer surface was free of tumor. We did routine thyroid assessment like TSH and ultrasonography showed normal thyroid profile without any nodule. We planned for total thyroidectomy with central clearance and lateral clearance if needed followed by radio-iodine ablation. The patient did not report for further treatment.

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Received Date: *15 Jun 2022*
Accepted Date: *14 Jul 2022*
Published Date: *19 Jul 2022*

Citation:
Matin MA, Islam MS, Razzak MA. Metastasis of Papillary Thyroid Carcinoma to Larynx: A Rare Case Report. Am J Otolaryngol Head Neck Surg. 2022; 5(8): 1203.

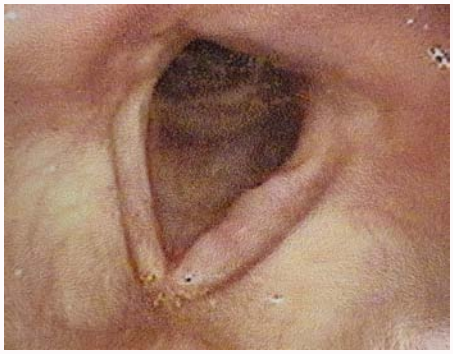

Figure 1: Fibreoptic laryngoscopy showed a fleshy smooth lesion in left vocal cord.

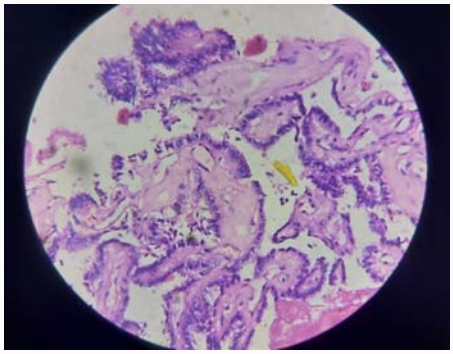

Figure 2: Papillar carcinoma. The papillae are lined by cuboidal cells with clear nuclei and central core.

Discussion

More than 90% of the thyroid carcinoma is papillary carcinoma with very good survival rate [1]. Papillary carcinoma with histologically tall cell type and diffuse sclerosis variant carries a bad prognosis [11,12]. Other bad prognostic factors include age of the patient (>45 yrs), extra capsular invasion, extra nodal spread, anaplasia of the tumor and male patient [3,11]. Direct laryngeal invasion of the tumor might produce dysphagia, stridor and hoarseness but in our case the patient presented with hoarse voice with left vocal cord lesion but there was no thyroid swelling. Our case is extra nodal metastasis of papillary thyroid carcinoma to larynx from occult thyroid primary. Direct laryngoscopy showed a discrete lesion in left vocal cord which was not in continuity with the thyroid swelling. This discrete thyroid cancer would have been a consequence of an either retrograde lymphatic or vascular spread [13]. As there is absence of lymphatic supply in vocal cord so retrograde sub-epithelial spread cannot be ruled out. Advanced thyroid cancer generally presents difficult therapeutic decision and most of the cases need total thyroidectomy followed by radioiodine ablation [14]. Central and lateral neck clearance is needed in some cases. Although in our case there was no obvious thyroid lesion clinically as well as on ultrasonography but completion thyroidectomy followed by post operative radioiodine ablation would be the best option.

References

1. Matin MA, Islam MS, Razzak MA, Khanam M, Kabir S, Saifuddin AKM, et al, Incidence of thyroid cancer in thyroid swelling, study of 200 cases. Bangladesh J Otorhinolaryngol. 2021;27(1):12-6.
2. Varghese BT, Mathews A, Pandey M, Pradeep VM. Unusual metastasis of papillary thyroid carcinoma to larynx and hypopharynx a case report. World J Surg Oncol. 2003;1:7.
3. Mcaffrey TV, Bergstralh EJ, Hay ID. Locally invasive papillary thyroid carcinoma. Head Neck. 1994;16(2):165–72.
4. Graham LD, Roe SM. Metastatic papillary thyroid carcinoma presenting as a primary renal neoplasm. Am Surg. 1995;61(8):732–4.
5. Pacak K, Sweeney DC, Wartofsky L, Mark AS, Punja U, Azzam CJ, et al. Solitary cerebellar metastasis from papillary thyroid carcinoma: A case report. Thyroid. 1998;8(4):327–35.
6. Lissak B, Vannetzel JM, Gallouedec N, Berrod JL, Rieu M. Solitary skin metastasis as the presenting feature of differentiated thyroid microcarcinoma: Report of two cases. J Endocrinol Invest. 1995;18(10):813–6.
7. Cooney BS, Levine MS, Schnall MD. Metastatic thyroid carcinoma presenting as an expansible intraluminal esophageal mass. Abdom Imaging. 1995;20(1):20–22.
8. Wang X, Cui XY, Fang N, Chen WL, Yu H, Zhu W. Papillary thyroid carcinoma and laryngeal squamous cell carcinoma manifesting as a collision tumor of the neck: A case report. Oncol Lett. 2013;6(6):1616–8.
9. Mattavelli F, Guzzo M, Di Palma S, Molinari R. Synchronous association of carcinoma of the superior aerodigestive ways and lymph node metastasis of papillary adenocarcinoma of the thyroid: Presentation of 6 cases. Acta Otorhinolaryngol Ital. 1991;11(2):179–84.
10. Lopez-Escamez JA, Lopez-Nevot A, Moreno-Garcia MI, Gamiz MJ, Salinero J. Cervical metastasis of occult papillary thyroid carcinoma associated with epidermoid carcinoma of the larynx. ORL J Otorhinolaryngol Relat Spec. 1999;61(4):224–6.
11. Cotran RD, Kumar V, Collins T, editors. WB Saunders Company, Philadelphia. Robbins Pathological Basis of Disease. 1999. p. 1143–4.
12. Mizukami Y, Nonomura A, Michigishi T, Hashimoto T, Noguchi M, Nakamura S, et al. Diffuse sclerosing variant of papillary carcinoma of the thyroid: Report of three cases. Acta Pathol Jpn. 1990;40(9):676–82.
13. Tobias MJ. Anatomy of the human lymphatic system: A compendium translated from the original 'Anatomie des Lymphatiques de l 'Homme 'by H. Rouviere rearranged for the use of students and practitioners. Ann Arbor, Edward Bros. 1938.
14. Mazzaferri EL. Thyroid remnant I131 ablation for papillary and follicular thyroid carcinoma. Thyroid. 1997;7(2):265–71.