

Case Report

ANAPLASTIC TRANSFORMATION OF PAPILLARY THYROID CARCINOMA AS PROLONGED EFFECT, METASTASIZED TO CERVICAL LNS– A CASE REPORT

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ABSTRACT

Anaplastic carcinoma is solid tumor that is aggressive and rare form of thyroid cancer. Although anaplastic tumor occurs 1 to 2 percent only, they account for 14 to 50 percent of per year mortality rate related to thyroid tumor. 25% of anaplastic thyroid carcinoma (ATC) occurs along with differentiated thyroid tumors. Anaplastic transition at remote metastatic locations is extremely rare. Here, we are representing a rare case of transformed anaplastic carcinoma of thyroid as prolonged effect of papillary thyroid tumor left untreated, in 59 years old male that has metastasized to cervical lymph node.

Keywords: Thyroid cancer, Anaplastic carcinoma, Papillary carcinoma, Follicular carcinoma, Lymph node

INTRODUCTION

Papillary thyroid tumor is most common neoplasm occurring in 80 to 85 percent of cases and has best prognostic factors. In most cases, the tumor presents as an abnormal dense mass, but in some unusual cases, it can have cystic features. (Limaiem *et al.*, 2019) On the other side, anaplastic cancer of thyroid gland occurs about 10 to 15 percent in relation to other thyroid cancers. Its survival rate ranges about 5 years in 3.6% patients whereas average survival rate is of four months. Increasingly growing thyroid mass along with earlier thyroid goiter is the most frequent indicator. (Nel *et al.*, 1985) Anaplastic carcinoma is solid tumor that is aggressive and rare form of thyroid cancer. Although anaplastic tumor occurs 1 to 2 percent only, they account for 14 to 50 percent of per year mortality rate related to thyroid tumor. (Nagaiah *et al.*, 2011) 25% of anaplastic thyroid carcinoma (ATC) occurs along with differentiated thyroid tumors. As ATC is typically caused by transformation of different thyroid tumors (either papillary tumor or follicular tumor). (Spires *et al.*, 1988) Most commonly Anaplastic thyroid carcinoma arises from follicular tumor rather than from papillary tumor. Anaplastic transition at remote metastatic locations is extremely rare. (Wang *et al.*, 2007) Male to female ratio of ATC is 3.5:1 and it occurs in individuals of age group above 50 years. (Demeter *et al.*, 1991) Anaplastic cancer of thyroid is rare enough with incidence rate of 1 to 2 people per 1000000 annually. Because of ATC's offensive behavior, invasion of lymph nodes and Distant Mets (AJCC) American Joint Committee on Cancer declared all of the phases as stage 4. Further subdividing it as stage IVa, IVb and IVc. (Keutgen *et al.*, 2015) Metastasis of transformed anaplastic tumor to other site is a rare occurrence, till now, a few reports of such condition has been published. We share our case of negligence toward the treatment of thyroid mass (papillary carcinoma) leading to the rare condition of transformed anaplastic thyroid carcinoma metastasized to cervical LNs.

CASE REPORT

A 59-year male presented in the OPD of Mayo hospital, Lahore with right side neck swelling in supraclavicular area from last 1 month. Patient has medical history of sore throat from last 5 years, left untreated. Clinical evaluation disclosed normal BP, heart rate and absence of pyrexia. Physical evaluation showed right side supraclavicular mass lateral to thyroid gland, no lymphadenopathy was observed. Lab evaluation revealed normal thyroid function test and absence of any infection or microbes. Thyroid scan was performed in King Edward Medical University, Lahore. The scan was taken 20 mints later to IV injection of Tc 99 mand revealed marginal goiter with early nodular changes and extra thyroidal swelling in right side of neck as shown in fig 1. Ultrasound showed right sided lymph node abscess of mixed density, as depicted in fig 2. Following FNA (fine needle aspiration) diagnosed the mass was suspicious of malignancy. The Contrast CT scan represented a matted lymph node pushing trachea and right lobe of thyroid, as showed in fig 3 and 4.

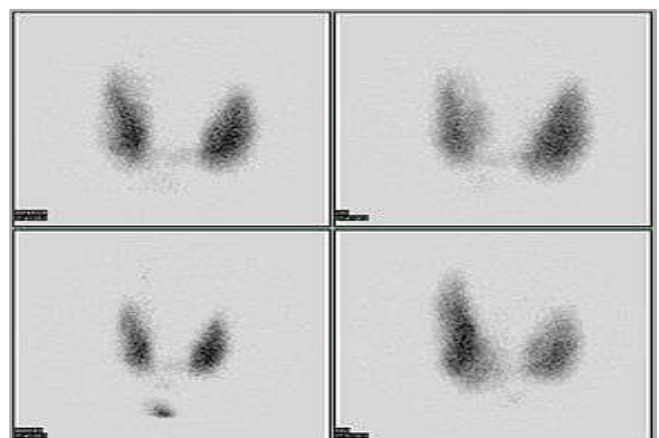


Figure 1: Nuclear thyroid scan representing marginal goiter of thyroid gland.

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Figure 2: Ultrasound image depicting a mixed density lymph node abscess at right side approximately in supraclavicular region.



Figure 3: Computed Tomographic image displaying enlarged matted lymph node in right side of neck.



Figure 4: Clearly depicting tracheal and right lobe shift caused by enlarged matted lymph node.

Using general anesthesia, surgery was conducted and extracted mass was sent for pathological evaluation. Excisional biopsy gave final diagnosis of transformed anaplastic carcinoma of stage 4 in background of papillary thyroid carcinoma. Transformed anaplastic carcinoma has metastasized to cervical LNs. Considering lymph node involvement, severe pain, blood vomiting, fast growth and advanced stage of carcinoma in patient, oncologist decided to give only palliative chemotherapy to the patient. Patient expired one and half month later to the excisional biopsy. As patient left the mass of papillary thyroid carcinoma (PTC) untreated that later on transformed into anaplastic more severe form of tumor. So, this case supports the hypothesis that anaplastic carcinoma is one of the prolonged effect of papillary thyroid carcinoma and represents a rare phenomenon of metastasis of transformed ATC.

DISCUSSION

ATC cases are usually believed to be the result of existing different thyroid tumors. Anaplastic transition is frequently seen in thyroid gland and surgical site of previously existing thyroid cancer.

Anaplastic thyroid cancer metastasis to remote areas is quite rare condition to occur. The sites usually metastasized includes cervical LNs, liver, adrenal gland, brain, intrathoracic LNs, lung, pleura, heart, and retroperitoneal LNs. (Solomon *et al.*, 2015) In this report, patient came with metastasis of transformed anaplastic thyroid tumor into the cervical LNs. Two theories have been made about the etiology of anaplastic carcinoma of thyroid. One theory is that ATC results from transition of existing different thyroidal tumors, and the other one is that ATC is primarily derived from follicular cells. In this report, patient developed transformed anaplastic tumor secondary to papillary thyroid carcinoma. So this case supports the first theory made about the oetiology of ATC. (Dwipayana *et al.*, 2017) ATC is typically caused by irregular thyroid gland, presence of goiter is recorded in more than 80 percent of cases. It affects more women than men. The signs of anaplastic cancer include neck mass, difficulty in swallowing, breathing and having abnormal voice also known as dysphonia. ATC prognosis is better in patients less than or equal to 50-years rather than in old patient having metastasized anaplastic tumor. Risk factors accompanied with poor prognosis, that elevates the chances of fatality are tumor greater than 5cm, remote metastasis, male gender and elevated WBCs (leukocytosis). Although surgical and radio therapeutic managements have appeared to improve the outcomes but the final prognosis remain fatal. (Hassan *et al.*, 2016) In this case report, the victim has very unfortunate outcomes with age almost 60 years, sex male, cervical LNs metastasis and tumor greater than 5cm in size. That's one of the reason that the oncologist preferred to give only palliative chemotherapy to the patient. And patient managed to survive one and half month later to the diagnosis.

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