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Brief Report

Atypical Presentations of Thyroid Cancer: Analysis of Forty-Eight Cases from A Tertiary Hospital in Cameroon

Bamidele Johnson Alegbeleye[1], Hüseyin Keskin[2]

[1]*Department of Surgery, St. Elizabeth Catholic General Hospital, Kumbo-Nso Bui Division, Cameroon*

[2]*Niğde Bor Devlet Hastanesi, Niğde, Turkey*

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Abstract

Background: Differentiated thyroid cancers with secondaries in sites other than the neck are relatively uncommon, and even rarer are the initial atypical presentation i.e. symptoms that are not related to the neck. The objective of this study was to bring to the fore the atypical cases of patients diagnosed with well-differentiated thyroid cancer and the complicating distant metastasis; with specific emphasis on presentation, management and outcome of patients with thyroid malignancy.

Methods: A retrospective cross-sectional descriptive study; in which we conducted a review of casefiles of 126 patients who had thyroid surgeries. There were 48 cases of well-differentiated thyroid cancer with confirmed histopathological diagnosis on the final analysis and we subsequently identified and reviewed 5 patients who initially presented with unusual complaints to the thyroid clinic.

Results: During the study period under review, forty-eight consecutive patients, 4 male (8.4%) and 44 females (91.6%) with well-differentiated thyroid cancer, who had more than two follow-up visits to the Thyroid Clinic, over the last two years were included in this study. Subsequently, we described the profile of 5 selected patients with atypical presentations including four patients diagnosed with follicular carcinoma, and one patient with papillary carcinoma.

Conclusion: It is glaring from this case series that differentiated thyroid cancer can present with atypical manifestations. For the clinicians worldwide, a routine preoperative physical examination of the thyroid patient is mandatory. A high index of clinical suspicion, aggressive work-up and treatment are usually rewarding. We equally suggest and encourage a comprehensive multi-center study for a better understanding of the natural history of the thyroid cancer disease process.

Keywords: Thyroid cancer; Thyroid nodules; Distant metastases; Atypical presentations; Prognostic factors

Corresponding Author: Bamidele Johnson Alegbeleye. Department of Surgery, St. Elizabeth Catholic General Hospital, Kumbo-Nso Bui Division, Northwestern Region, Cameroon.
E-mail: drbalegbeleye@gmail.com
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Introduction

Cancer is gradually taking over as 'the captain of death' in many countries of the world. Thyroid cancer is the most frequently encountered endocrine malignancy amongst women. [1–5] Predominantly, thyroid cancer displays a spectrum from well-differentiated to undifferentiated forms. Carcinomas derived from follicular epithelial cells namely, papillary, follicular and Hurthle cell carcinomas of the thyroid are generally categorized as well differentiated thyroid cancers and constitute majority of thyroid malignancies. [1–7] While anaplastic carcinoma falls under the category of undifferentiated form. [1–5]

According to the World Health Organization International Agency for Research on Cancer, the worldwide frequency of thyroid malignancy is estimated at 1-5% of all cancers in women and less than 2% in men [6,7] Several new cases of thyroid cancer are diagnosed on a yearly basis, which is made possible because of the improved diagnostic modalities, such as high-resolution ultrasonography.[6,8] The overall 10-year survival rate of differentiated thyroid cancer is between 85% and 95%. For those patients with distant metastasis this number falls to about 50%.[6,8,9]

The epidemiology of thyroid cancer is closely related to the dietary iodine; suggesting that the follicular cancer is the most frequently encountered thyroid cancers in regions where dietary intake of iodine is low.[10,11] In one study, the authors evaluated the changing spectrum of differentiated thyroid cancers (DTC) from several centers in the West Africa sub-region; the outcome showed that "in the 1980s, there was a predominance of follicular CA over papillary CA (35.8% vs 27.3%).[10,12] However, in the same report from the 1990 to 2004, there was a documented predominance of papillary CA over the follicular type (35.7% vs 24.8%)".[10,12] This clinical picture is a close reflection of the aggressive widespread iodization programs and the resultant improvement in the iodine status of the entire continent of Africa. Several concerted efforts are being made to elucidate the understanding of thyroid cancers in the African continent and results demonstrate that follicular cancers are often the most frequently encountered thyroid malignancy in some geographical locations. This spectrum of follicular CA may also be mainly connected to the iodine status of the community where the study was conducted. Anaplastic thyroid cancers (ATC) are less frequently encountered and accounts for 2–5% of all thyroid cancers; with a prevalence ranging from 4% to 21.4% are heterogeneous in pattern histologically, often extremely aggressive but undifferentiated thyroid cancer. The biological features of ATC cells are completely different in the sense that they do not retain any of characteristics of the follicular cells from where they originate including the uptake of iodine and synthesis of thyroglobulin. In a related development, medullary carcinoma of the thyroid (MTC), are a well-defined entity arising from the parafollicular C cells remains the least documented malignancy of the thyroid gland. [10,13]

The most important clinical feature of DTC is an enlargement of the thyroid gland or otherwise presents as a thyroid nodule. We are also considering in this series that in very rare cases patients may demonstrate some atypical features but after a preliminary evaluation, thyroid cancer with distant metastasis is confirmed as the clinical or tissue diagnosis. The existence of any distant metastasis at the time of diagnosis is a sign of poor prognosis, and often those patients manifesting with evidence of any accompanying symptoms in the face of distant metastases perform very poorly in general. [1–5]

There has been no formal study on thyroid cancer in our center which is located in an endemic goitrous region. Presentation in resource- limited settings may favor advanced disease. Many patients presenting to a referral tertiary care hospital in Cameroon with thyroid cancer come at advanced stage due to financial difficulties. They are equally faced with other challenges including: i) lack of access to health care professionals; ii) lack of appropriate diagnostic equipment;

iii) preferential use of traditional medicine; and iv) biological aggressiveness of the thyroid malignancy. There are very few reports in the literature on atypical presentations of thyroid cancers; therefore because of the rarity of such presentations of metastatic DTC, no definite treatment protocol has been defined.

The objective of this series was to bring to the fore the atypical cases of patients diagnosed with well-differentiated thyroid cancer and the complicating distant metastasis; with specific emphasis on presentation, management and outcome of patients with thyroid malignancy.

Methods

This retrospective cross-sectional descriptive study was conducted at St Elizabeth Catholic General Hospital and Cardiac Center, Shisong, Cameroon over a three-year period from January 2016 to December 2018. Patients' records were reviewed for socio-demographics, probable risk factors, duration of disease, type of surgery and complications. Data obtained was analyzed and presented with simple descriptive inferential statistics using percentages, tables and charts where applicable. A review of 126 cases of patients with goiter who underwent treatment was performed. Issues relating to presentation, management and outcome of patients with thyroid malignancy were highlighted.

Results

During the study period under review, forty-eight consecutive patients, 4 male (8.4%) and 44 females (91.6%) with DTC, who had more than two follow-up visits to the Thyroid Clinic, over the last two years were included in this study. Their mean duration of follow-up was 1.2 ± SD 0.25 years ranging from 3months to 2 years. The age range was between 22 - 74 years with a mean age of 30.5± SD 10.2 years. Table 1 is the summary of the profile of five (5) selected patients with atypical presentations.

The highest numbers of thyroid disorders were recorded in the fifth and six decades of life as outlined in Table 2. The younger patients are at higher risk for malignancy and older patients are more predisposing to developing advanced disease based on Table 3. There is a statistically significant association between the female gender and the risk of thyroid disease (malignant and non-malignant goiters) p-value = 0.014 as outlined in Table 4. A total of 126 patients of thyroid cases (malignant and non-malignant goiters) were seen over the same study period of three years at the thyroid clinic. Out of this figure of 126; 68 (54%) patients had multinodular goiter, 52 (41%) had a solitary thyroid nodule and six (5%) had a diffuse goiter. All were euthyroid at diagnosis except for 6 patients (5%), 4 of whom were thyrotoxic and two hypothyroid.

From this series 10 patients had DTC with distant metastasis and they presented with features ranging from lower limb deep seated pains in the hip to painless right labia majora swelling. Out of the 10 patients, a total of 8 patients were diagnosed by other health facilities, before they were subsequently referred to our thyroid clinic in Shisong for the definitive treatment. One of the patients with an upper chest wall (sternal) mass had retrosternal chest pains that gradually subsided over time but persisted even till the last follow-up visit (Table 5). Another patient presented with severe pains in the left hip and thigh radiating to the leg; both were earlier seen by the orthopedic surgeon. This patient was found with a lesion on the left iliac crest which was revealed on imaging with a computed tomography (CT) scan, and histology report of a biopsy was performed with the patient under general anesthesia that confirmed a thyroid malignancy. Two female patients were reviewed by the gynecologist; the first patient with bleeding from the right labia majora mass and the second patient had abnormal vaginal bleeding which was confirmed by pelvic ultrasound scan as (complex ovarian mass) struma ovarii. The last of the atypical presentations is one that presented to the surgeon with right pulmonary lesion and right scrotal mass underwent a pleural and testicular biopsy that was diagnosed as metastatic thyroid malignancy. The operative modalities for all the patients were surgical resection (thyroidectomy) with or without neck dissection.

Total thyroidectomy was done in 38 patients (80%), hemithyroidectomy in 10 (20%). Analysis of histopathological data revealed that 27(56%) patients had follicular, 6 (10%) had follicular variant of papillary thyroid carcinoma and 16 (34%) had papillary carcinoma and were on suppressive doses of levothyroxine. The patients were subsequently referred to the Radio-oncologist at Reference Hospital, Yaoundé for radioactive iodine (RAI) ablation. Some of the patient equally consulted the Radio-oncologist at the University College Hospital, Ibadan- Nigeria for the RAI therapy as a measure to complement the effort of the Reference Hospital, Yaoundé- Cameroon. All patients except one, after total thyroidectomy, received an ablative dose of 131I and all the patients had regular follow-up for over a period of at least two years, except for two patients; one had earlier presented with an initial lesion on her left groin and the other her scalp. At the time of presentation, they already had distant metastasis. We describe 5 peculiar cases out of 48 who had atypical presentations of the thyroid cancer and the individual cases are summarized below in Tables 1 and 5.

Table 1. The profile of five patients with atypical presentations

Serial No	Age	Sex	Co-Morbidities	Initial Presentation	Surgery	Histopathology	Radio-Iodine Ablation
1	30	F		Solitary thyroid nodule and ovarian mass	T.thyroidectomy + central ND	Struma ovarii with Follicular Ca	Yes
2	48	M	Hypertensive, Asthmatic, HHDx	Lung and left breast (peri-areolar region)	T.thyroidectomy + bilateral ND	Papillary	Yes
3	38	F		Left iliac crest mass	T.thyroidectomy + bilateral ND	Follicular	Yes
4	64	F	Diabetic, Hypertensive	Right labia majora mass	T.thyroidectomy + central ND	Follicular	Yes
5	52	F		Upper chest wall (Sternal) mass	T.thyroidectomy + bilateral ND	Follicular	Yes

F=Female; M= Male; Ca= Carcinoma; HHDx=Hypertensive heart disease; ND:Neck Dissection; T:Total

Table 2. Statistics for thyroid surgery

Age	No of Patients	Non-Malignant Goiter	Malignant Goiter	Advanced Disease
20-30	2	01 (50%)	01 (50%)	
31-40	20	12 (60%)	08 (40%)	
41-50	41	25 (61%)	16 (39%)	01(2.4%)
51-60	30	18 (60%)	12 (40%)	02 (67%)
61-70	27	17 (63%)	10 (37%)	02 (7.4%)
71-80	6	05 (83%)	01 (17%)	01 (16.7%)
TOTAL	**126**	**78 (62%)**	**48 (38%)**	**06 (4.8%)**

Table 3. Association of malignant potential with patient age

Age	(Percentages)	Malignant Goiter			P-Value
20-30:	(50%)	Malignant		**	0.044
31-40:	(31%)	Malignant		**	
41-50:	(35%)	Malignant	(2.7% advanced)	****	
51-60:	(37%)	Malignant	(7.4% advanced)	****	
61-70:	(29%)	Malignant	(8.3% advanced)	****	0.026
71-80:	(17%)	Malignant	(17% advanced)	****	

** Younger patients are at higher risk for **malignancy** and **** Older patients are more likely to have **advanced disease**

Table 4. Gender and malignancy risk

Gender	Non-Malignant Goiter N (%)	Malignant Goiter N (%)	Total	P-Value
Female	72 (62)	44 (38)	116	0.014
Male	06 (60)	04 (40)	10	0.789
Total	**78 (62)**	**48 (38)**	**126**	

Table 5. Thyroid cancer and metastasis

Metastatic Sites	Papillary Carcinoma	Follicular Carcinoma	Total
StrumaOvari/ Labia		2	2
Lung		1	1
Iliac Crest/ Left Hip	0	2	2
Sternum	2	0	2
Scrotum/ Testes		1	1
Grand Total	**2**	**6**	**8**

Discussion

Clinical Presentation and Diagnosis of Thyroid Cancer

In our case series, all the patients with thyroid cancer were euthyroid, this support the assertions of some authors that thyroid cancer manifesting with thyrotoxicosis is rare. Ever since Leiter *et al* described the first patient with adenocarcinoma of the thyroid with functioning metastasis and postoperative thyrotoxicosis in 1946; there has been only very few other cases (less than 50) described since then in the literature. [14-16]

Generally, in most countries in Africa comprehensive diagnostic facilities for thyroid disorders are lacking. The commonly operational diagnostic techniques include immunoassays, serology, ultrasonography cytology, and histopathological techniques for the evaluation of thyroid nodules. Computer tomographic scans and magnetic resonance imaging facilities are also not readily available. Even where these facilities are available, the patients are unable to access the diagnostic facilities practically because of the health care payment system otherwise referred to as “out of pocket”

payment.[10] Fine needle aspiration cytology (FNAC) remains a vital modality that normally used in the evaluation of thyroid nodules in the African continent and in the Nigerian as well as the Cameroonian context usually for patients presenting with nontoxic goiters.[10,18] Similar account from Tunisia[19] submitted that "the interpretability rate of FNAC in the evaluation of thyroid nodules was 7.52%, sensitivity as compared with that of histopathology was 70% and a specificity of 97.43%." Afolabi *et al* from a Nigerian series showed that "the diagnostic accuracy of the FNAC procedure for carcinoma was 89% with a sensitivity of 35%, specificity of 97%, positive predictive value of 64%, and a negative predictive value of 91%."[18] However, Thomas *et al* in a similar study reported "the diagnostic accuracy of FNAC for malignancy to be 80.6% with a sensitivity and specificity as 83% and 80%, respectively".[20]

Establishing the diagnosis of benign or malignant thyroid masses with FNAC according to Afroze *et al* [21-23] who reported "the sensitivity of 61.9%, specificity of 99.3% and diagnostic accuracy of 94.5%"; Kessler et al[22,24] equally reported "79% sensitivity, 98.5% specificity and 87% diagnostic accuracy"; and Gupta *et al*.[21,25] reported "80% sensitivity, 86.6% specificity and 84% accuracy". Cibas and Ali reported about the Bethesda system for thyroid cytopathology. "This system is based on six diagnostic categories for thyroid masses which include: (i) Unsatisfactory, (ii) Benign, (iii) "Follicular lesion" or atypia of undetermined signify cance (AUS), (iv) "Follicular neoplasm," (v) Suspicious for malignancy, and (vi) Malignant".[22,24,25]

Other authors showed that 35% of the "follicular neoplasms prove not to be neoplasms but hyperplastic proliferation of follicular cells; and only about 15% to 30% of thyroid masses prove to be malignant".[21,22] The other interesting finding is that "majority of follicular neoplasm cases turn out to be follicular adenomas or adenomatous nodules, both of which are relatively more common than follicular carcinomas. Some of the "follicular neoplasms are follicular variants of papillary carcinoma". The important pathological limitation in FNAC of follicular neoplasm is basically the difficulty in differentiating follicular adenomas from follicular carcinomas. [18-20] In an attempt to make a definitive diagnosis most patients with "follicular neoplasm" are managed by thyroidectomy or lobectomy and the resultant histopathology confirms the tissue diagnosis of follicular carcinoma. The "follicular lesion" or atypia of undetermined significance (AUS) result is obtained in 3% to 6% of thyroid FNAC. The recommended management is clinical correlation and repeated FNAC at an appropriate interval. In several cases, once the FNAC is repeated the resulting outcome is a more definitive interpretation. An estimated 20% of FNAC reports of such nodules are reported again as AUS. In some cases, however, the surgeon may decide not to repeat FNAC but observe the nodule clinically or, alternatively may decide to operate on the patient because of growing concerns about the clinical and/or sonographic features of the thyroid nodules. [21,22]

In a related development, South Africa sub-region seems to enjoy the monopoly of having majority of the reported cases involving the use of nuclear medicine in diagnosis of thyroid disorders. From these South African reports, the indication for nuclear scans in the evaluation of thyroid nodules and TC99m MIBI Scintigraphy was found in association with FNAC to be vital tool in the preoperative evaluation of thyroid carcinoma.[10,26] Other related literature from South Africa corroborated on the evaluation of thyroid nodules, suggesting that "the specificity of TC99m MIBI Scintigraphy, Pertechnetate, and FNAC is 77%, 40%, and 90%, respectively".[10,2] The primary role of scintigraphy according to an Ethiopian report was in the evaluation of the solitary nodule, ectopic thyroid tissue and the retrosternal goiter.[10,28] It is instructive to say that there is a colossal under-utilization of radioactive iodine (RAI) as a major facility reliably adopted in the diagnosis and management of benign and malignant thyroid disorders in African continent in general. Radioactive uptake test/ scan was equally used in a Liberian report to facilitate the diagnosis and management of hyperthyroidism as well as a mention of slight improved usages in Nigeria.[10,29]

Management and Outcome of Thyroid Cancer

In the consideration of treatment modalities for thyroid cancer and the accompanying metastasis; most centers in Africa due to limited facilities still consider surgery as first line therapy. Radioactive Iodine (RAI) ablation is taken as the second line therapy where such facilities exist. It is worth mentioning that 1991 was symbolic for the first use of RAI in Nigeria and there was divergent opinion at various centers on the indications including as a first-line treatment for Graves' disease, thyrotoxic heart disease, recurrent thyrotoxicosis, and failed anti-thyroid drug therapy[10,30] and also considered as major management modalities of thyroid CA usually following thyroidectomy. In one literature, the current rate of utilization of RAI in Nigeria in the management of thyroid disorders is 7% and doses are often administered empirically.[10,31,32]

In agreement with this case series, surgery is regarded as the first line modality commonly used for treating thyroid disorders in Cameroon as well as Nigeria. In one report from Kano, Nigeria in which 75 patients had thyroid disorders that included simple goiters, toxic goiters, thyroid CA, and follicular adenoma all the patients had thyroid surgery done. A similar account was submitted in a Senegal report, in which 105 patients were diagnosed with various forms of thyroid disorders, 41.6% of these patients had total or subtotal thyroidectomy.[10,33]

Furthermore, a literature report suggested that DTC frequently metastasizes to lymph nodes, bones, lung, brain and other organs. Osseous metastasis occurs in 3% to 12% of patients with differentiated follicular and papillary thyroid cancer. However, 131I scan or 99mTcMDP scan can reveal osseous metastasis in the majority (74%) of these patients.[34] The prevalence of bone metastasis in follicular carcinoma is 15.2% as compared to papillary carcinoma which is 0.6% of cases and the frequent sites of osseous metastases are sternum, vertebrae, pelvis and ribs.[35] These findings are in concordance with our case study in which there is atypical presentation showing sternal, iliac and hip bone metastasis. Additional findings revealed that five out of the ten patients had bony metastasis (two to the iliac crest, one vertebral, and one each to the rib and femoral neck).[14,35]

Case 3 (Table 1) presented with metastatic deposit in the iliac crest bone, and case 5 to the sternal bone which though classical, are both very rare as the presenting manifestations.

To the best of our knowledge, there has been very scanty report on established cases of distant metastasis to the labia majora, thus granting credence to the set objective of this case series in studying atypical or unusual presentation of DTC. The labia majora mass was resected and the wound was closed primarily in addition to total thyroidectomy as well as central neck dissection.[14] Struma ovarii is a slow growing ovarian neoplasm within thyroid tissue. The ovarian thyroid demonstrates the same physiological and histological characteristics similar to the cervical thyroid. The tumor is a highly specialized subclass of benign cystic teratoma; 95% remain benign while the remainder undergoes malignant transformation, with peak frequency during the fifth decade of life.[14]

The case 1 patient responded very well to RAI following total thyroidectomy and central neck dissection.[36,37] About 6% of struma ovarii are bilateral and the left ovary is more frequently involved than the right. The clinical presentations of struma ovarii include abdominal mass, with lower abdominal pain, ascites and, uncommonly, hyperthyroidism in about 5% of cases. In addition, there has been a report of past or concomitant thyroid enlargement in 18% of case described with struma ovarii, which may cause difficulty in its diagnosis.[14]

Retrospectively, for about two years the patient remained euthyroid without L-thyroxine replacement which probably suggested that there was the presence of a functioning struma ovarii; further substantiated by the fact that the patient became hypothyroid (TSH 14.6 μU/mL) shortly after ovarian cystectomy. In a lot of cases majority of malignant struma ovarii are diagnosed as follicular carcinoma, while papillary, anaplastic, and Hurthle cell carcinoma has also been described. It is important to note that normal thyroid follicular cells do not express estrogen receptors and the lack of demonstration of estrogen and progesterone receptors in struma as seen in our index patient (case 1) can be explained by the complete transformation of ovarian tissue into struma.[38]

Furthermore, reports showed that local or distant metastases occur in nearly 10–20% of patients with DTC. [39-41] In this setting, therapeutic options may include the use of surgery, RAI, and/or the use of external beam radiotherapy (EBRT), among others.[42] Nevertheless, between one-third to two thirds of patients with metastatic DTC will become RAI refractory, and this situation is often seen in patients with bone metastasis.[43] As we observed in our study, most patients did not fulfill the current criteria for RAI refractoriness.[44] It is obvious from other reports that patients with bone metastasis generally have a poor overall prognosis, with 10-year survival rates of only 10% and median survival from the discovery of metastases of only 3 to 5 years.[43] DTC has a high tendency to metastasize to bone compared to other tumors; it was reported to be the third most frequent solid tumor after breast and prostate cancer, although the physiopathology of bone metastasis from DTC is largely uncharacterized.[45]

Prognostic Factors in DTC

The prognostic factors in metastatic DTC have been well studied. One of the most important prognostic factors in well differentiated thyroid cancer is the presence of distant metastasis as at the time of presentation, indicating that the 10-year survival rate falls to 50%. Invariably, independent factors associated with mortality in thyroid-cancer patients include Age, gender and distant metastasis involving multiple organs.[6,46] Many studies have elucidated the Clinicopathological patterns of metastasis to the lung and bones, and thus draw significant attention when planning treatment for these patients, but metastasis outside these organs is usually ignored in the clinical setting. This may be due to the rarity of such cases, which explains the lack of literature on the subject.

The histopathology of DTC equally remains a critical prognostic factor, with 10-year survival rates as high as 90% for papillary thyroid cancer, while the rates for follicular and Hurthle cell carcinomas are 85% and 76% respectively.[4,6,47] The papillary cancer and its variants out number follicular and Hurthle cell carcinomas 7-fold, 25-fold respectively.[6,47] The papillary CA is known to metastasize via the lymph nodes, whereas follicular CA metastasizes hematogenously, which often explain the distant spread of follicular CA when compared with papillary CA. It is therefore readily easy to explain that one of our patients who had follicular CA involving the labia majora was essentially by the hematogenous spread.

The molecular biology of thyroid cancer has also been well explained as a complex colonization of thyroid cancer cells in various organs (organ tropism). Various models, such as the mitogen-activated protein kinase (MAPK) and the phosphatidylinositol 3-kinase/protein kinase B (PI3K/Akt) pathways have been developed. However, these models explain the spread of thyroid cancer to extra-cervical sites, but they fail to predict the phenomenon of rare organ metastasis that is atypical presentations. [4,6] There are speculations of the existence of some mediators that could serve as "link-bridges" for organ tropism for metastasis in thyroid cancer and extensive studies are ongoing to clarify them in nearest future.[48] For DTC with distant metastasis the tools for detecting spread include Blood test for thyroglobulin levels, high-resolution ultrasonography, whole body iodine scan, and fluorodeoxyglucose positron emission tomography (FDG-PET) scan are generally beneficial.[4,6] During the follow-up period in most cases of DTC an elevated thyroglobulin level may suggest a metastatic or recurrent disease. The levels of thyroglobulin < 0.5ng/ml have a negative predictive value of 98%.[49] These patients may then undergo surgical resection of the thyroid gland followed by radioiodine ablation.[50] Essentially, the patients presenting with distant metastasis on the onset of the disease constitute a significant challenging group. During this period, these conventional methods of diagnosing thyroid malignancy could not be employed; therefore, those patients underwent either a formal biopsy or FNAC. Once diagnosed with thyroid metastasis, they underwent total thyroidectomy.

In a related development, there is a general lack of data on this category of patient with thyroid cancer presenting initially with distant metastasis; for which therefore, no definitive guidelines are available. Since the publication of the article by Song *et al*,[46] various articles reporting such unusual presentations have been published, as well as a recent systematic

review on distant metastasis of differentiated thyroid cancer, but more data are required so that there is a consensus on the treatment guidelines of these cases.[4,6]

Conclusion

It is glaring from this case series that differentiated thyroid cancer can present with atypical manifestations. The distant metastasis accompanying well- differentiated thyroid cancers are relatively uncommon. The frequent site of the distant metastasis in such patients is either the lung or the bones, and metastases to organs other than these are rare. There is also a dismal prognosis in the patient with distant metastasis, providing a grim picture. For the clinicians worldwide, a routine preoperative physical examination of the thyroid gland is mandatory in all cases of metastatic lesions of unknown origin. A high index of clinical suspicion and aggressive work-up and treatment are usually rewarding. From the foregoing, the high incidence of metastatic disease in an iodine deficiency area like ours is postulated due to the advanced stage at presentation or inherent aggressive biological behavior.

Furthermore, there are still no definitive guidelines to treat these patients. We equally suggest and encourage the collection of more data on such patients in order to understand the natural history of the disease process. As a matter of urgency, there is therefore a need to formulate a guideline to help clinicians make the right decision when treating patients with distant thyroid metastasis.

Author contributions

BJA conceived of the study and participated in its design and coordination as well as helped to draft the manuscript; also read and approved the final manuscript. HK participated in its design, manuscript draft, also read and approved the final manuscripts.

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Conflict of interest

All authors declare that they have no conflict of interest.

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