Surgical atypical clavicular metastasis of a thyroid oncocyotoma: A rare finding

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Abstract

Clavicular metastases of differentiated thyroid cancers are very rare. We report the case of a 62-year-old patient with clavicular metastasis secondary to thyroid carcinoma.

Introduction

Well-differentiated thyroid carcinomas generate 1-3% of distant metastases during initial diagnosis, and 7-23% during their evolution, bone metastasis have been reported as the second location of distant metastasis after lung [1,2].

Clavicle metastases of differentiated thyroid cancers are very rare, with the most common metastasis sites being the femur followed by the humerus, pelvis, radius and scapula. Moreover, several studies evaluate the prognostic factors of bone metastases of differentiated thyroid cancers, but few studies evaluate the surgical management which remains a dilemma and an attitude based on the site of the metastasis [3].

Case report

62-year-old man, with medical past of hypertension, followed in our hospital for a differentiated thyroid cancer since 2014 (oncocytoma), the patient benefited from a total thyroidectomy with satellite lymph node resection. 8 months before the admission, the patient presented a painful left sternoclavicular tumor evolving, the physical examination revealed a bony mass of about 5 x 5 cm of the medial left clavicle without inflammatory symptoms.

The scintigraphy revealed a secondary metastatic site on the left clavicle, the thoracic computed tomography showed a lytic image of the medial the left clavicle without invasion of the first rib or the subclavian vessels. The patient underwent a resection of half left clavicle, during the postoperative control the pathology showed a complete tumor removal (R0).

Two months later, the biological data become higher showed an the Thyroglobulin level after the first surgical treatment was 160 ng/ml, and the PET-CT-FIG1-, objectified the presence of a recurrence of metastasis in the site of surgery, the tumor size were 7 x 7 cm, the patient has still benefited from a more extensive surgery. A left hemimanaubriotomy with tumor removal and a partial resection of the left first rib without pleural preoperative opening. This attitude gave better results with no evidence of recurrence or disseminated disease was detected. And the Thyroglobulin level four months later: under the limit of detection <0.2 ng/ml). The patient following up is free 10 months later (Figure 1).

Discussion

Malignant oncocytomas are very rare tumors, representing less than 5% of differentiated thyroid cancers and less than 400 cases reported in the literature. The Bone metastasis has been reported as the second most common site of metastasis in patients with well-differentiated thyroid cancers and its incidence ranges from 1% to over 40%.

Follicular carcinomas show a greater propensity for distal metastases (7-28%) than papillary (1.4-7%) and anaplastic thyroid carcinomas. Nevertheless, some studies have reported a higher relative incidence of papillary carcinoma giving rise to bone metastases [4].

Patients with bone metastases from thyroid cancers generally have better survival (10 years survival rate ranging from 13 to 21%) than some other primary carcinomas that metastasize more frequently to the bone [5].

However, there are currently no established prognostic factors for selecting from clavicular or sternal locations those that can be effectively treated by medical treatment alone. The slow evolution of thyroid cancer therefore raises the question of the need for early and expanded surgical treatment of these metastases [6,7].

The pathogenesis of thyroid oncocytes bone metastasis has not yet been fully elucidated; Individual prognosis depends on age, diagnosis of metastases, tumor weight and number of metastases.

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Seems incomplete, can improve the efficacy of radioactive iodine [12-14].

However, some bone metastases require surgical intervention because of the associated symptoms and fracture risk. Surgery is usually recommended for isolated, solitary and accessible metastases [5,8].

In patients with multiple sites, the role of metastectomy is less well understood. There have been studies that have shown that the removal of up to five bone metastases can be associated with improved survival and life [8,10,11].

In our case, left sternoclavicular resection was decided for our patient because of the pain and the tumor lytic behavior of a solitary location. In addition, before considering an expanded surgical procedure, the usefulness of radiiodine therapy alone should also be discussed. However, there are currently no established prognostic factors for selecting from clavicular or sternal locations those that can be effectively treated by medical treatment alone and the oncocytoma are less treated by radiiodine therapy. Although due to the slow evolution of thyroid cancers poses the opportunity of choosing an early and expanded surgical treatment of these metastases [6,7].

Then the management of solitary sternal or clavicular metastases should be discussed on a case-by-case basis, furthermore the presence of one or more other respectable locations may limit a surgical attitude but this must be discussed case-by-case.

Finally, large clavicular or sternal metastases can sometimes be treated by a reduction of the tumor mass because this approach, which seems incomplete, can improve the efficacy of radioactive iodine [12-14].

Figure 1. F18-FDG PET-CT before and four months after surgical treatment. Bone metastasis on the left side of the sternal manubrium (white arrow) and recurrence in the thyroid bed (red arrow) are identified on axial (A) and coronal (B) fusion images. Four months after surgical treatment, F18-FDG PET-CT axial (C) and coronal (D) views show a mild uptake (arrowhead)

Metastases of thyroid cancers can be effectively treated with external radiotherapy [5,8].

Conclusion

Clavicle metastases of oncocytomas thyroid cancers are very rare, an aggressive attitude (surgery and radioactive iodine therapy) allows survival without recurrence, the surgical management which remains a dilemma and an attitude based on the site of the metastasis.

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