Original Research Paper

Volume-8 | Issue-5 | May-2018 | PRINT ISSN No 2249-555X

Radiotherapy

SQUAMOUS CELL CARCINOMA OF THE THYROID: A CASE REPORT AND REVIEW OF THE LITERATURE CARCINOME EPIDERMOIDE DE LA THYROIDE: A PROPOS DUN CAS ET REVUE DE LA LITERATURE

Najoua Bouayad* Department of Radiotherapy-UH HASSAN II-FEZ, Morocco*Corresponding Author

Khalid Hassouni Department of Radiotherapy-UH HASSAN II-FEZ, Morocco

ABSTRACT Primary squamous cell carcinoma (SCC) of the thyroid is a very rare entity which comprises only 1% of all malignant tumours of the thyroid gland. Herein we report a 69 years old Moroccan female with 6 months history of progressive neck swelling and hoarse voice with a recent rapid increase in size and associated with pressure symptoms. There was massive enlargement of the thyroid. A palliative thyroidectomy was done leaving the residual tumour behind. She received EBRT 68Gy in 34 fractions; there was progression of disease and patient died 10 months after completion of radiotherapy.

KEYWORDS : Primary squamous cell carcinoma; Thyroid; Radiotherapy.

Résumé

Le carcinome épidermoide primitif de la thyroid est une entité très rare, elle représente moins de 1% des tumeurs malignes de la glande thyroïde. Les auteurs rapporte le cas d'une femme marocaine âgée de 69 ans, qui présentait 6 mois avant son admission une tuméfaction cervicale avec une dysphonie, l'évolution était rapide caractérisée par l'augmentation en volume et l'apparition des signes de compression. Une thyroïdectomie partielle a été réalisé, puis elle a reçu une radiothérapie externe conformationelle à la dose totale de 68Gy en 34 fractions. Après 10 mois de la fin d'irradiation, la patiente est décédée.

Mots clés : Carcinome épidermoide primitif ; Thyroide ; Radiothérapie.

Background

Primary squamous cell carcinoma(SCC) of thyroid is an uncommon malignancy and has poor prognosis[1]. The cancer is characterized by rapidly progressive clinical behavior that resembles anaplastic carcinoma, and the tumours tend to be advanced at presentation [2-3]. Surgery is a curative option, but it is not always possible. EBRT alone was found ineffective. Aggressive combined modality (debulking surgery, radiation and chemotherapy) shall be considered for such cases.

Case presentation

A 71 year old Moroccan female presented in our hospital with neck swelling and hoarse voice. She had noticed this swelling for 6 months and it had been rapidly increasing in size over a week causing dyspnoea and dysphagia to solid. A CT Scan of neck, chest, abdomen and pelvis indicated that the isthmus and the left lobe of the thyroid gland were enlarged with a high possibility that the tumor had eroded the anterior part of the trachea and infiltrated the esophagus. There were no lung or liver metastases. The patient underwent exploration of the neck and intra-operative findings noted that the tumor had infiltrated the adjacent soft tissue.

A palliative thyroidectomy was done leaving the residual tumour behind. The histopathological result confirmed that the cyst was found to have a fibrocollagenous wall ans was lined all over with keratinized stratified squamous epithelium. Immunohistochemistry studies supported the diagnosis of squamous cell carcinoma, showing positive reactivity for high molecular weight cytokeratin.

The patient was asymptomatic post operatively and was given 68Gy in 34 fractions of Radiotherapy to the neck and upper mediastinum (figures 1-2). She died of airway compromise 10 months of EBRT.

Discussion

SCC of the thyroid gland is extremely rare and aggressive entity usually presents with classic triad features; (I) rapidly enlarging mass in the older patients behaving like anaplastic carcinoma, (II) it may be associated with other thyroid malignancies and (III) histological features of intercellular bridges and keratin [4-5].

When making the diagnosis of SCC of the tyroid, il is important to exclude metastases from other sites and direct local invasion from tumours in adjacent structures such as trachea, bronchus, lungs and oesophagus. Endoscopic evaluation should be emphasis. Moreover, because of the lower frequency of primary SCC of the thyroid, the incidence of secondary invasion from carcinoma arising in an adjacent organ should be stressed [6].

A long history of goiter or chronic thyroid disease is characteristically found in patients with SCC [7]; but the disease interval of our case was less than 6 months. The onset may be sudden with pain and pressure symptoms [8]. Diagnosis is histological, based upon the presence of malignant squamous cells, keratinisation with pearl formation and intercellular bridges.

Resection of thyroid SCC, when possible, is the treatment of choice. Our patient underwent total thyroidectomy, but the gravity of her disease was not known until at the time of surgery; debulking surgery only was performed due to the local infiltration. As a result she did not undergo formal neck dissection; the course is remarkably fulminant; death usually ensures within a year [9], it's the case of our patient.

Simpson and carruthers suggested that complet macroscopic excision should be followed by radiotherapy for the best chance of local control, and they described two patients treated this way who were long-term survivors [10]. Cook, Vini and Harmer support this data [11].

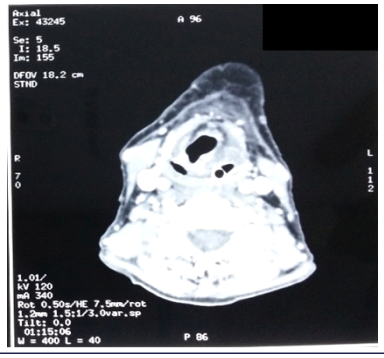
Radiotherapy should be delivered to a dose of at least 60Gy in 30 fractions over six weeks, or equivalent [12]. In accordance with this, our patient received 68Gy in 34 fractions of radiotherapy over seven weeks and remains asymptomatic as of a follow-up last month. Aggressive chemotherapy is not obviously beneficial [2-3-13].

Conclusion

Primary squamous cell carcinoma of thyroid is a rare and aggressive entity with poor prognosis. Aggressive treatment with surgery followed by adjuvant radiotherapy with or without chemotherapy is recommended to achieve better outcome.

List of tables and Figures

Figure 1 : axial CT image demonstrating stability tumor of the thyroid after 6 month of radiation



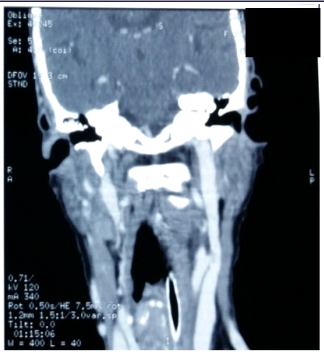


Figure 2 : coronal CT image demonstrating stability tumor of the thyroid after 6 month of radiation

Competing interests
Authors have neither potential conflict of interest nor received any grants for this case report.

Authors'contribution
All the authors of the manuscript have read and agreed to its content

References:

[1] Zimmer PW, Wilson D, Bell N : Primary squamous cell carcinoma of the thyroid gland. Mill Med 2003, (168): 124-5.
[2] Shmaoka K, Tsukada Y. Squamous cell carcinomas and adenosquamous carcinomas originating from the thyroid gland. Cancer 1980; (46):1833-42.
[3] Sarda AK, Bal S, Arunabh, Singh MK, Kapur MM. Squamous cell carcinoma of the thyroid gland. J surg oncol 1988; (39): 175-8.
[4] Ko YS, Hwang TS, Han HS, Lim SD, Kim WS, Oh SY:Primary pure squamous cell carcinoma of the thyroid: report and histogenic consideration of a case involving a BRAF mutation. Pathol Int 2012,(62):43-8.
[5] De Vos FY, Sewnaik A, de writ JH, Smid EJ, den Bakker MA, Van Meerten E: Combined therapy for thyroid squamous cell carcinoma. Head and neck 2012,(34):131-4.
[6] Watanabe I, Tsuchiya A. secondary carcinoma of the thyroid gland. JPN J Surg 1980; (10):130-136.
[7] Huang TY, Assor D. Primary squamous cell carcinoma of the thyroid gland; a report of four cases. Am J clin pathol 1971; (55):93-98.
[8] Saito K, Kuratomie Y, Yamamoto K, Saito T, Kuzuya T, Yashida S, Moriyana S, Takayashi A. Primary squamous cell carcinoma of the thyroid gland associated with marked leucocytosis and hypercalcemia. Cancer 1981; (48): 2080-2083.
[9] Goldman RL. Primary squamous cell carcinoma of the thyroid gland: Report of a case and review of the literature. Am Surg 1964; (30):247-52.
[10] Simpson WJ, Carruthers J. Squamous cell carcinoma of the thyroid gland. AM J surg 1988; (156): 44-6.
[11] Cook AM, Vini L, Harmer C. Squamous cell carcinoma of the thyroid: Outcome of the treatment in 16 patients. Euro J surg Oncol 1999; (25): 606-09.
[12] Harmer C, Bidmead M, Shepherd S, Sharpe A, Vini L. Radiotherapy planning techniques for thyroid cancer. Br J Radiol 1998; (71): 1069-75.
[13] Harada T, Shimaoka K, Katagiri M, Shimizu M, Hosada Y, Ito K. Rarity of squamous cell carcinoma of the thyroid: Autopsy Review. Worth J Surg 1994; (18): 542-6.