Brain Metastatic Disease in a Patient with Tall Cell Thyroid Carcinoma

Ioannis Georgiadis, Ifigenia Kostoglou-Athanassiou

Endocrinologist, Chios, Greece
Department of Endocrinology, Red Cross Hospital, Athens, Greece
Introduction

- Papillary thyroid carcinoma is a disease associated with a very good prognosis.

- However, there are some subtypes of papillary thyroid cancer which are associated with aggressive biological behavior and worse outcome.

- The appearance of brain metastatic disease in the course of papillary thyroid carcinoma is rare and carries an unfavorable prognosis.
The aim was to describe the case of a patient with tall cell papillary thyroid carcinoma who presented with brain metastatic disease.
Methods

- A patient, male, aged 63 years, presented with a large mass in the area of the thyroid causing dysphagia

- Initial evaluation with thyroid hormone measurement and a fine needle aspiration biopsy revealed the presence of malignancy

- Near total thyroidectomy was performed
Results

- On histology a large tumor measuring 7.0x7.0x5.0 cm and weighing 122 g was examined.
- The tumor was multilobular, scleroelastic and had a small area of fibrosis and an area of cystic degeneration.
- The neoplasm was a tall cell papillary thyroid carcinoma which had foci of dedifferentiation.
- Within the area of low differentiation atypical mitoses were observed with a Ki67 index of approximately 10%.
- The tumor was positive to p53 in 50% of the cells.
- Extrathyroidal extension was observed.
- After near total thyroidectomy therapeutic radiodine was administered.
- Approximately a year later the patient presented with brain metastases.
Conclusions

- Brain metastatic disease from thyroid cancer is rare and carries a bad prognosis

- Some subtypes of papillary thyroid cancer, such as the tall cell variant have an increased propensity to develop metastatic disease, including brain metastatic disease

- In conclusion, the case of a patient with a tall cell thyroid carcinoma with areas of low differentiation is presented who developed early brain metastatic disease