

Overcoming fertility challenges in thyroid carcinoma survivors: A case study of successful pregnancy

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Introduction

Oncofertility is a field of medicine that focuses on the reproductive health of cancer patients. Cancer treatments such as chemotherapy, radiation therapy, and surgery can cause infertility, making it difficult or impossible for patients to have children in the future. Oncofertility provides options for preserving the fertility of these patients before they undergo cancer treatments, thus enabling them to have children in the future. Thyroid carcinoma can occur in any age group, but it is more common in women and in people over the age of 55. The treatment of thyroid carcinoma depends on the type and stage of the cancer, as well as the patient's age and overall health. Treatment options may include surgery, radiation therapy, and chemotherapy.

Case report

We present a case of a 30-year-old woman who was diagnosed with papillary carcinoma of the thyroid gland on November 11, 2021. The patient had a history of a normal spontaneous delivery of a child prior to the diagnosis. Upon the diagnosis of thyroid cancer, a multidisciplinary team, consisting of oncologists, endocrinologist and surgeons, recommended a total thyroidectomy.

On November 11, 2021., the patient underwent the recommended surgical procedure, which was performed without any complications. After the definitive histopathological diagnosis and according to the TNM classification, the tumor has been classified as pT3a (m) N1a(5/9)mx, Cs I. Soon after the operation, the patient spontaneously conceived pregnancy but had a miscarriage in the seventh week.

Due to the oncology pathology and staging of the disease, after the surgery, the patient underwent a PET scan and received appropriate treatment with radioactive iodine at a dosage of 5.55 GBq. Following this, the patient was placed on thyroid hormone replacement therapy and closely monitored by a multidisciplinary team comprising of gynecologists, oncologists, endocrinologists, and radiologists.

Just four months after the radioiodine therapy, patient again spontaneously conceived pregnancy, and the pregnancy was closely monitored by the multidisciplinary team throughout the entire pregnancy. She gave birth at full term to a healthy baby boy, body weight 3370gr, with an Apgar score of 10/10. The patient was maintained on thyroid hormone replacement therapy, and the pregnancy did not have any complications and no fetal anomalies were detected. The postpartum period was uncomplicated, and the hemoglobin level after delivery was 106g/L, so the patient was treated with iron supplementation therapy. Both the patient and her baby were discharged from the hospital on the second day after delivery. There was no evidence of disease recurrence or metastasis during pregnancy. The patient remained in remission with no evidence of disease recurrence at the time of this report.

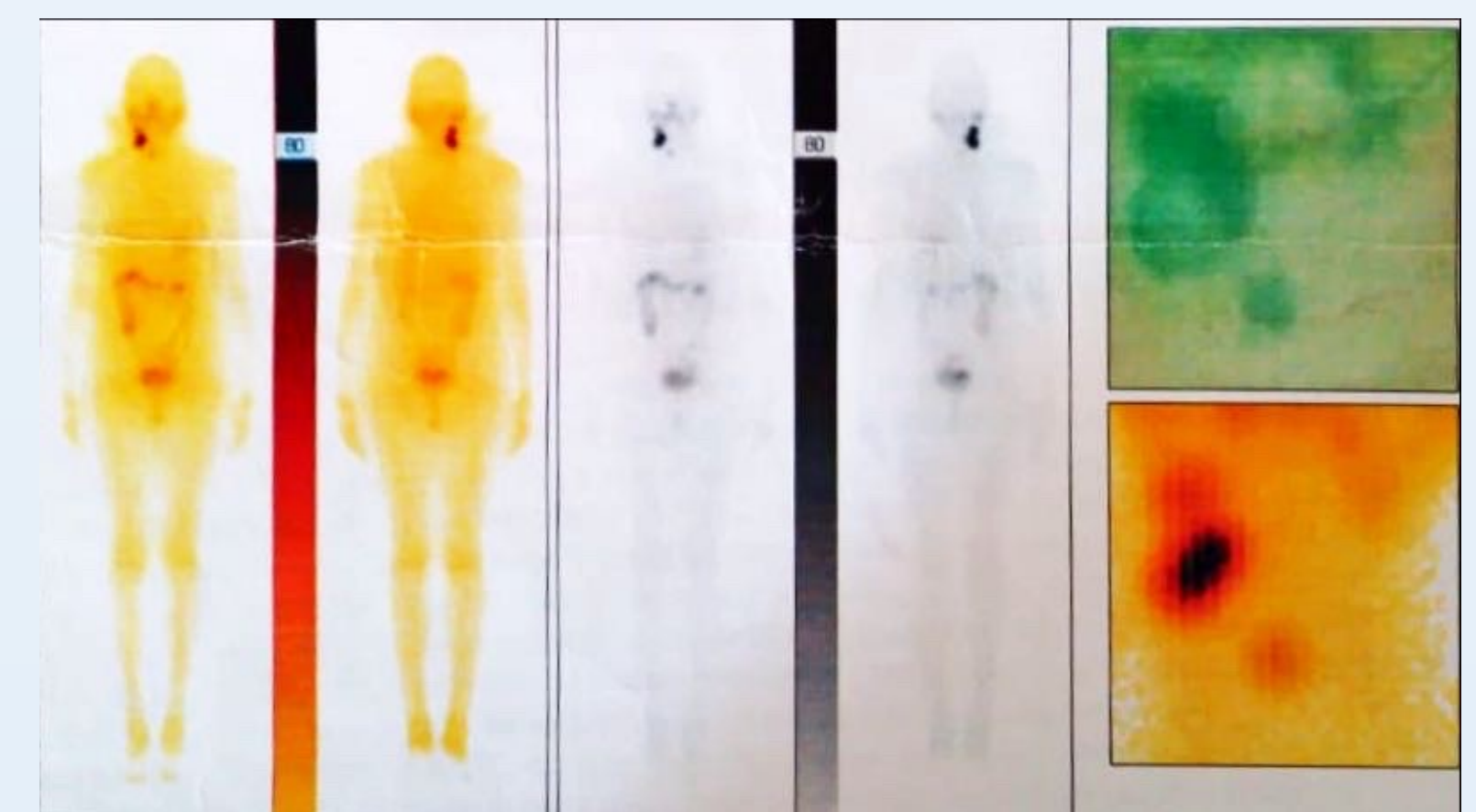


Figure 1. Whole body and specific scintigraphy after operation, The accumulation of radiiodine is visualized in three zones of the neck, most likely corresponding to the right lobe/isthmus rest.

Discussion and conclusion

This case highlights the successful management of thyroid carcinoma in a young female patient who desired future fertility. The patient was successfully managed with thyroid hormone replacement therapy and close monitoring throughout pregnancy, resulting in the successful delivery of a healthy baby. The current recommendations suggest that a woman should consider pregnancy 6-12 months after radioiodine treatment, which is administered following surgical treatment for thyroid cancer. The risk of permanent damage to the ovaries after ablative radioiodine treatment appears to be low, radioiodine causes transitory alterations in ovarian function even in younger women and patients can be reassured they can have normal pregnancies after this treatment. The importance of a multidisciplinary team in the management of thyroid cancer is emphasized, particularly in patients of reproductive age.

References

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