nodule resulted as follicular neoplasm with 15-30%, risk of malignancy. Molecular test showed 40% risk of malignancy. Lobectomy was deferred. Pembrolizumab was initiated for advanced cervical cancer in 07/2018. Repeat PET in 10/2018 showed resolution of metastasis and right thyroid mass was stable. TSH remained in euthyroid range for 4 months until 11/ 2018. In 01/2019, her TSH was low and became undetectable in 03/2019 with high free T4 and total T3. She developed symptoms of hyperthyroidism. TSI was positive and TSHR Ab was negative. RAIU was low. No iodinated contrast study done prior to I123 scan. In 05/2019 to 08/2019, free T4 and total T3 was normal range with detectable but low TSH consistent with transient resolving thyroiditis. In 10/2019, thyroid hormones significantly increased with recurrence of hyperthyroidism. Both TSI and TSHR Ab were elevated confirming diagnosis of GD. Due to overt thyrotoxicosis, Methimazole (MMI) was initiated in 10/2019. She was briefly lost to follow up and stopped MMI. RAIU scan in 12 /2019 showed increased uptake consistent with GD. MMI was resumed in 04/2020. 06/2020 - 09/2020, MMI dose was titrated to achieve euthyroid state. In 09/25/2020, hypothyroidism was noted which improved with MMI dose reduction. Anti- TPO and Anti-Tg were negative. Pembrolizumab was stopped in 07/2020 due to dilated cardiomyopathy. She completed 2-year course of Pembrolizumab with advanced cervical cancer showing excellent response.

Discussion: Observed thyroid dysfunction with ICI, is transient destructive thyroiditis followed by hypothyroidism, which can be permanent. Our patient had an initial low RAIU indicating destructive thyroiditis along with, mildly elevated TSI suggestive of superimposed autoimmune process. The elevated TSI predisposed to later occurrence of GD likely precipitated by Pembrolizumab. MMI provided therapeutic benefit.

Conclusion: Less than 10 cases of GD with ICI and 5 cases of GD with Anti-PD- 1 have been reported. Our patient is a second case of persistent hyperthyroidism due to GD induced by Pembrolizumab. GD should be considered if hyperthyroidism persists or recurs in patients on ICI with destructive thyroiditis, which is mostly transient.

Thyroid

THYROID DISORDERS CASE REPORT

Transdermal Absorption of Methimazole- a Cat's Tale

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Introduction: In modern civilization different kinds of animals live with us as pets. These pets have different diseases and are on medications. Close contact with animals can cause medication adverse reactions or may worsen pre-existing conditions in humans. Here we present an interesting case of hypothyroidism worsened by transdermal absorption of methimazole administered for feline hyperthyroidism. **Case History:** 66-year-old Caucasian female with past medical history of postoperative hypothyroidism s/p total thyroidectomy secondary to multinodular goiter due to Hashimoto's thyroiditis with a 0.2 cm papillofollicular microcarcinoma and 0.7 cm follicular adenoma presented for follow up. She complained of weight gain, lethargy and dry skin for the past 4 months. She was on a stable dose of levothyroxine 112 mcg daily for the past year. She took her pill correctly and did not miss any doses. Her other medical problems were impaired fasting glucose, osteopenia and B12 deficiency. Her repeat thyroid function tests showed TSH 11.2 mc IU/ l (0.4 -4) (TSH - 0.538 mc IU/ L 6 months back), T4 - 6.8 mcg/ dl (4.5 - 12) (T4 8.9 6 months back). She had a measurable serum thyroglobulin of 0.4 ng/ml with antithyroglobulin antibody 11 IU/ml (<115) consistent with some residual thyroid tissue despite her history of a "total thyroidectomy". Due to recent worsening of her symptoms with elevated TSH on background of previous stable levothyroxine requirement, further detailed history was taken. She reported that her cat was suffering from hyperthyroidism, treated with methimazole 10 mg daily. The patient used to cut the pill in half with bare hands and fed it to her pet. She also used to handle wet methimazole that her cat coughed up. Her levothyroxine dose was continued at 112 mcg daily. The patient was advised to use gloves before feeding and wash her hands after feeding her cat. Her symptoms resolved after she took precautions and TSH normalized to 1.170 mc IU/ l with T4 7.6 two months later.

Conclusion: Absorption of methimazole by transdermal administration has been shown in cats[1]. A study by Kasraee et al showed safety of a 5% topical methimazole application for treatment of post inflammatory hyperpigmentation in humans with no change in thyroid function tests[2]. Our case contradicts this study and indicates that methimazole might be absorbed transdermally in humans. To conclude, more studies are needed to study the effect of transdermal administration of methimazole in humans.

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Thyroid

THYROID DISORDERS CASE REPORT

Transient Thyrotoxicosis in Molar Pregnancy

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Introduction: Thyroid function abnormalities commonly occur in pregnancy. Due to the structural homology between beta-human chorionic gonadotropin (beta-hCG) and thyrotropin (TSH), some of these changes may be physiologic, while others can be from pathologic causes. Molar pregnancies represent a unique etiology, as beta-hCG levels are often markedly elevated due to trophoblastic hyperplasia and can cause hyperthyroidism. **Case Description:** A 20-year-old pregnant female presented at 18 weeks estimated gestational age for persistent nausea and vomiting, which had worsened over the past one to two weeks. She also noted palpitations and heat intolerance. On