Abstract citation ID: bvac150.1677

Thyroid

PSAT276

A Case of Malignant Struma Ovarii: Management After Surgery

Chandriya Chandran, MD, Patamaporn Lekprasert, MD, Kay Win, MD, and Corrado Minimo, MD

Background: Struma ovarii is a highly specialized and extremely rare monodermal ovarian teratoma that comprises 0.3 to 1% of all ovarian tumors. It consists of greater than 50% of mature thyroid tissue that is usually benign, but malignancy has been reported in up to 5- 23% of the cases. Even after surgery, recurrence rates of malignant struma ovarii can be as high as 35%. [1] Adjuvant thyroid targeting therapies such as radioiodine ablation after total thyroidectomy and TSH suppression therapy have been shown to reduce the risk of tumor recurrence similar to that of primary thyroid cancer.

Case Description: A 46-year-old healthy lady presented with a 3-month history of non-specific lower abdominal pain and inter-menstrual bleeding. An extensive review of systems was otherwise unremarkable. Ultrasound of the pelvis showed a 4 cm left adnexal mass. An MRI of the pelvis revealed a 2.2×3.6×2.4 cm solid, enhancing mass within the left ovary with an adjacent cystic component. Tumor markers including CEA, CA 19-9, and CA 125 were unremarkable. Due to suspicion for malignancy, she underwent laparoscopic left salpingo-oophorectomy and resection of the mass. Histopathology revealed papillary thyroid carcinoma approximately 1 cm in size with a background of struma ovarii. Immunohistochemistry staining showed positivity for thyroglobulin and Thyroid Transcription Factor-1 (TTF-1). BRAF mutation analysis was negative. An ultrasound of the thyroid gland disclosed two low-risk nodules. TSH was 1.070 mcIU/ml (0.450-4.500), and thyroglobulin level was 6.8ng/ml (1.5-38.5). We performed an Iodine-123 whole-body scan which was negative for abnormal radioiodine uptake. Based on these results, we classified this patients' recurrence risk as low to intermediate. We initiated TSH suppression therapy with thyroid hormone to maintain TSH in the low normal range. We deferred total thyroidectomy and radioiodine ablation given

the low recurrence risk. She will be monitored for recurrence with TSH and thyroglobulin panel at 6 and 12 months in the first year and then annually for at least the next ten years.

Discussion: Given the rarity of malignant struma ovarii, there are no consensus guidelines for identifying patients with a high recurrence risk who would benefit from thyroid targeting therapy. While some authors recommend total thyroidectomy and radioiodine ablation for all patients, a recent review [2] recommended an algorithm based on imaging, laboratory, and pathologic characteristics of the tumor to risk-stratify patients and treat them depending on their recurrence risk. Improved strategies for risk-stratification and follow-up are essential to provide optimal treatment for malignant struma ovarii patients without overtreating them.

References 1. Yassa L, Sadow P, Marqusee E et al. Malignant struma ovarii. Nat Clin Pract Endocrinol Metab 2008; 4: 469-472. 2. Addley S, Mihai R, Alazzam M et al. Arch Gynecol Obstet 2021; 303(4): 863-870

Presentation: Saturday, June 11, 2022 1:00 p.m. - 3:00 p.m.