Malignant Struma Ovarii With Peritoneal Implants and Pelvic Structures and Liver Metastases Demonstrated by I-131 SPECT and Low-Dose CT

Shiou-Chi Cherng, MD,* Yuh-Feng Wang, MD,† Yu-Ming Fan, MD,* Ching-Yuan Chen, MD,* Yao-Nan Yuan, MD,* and Cheng-Yi Cheng, MD, PhD*

Abstract: Malignant struma ovarii is a rare disease in gynecology and the optimal treatment regimen for the tumor remains obscure. We present a patient who had malignant struma ovarii with peritoneal implants and pelvic structures and liver metastases shown on posttreatment iodine I-131 single-photon emission tomography (SPECT) and low-dose computed tomography (CT). The roles of I-131 ablation in the management of the disease are reviewed and discussed.

Key Words: malignant struma ovarii with metastases, I-131 SPECT, low-dose CT

REFERENCES
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A 49-year-old female patient presented with abdominal distension and an ovarian mass were seen on abdominal sonogram and CT. Total abdominal hysterectomy and bilateral salpingo-oophorectomy and infracolic omentectomy were performed. Pathologic examination revealed malignant struma ovarii with peritoneal studding. She was subsequently treated with thyroidectomy and I-131 ablation. Posttreatment I-131 whole-body scan (left: anterior view, right: posterior view) demonstrated increased activity in the thyroid bed (T), liver (L), abdominal cavity (Ab), and pelvic structures (P).

Malignant struma ovarii with distal metastases is uncommon. The most common sites are the contralateral ovary, pelvic structures, bone, brain, liver, and lungs. In addition, metastases can simulate peritoneal seeding of struma ovarii. The modalities of treatment of malignant struma ovarii are still controversial because it is rarely encountered. However, thyroidectomy and I-131 ablation are recommended for advanced disease. DeSimone reviewed a total of 12 patients with the disease and found that I-131 provided an initial complete response in all 4 patients for postoperative treatment and in 7 of 8 patients for recurrent disease. Thus, thyroidectomy and I-131 ablation should be considered in the first priority of management for malignant struma ovarii.