Recurrent thymic carcinoma treated with anterior median thoracotomy, innominate vein replacement for superior vena cava, and iodide implantation: A case report and review of the literature

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Abstract

Thymic neuroendocrine tumors are rare malignant tumors with neuroendocrine functions located in the anterior mediastinum thymic region. They exhibit a high degree of malignancy and can early invade surrounding fat, pericardium, pleura, major blood vessels, and lungs, posing a significant risk of recurrence. Here, we report a case of recurrent thymic cancer treated with complete surgical resection, replacement of the innominate vein, superior vena cava formation, and iodine ion insertion. A 51-year-old male diagnosed with stage IIIA malignant thymoma in November 2021, accompanied by lymph node metastasis, involving the peripheral left lung. The patient underwent six cycles of adjuvant immunotherapy with pembrolizumab and cisplatin plus etoposide, along with one course of radiotherapy postoperatively. Subsequently, the patient received regular immunotherapy and follow-up at our hospital. In October 2023, chest CT revealed tumor recurrence, with infiltration into the pericardium, bilateral innominate veins, superior vena cava, and brachiocephalic artery. Subsequently, the patient underwent a midline thoracotomy for extensive resection of recurrent thymic tumor, enlargement of pericardial resection, left innominate vein-to-right atrial artificial grafting, superior vena cava formation, and iodine-125 radioisotope brachytherapy. Aggressive surgical intervention combined with adjuvant therapy is an essential treatment modality for locally advanced thymic cancer involving the superior vena cava and surrounding blood vessels.

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