Case Reports in Oncology

Case Rep Oncol 2014;7:422–425

DOI: 10.1159/000365187
Published online: July 2, 2014


1662–6575/14/0072–0422$39.50/0
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# Asymptomatic Pelvic Metastasis from Thymic Carcinoma: A Case Report

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**Key Words**
Thymic carcinoma · Thymoma · Extrathoracic metastasis · Pelvic metastasis · Positron emission tomography

**Abstract**
Thymic epithelial tumors are rare and often occur somewhere local. Metastatic sites of thymic carcinomas (Masaoka-Koga stage IVb) are mostly seen in the lung, liver and brain. We report a 64-year-old female with an initial diagnosis of thymoma B3 who first showed thoracic recurrences and then an asymptomatic isolated pelvic metastasis from her thymic carcinoma.



## Introduction

Thymic malignancies are rare tumors with mainly local extensions and/or recurrences. Thymic carcinomas account for less than 1–4% of thymic epithelial tumors. The most common sites of metastatic thymic carcinomas (Masaoka-Koga stage IVb) are the lung, liver and brain. Unusual metastatic sites have been reported. They can be found in the kidney, pancreas, pituitary, orbital, lymph nodes, peritoneum, and the ovaries.

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## Case Report

Thymoma B3 was diagnosed in a 64-year-old female in 2002 (fig. 1). According to the French RYTHMIC guidelines, the patient underwent preoperative chemo-radiotherapy followed by a complete resection [1]. Parietal and pleural tumors were detected by CT scan and [$^{18}$F]FDG-PET/CT in 2008. The patient was reoperated, and these tumors were confirmed to be metastases of mixed thymoma B3 and thymic carcinoma. A pelvic mass was detected in 2013 by [$^{18}$F]FDG-PET/CT (SUVmax 8.4) and confirmed by MRI (fig. 2, fig. 3). The patient was asymptomatic. A laparotomy confirmed an isolated peritoneal 60-mm tumoral mass localized on the left part of the Douglas's pouch. The lesion was completely resected. Pathological analysis concluded metastasis of the previously diagnosed thymic carcinoma (fig. 4).

## Discussion

Peritoneal and/or ovarian metastasis from thymic malignancies are very rare; only four cases have been reported in the literature [2–4]. These metastases can occur immediately or several years after primary thymic tumor (3–6 years). Different thymic histological subtypes were observed (carcinoma, B1, neuroendocrine), and they were always associated with a loco-regional extension and/or distant metastasis. To our knowledge, this is the first report of an isolated pelvic metastasis from thymic carcinoma. This isolated pelvic metastasis probably had a systemic origin rather than a direct peritoneal extension below the diaphragm (as described in previously reported cases). However, considering that this pelvic metastasis was isolated and completely resected, chemotherapy was not performed in our patient. Efficacy of [18F]FDG-PET/CT for the detection and localization of mediastinal recurrence is well established [5]. Our case report emphasizes the utility of [18F]FDG-PET/CT for metastasis detection and long-term follow-up in patients with thymic epithelial tumors.

## Disclosure Statement

The authors declare that they have no conflicts of interest.

## References

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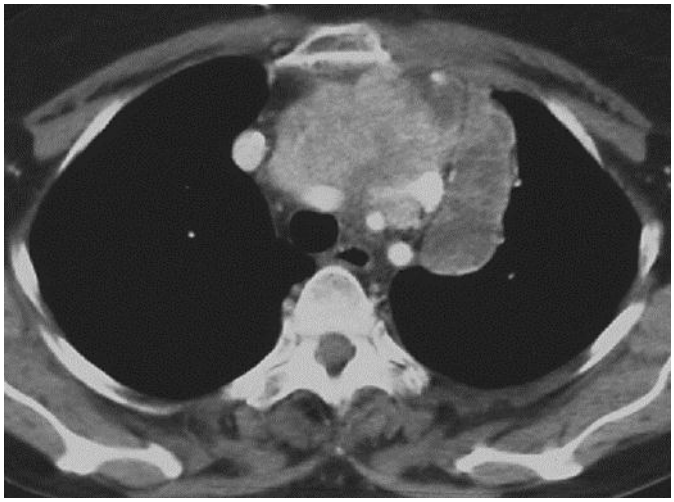

**Fig. 1.** Baseline thoracic CT scan (2002): locally advanced thymoma B3.

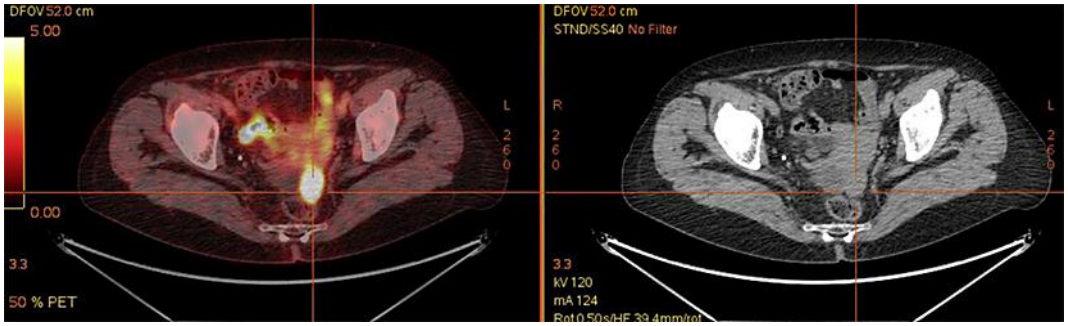


**Fig. 2.** [$^{18}$F]FDG-PET/CT (2013): isolated abnormal uptake of FDG (SUVmax 8.4) in a pelvic posterior mass just before the rectum.

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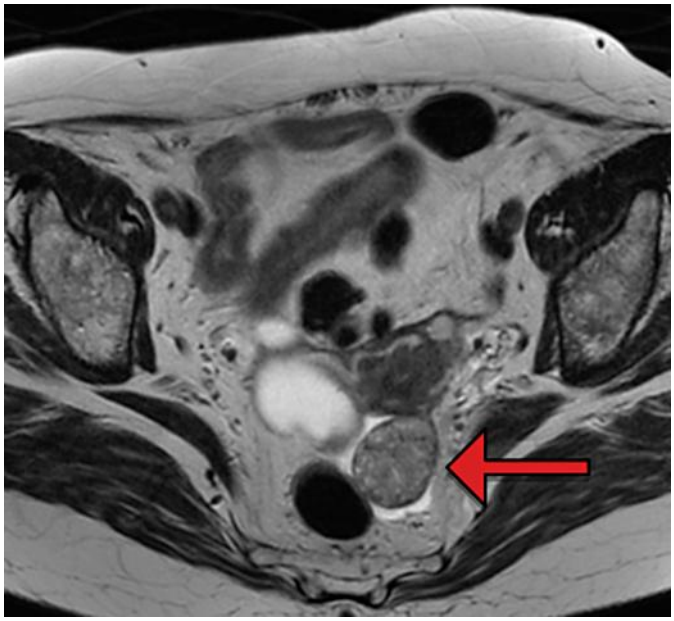

**Fig. 3.** Pelvic MRI (2013): hyperintense T2-isolated tumoral mass on the left part of the Douglas's pouch (arrow).

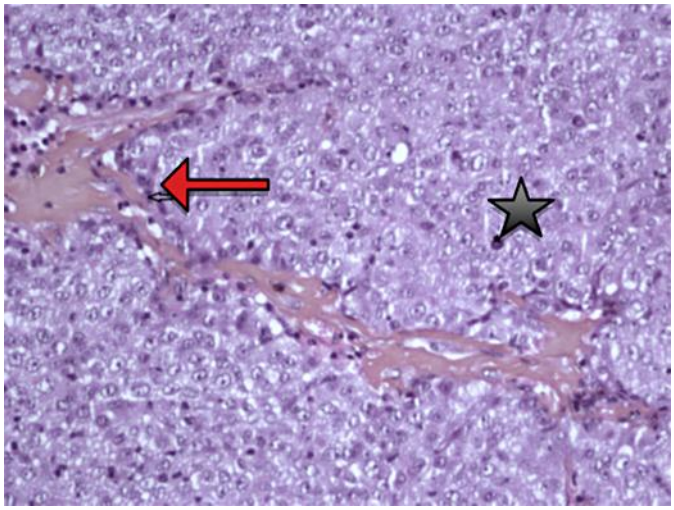

**Fig. 4.** Metastasis of mixed thymic carcinoma and thymoma B3. Areas of epithelial cells are separated by thick fibrous bands (arrow). No necrosis, but atypia and mitotic activity (star).