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Case Report

Pulmonary metastasectomy for uterine malignant mixed mullerian tumor

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Introduction

Pulmonary metastasis from uterine malignant mixed mullerian tumor (MMMT) is usually associated with a poor prognosis.

Case report

A 34-year-old lady was referred to us in December 1998 as a case of MMMT of the uterus after undergoing a panhysterectomy elsewhere for excessive vaginal bleeding. The histopathology slides and paraffin blocks from the specimen were reviewed in our hospital and the diagnosis of uterine MMMT was confirmed. Nodal status could not be determined as a pelvic nodal sampling was not performed at the time of hysterectomy. After clinical and radiological evaluation to rule out any residual or metastatic disease, she received adjuvant external beam radiation to the pelvis to a dose of 50 Gy using a four field box technique, followed by vaginal brachytherapy using a vaginal tandem to deliver 30 Gy.

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She completed radiation therapy in February 1999 and was then kept on regular follow up. The chest x-ray in February 2002 was normal. She defaulted after 2002 and later presented in May 2004 with a history of cough. On evaluation, she had no evidence of local or regional nodal recurrence. A chest x-ray showed opacity in the upper lobe of the right lung. CT scan of the chest revealed an irregular contrast enhancing mass lesion with cavitation and areas of degeneration in the right upper lobe measuring 4.5x4.5 cm (Figure 1). Bronchoscopy did not reveal any intraluminal lesion. Sonography of the abdomen and pelvis, and a bone scan did not show any evidence of bone metastasis. In view of the long disease

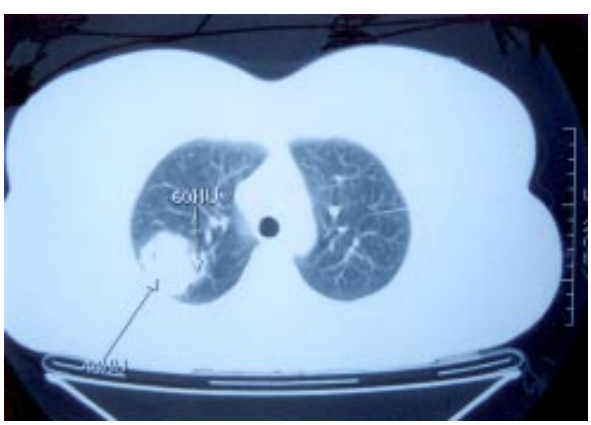

Figure 1. CT scan of the chest showing the lesion in the right upper lobe

free interval of more than 5 years, presence of a solitary respectable lesion in the lung, absence of extrapulmonary metastases or local recurrence, and good cardiopulmonary reserve, it was decided to surgically resect the lung tumor. She underwent thoracotomy and right upper lobectomy with mediastinal nodal sampling in June 2004 from which she had an uneventful recovery. Histopathological examination revealed metastatic MMMT in the lung (Figure 2) with microscopically free margins of resection. None of the 9 mediastinal nodes showed any metastases. She was then advised regular follow up. At her last visit in June 2006, she was disease free clinically and radiologically.

Figure 2. H&E staining of the metastasectomy specimen showing islands of carcinomatous areas (white arrows) amidst sarcomatous stroma (black arrow) (x10)

Discussion

The overall 5 year survival in patients with uterine malignant mixed mullerian tumor ranges from 31 to 39%, and the 5 year survival following recurrence is only 4%[1]. The commonest cause of death is distant metastasis, which usually occurs in the lung or abdomen in 57 to 66% cases[1]. There are very few treatment options for recurrent uterine MMMT. Chemotherapy is generally ineffective[2]. Pulmonary resection in now widely recognized as a safe and potentially curative procedure for lung metastases from a variety of malignancies. The Metastatic Lung Tumor Study Group of Japan reported a 5 year survival rate of 54.6% following resection of pulmonary metastases from uterine malignancies[3]. Levenback et al[4] analyzed the results of pulmonary metastasectomy in 45 patients with uterine sarcomas, the majority of which were leiomyosarcomas and reported 5 year survival of 43%[4]. The standard criteria for selection of patients for pulmonary metastasectomy include the following: the primary tumor under control, absence of extrapulmonary metastasis, presence of a respectable lung lesion, absence of a better treatment modality and a patient who is at a good surgical risk[5]. Prognostic factors for long term survival after pulmonary metastasectomy for gynecological malignancies include the disease free interval of >12 months[3] and unilateral metastasis[4]. To our knowledge, there is only one documented report of prolonged survival following pulmonary metastasectomy for uterine MMMT[1]. Our patient has survived for 24 months after pulmonary metastasectomy and is now disease free. She had all the good prognostic variables viz. a disease free interval of 5 years and presence of a unilateral solitary lesion which was completely resected. In conclusion, pulmonary metastasectomy is a treatment of option which needs to be explored in patients with lung metastases from uterine MMMT, who otherwise have a very dismal prognosis. In carefully selected patients, it has the potential to achieve prolonged survival.

References

1. Callister M, Ramondetta LM, Jhingran A et al. Malignant mixed Mullerian tumors of the uterus : analysis of patterns of failure, prognostic factors and treatment outcome. Int J Radiat Oncol Biol Phys 2004;58:786-96.
2. Ramondetta LM, Burke TW, Jhingran A et al. A phase II trial of cisplatin, ifosfamide and mesna in patients with advanced or recurrent uterine malignant mixed mullerian tumors with evaluation of potential molecular targets. Gynecol Oncol 2003;90:529-36.
3. Anraku M, Yokoi K, Nakagawa K et al. Pulmonary metastases from uterine malignancies: results of surgical resection in 133 patients. J Thorac Cardiovasc Surg 2004;127:1107-12.
4. Levenback C, Rubin SC, McCormack PM et al. Resection of pulmonary metastases from uterine sarcomas. Gynecol Oncol 1992;45:202-5.
5. McCormack P. Surgical resection of pulmonary metastases. Semin Surg Oncol 1990;6:297-302.