

LUNG METASTASECTOMY: INDICATIONS, PROGNOSIS AND SURVIVAL

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SUMMARY

Introduction: Surgery of lung metastases provides better results in terms of survival, subject to several conditions; hence the interest of this study to demonstrate the criteria of good prognosis. **Methods:** It's about a retrospective study concerning 15 cases of lung metastasectomy over a period of 7 years. **Results:** 15 patients (11 women, 4 men), whose The primitive cancers was breast in 3 cases, digestive in 8 cases, uterine in 2 cases and bone in 1 case and pleural in 1 case. They were unique in 66%. The surgery was a wedge resection in 53%, a Lobectomy in 33%, and a segmentectomie in 14%. the limits of resections was not tumoral in all cases, without vascular emboli tumour , but tumoral lymph nodes was found in 2 cases. All patients had received adjuvant chemotherapy. The survival rate was 27% at 5-year.

KEYWORDS: Metastatics, lung, cancer.

INTRODUCTION

Confirmed by several studies, including the largest that of Pastorino and al, 1997,^[1] (report of the international registry of lung metastases), the surgery of lung metastases was able to have its place in improving survival rates, it is intended for a selected group of patients; under the influence of several prognostic factors.

PATIENTS AND METHODS

This is a retrospective study over a period of 7 years (2010-2016), concerning 15 cases of lung metastasectomy, discussed in a multidisciplinary consultation meetings, who were in local remission of their primitive cancer, without other metastatic localization. Our purpose was to study the prognostic factors influencing the survival rate of patients

RESULTS

It was of 15 patients (11 women, 4 men), whose the average age was 59 years (18-74 years). The primitive cancers was breast in 3 cases, digestive in 8 cases, uterine in 2 cases and bone in 1 case and pleural in 1 case. Their histological type was: adenocarcinoma in 73%, Sarcoma 27%. The mean disease-free interval (DFI) was 23.2 mounths (2-60 mounths).

All patients had preoperability scores, including CTAP Scann, as well as a PET scann performed just in 6 cases.

Metastasis was unilateral in 86.4%, bilateral only in 13.6% cases; it was in a mean Lobar in 20%, Right inferior Lobar in 47%, Left inferior Lobar in 27%, Left upper Lobar in 6%. They were unique in 66% (Figure 1,2) and multiple in 34% (Figure 3). The mean size of the metastases was 20.05mm (10-65mm).

A pre-operative histological diagnosis was established through scanno-guided biopsy in 4 cases. One patient who received neoadjuvant chemotherapy, all patients were operated by a conservative postero-lateral Thoracotomy, the right side was 66.66%

The surgery was a wedge resection in 53%, a Lobectomy in 33%, and a segmentectomie in 14%; associated to a radical mediastinal lymph nodes dissection. The resection was incomplete for 2 cases of bilateral location requiring a second contralateral cure

The histological results confirmed the metastases, the limits of resections was not tumoral in all cases, without vascular emboli tumour, but tumoral lymph nodes was found in 2 cases. All patients had received adjuvant chemotherapy

The survival rate after a complete metastasectomy was 36%, at 1 year, 27% at 3-year, 27% at 5-year, and 9% at 7 years. The average survival rate was 30, 18 months (8months-7years). The prognosis was better for a resolved lung resections, yet poor for patients with tumoral mediastinal lymph nodes.



Figure 1: Chest X-ray showing the presence of a single metastasis on the right lower lobe in cases of a woman followed for breast cancer.

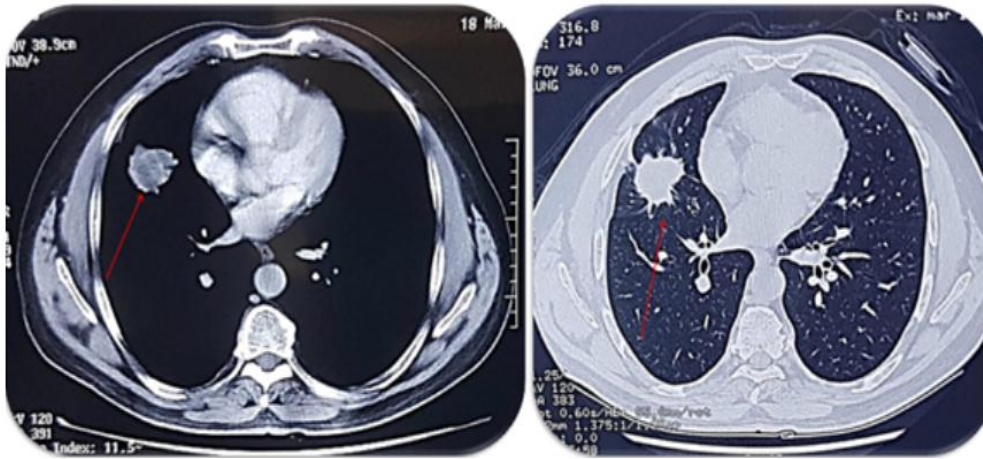


Figure 2: Chest CT scan demonstrating tissue injury with criteria for malignancy sitting on the right lower lobe in favor of a single metastasis.

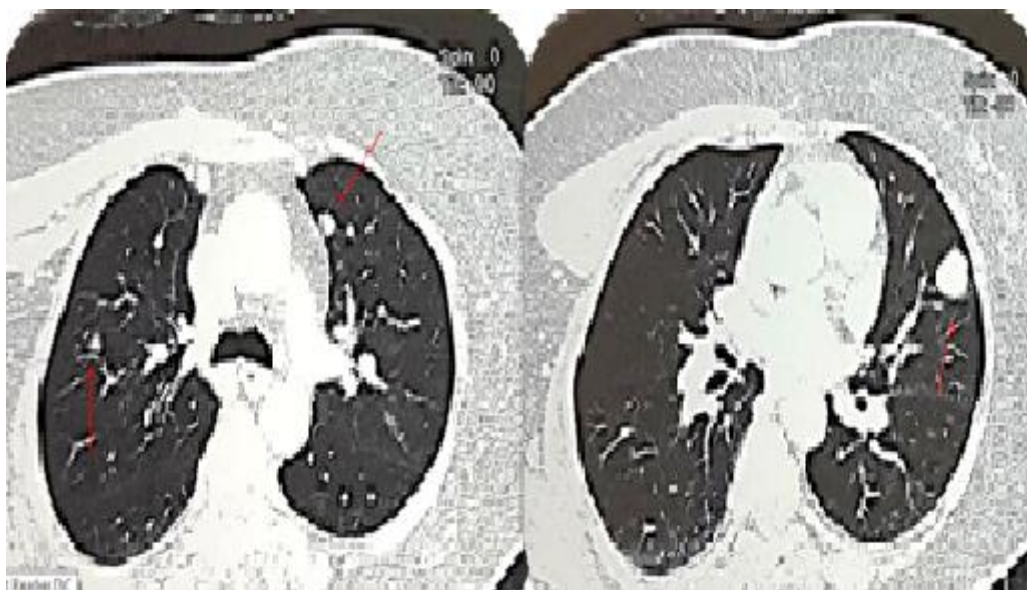


Figure 3: Chest CT scan demonstrating 2 unilateral metastasis benefiting from atypical resection.

DISCUSSION

Surgery of pulmonary metastases has been able to improve overall survival, however this surgery is aimed at a very selected group of patients, subject to several conditions to guarantee good results.

For this surgery to be feasible; the primary cancer must be in remission, without associated extrathoracic metastases, and the excision must be complete.

Other factors influence the prognosis, such as: the short interval between metastasis surgery and primary cancer treatment, as well as the number and uni or bilateral of metastases making incomplete resection; demonstrated by several studies including Murthy *et al.*'s study,^[2] hence the interest of open surgery to avoid underestimate small metastasis (<1cm).

Some histopathological criteria have an important prognostic value,^[3] such as the histological type, where metastases of melanoma have a poorer prognosis,^[1] the presence of vascular emboli tumors that reflect the presence of occult metastases making incomplete resection; as well as the involvement of mediastinal lymph nodes, influenced by tumor size of lung metastases.^[4] The nature of primary cancers can also influence the prognosis, where cervical cancer seems the least favorable.^[5]

Multimodal management combining neo or adjuvant chemotherapy acts on the improvement of the survival rate, that could reach in our series the 9% for a survival at 7 years, a survival rates at 5 years was reported at 26% even in series of poor prognosis.^[1]

From this, it can be concluded that a lung metastasectomy wick subject to the criteria of good prognosis occupies an important place in the management of metastatic cancers, with a low mortality rate of 1%. Local radiofrequency treatment comes in the second row after surgery if contraindications.^[6]

CONCLUSION

The prognostic factors such as the number and size of metastases, histological type, The mean disease-free interval, are valued differently according to the series, and not significant in our experience, but an incomplete resection and the presence of the lymphatic or vascular tumor emboli influence the survival rate, which improved when chemotherapy was introduced to the surgical treatment of lung metastases.

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