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Review

Small cell lung cancer associated with solitary fibrous tumors of the pleura: A case study and literature review

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ABSTRACT

Introduction: Small cell lung cancer (SCLC) is the most aggressive type of lung cancer. The surgical treatment is possible only in a few and defined occasions. The association between SCLC and a solitary fibrous tumor of pleura (SFTP) is extremely rare.
Case presentation: A 56 year-old man had a lung lesion (size 16 mm) FDG-avid (SUV 7.9) within upper lobe of right lung. No lymph adenopathy or other distant lesion were found. The pathological results of FNAB showed the presence of malignant cells inconclusive for a definitive diagnosis. Following thoracotomy, the exploration of pleural cavity showed an unexpected lesion (size. 3 cm) originating from parietal pleura and not radiologically seen. The intraoperative diagnosis was solitary fibrous tumor of the pleura. Then, an upper right lobectomy was achieved. The histological findings of the lung tumor diagnosed to be a SCLC (p-stage: T1N0M0). An adjuvant treatment was started. At 20 months after the procedure, no recurrence was found.
Conclusion: Surgery as part of multimodality treatment may be indicated in the treatment of SCLC in the early stage (T1N0M0). However, before proceeding to attend tumor resection an exploration of pleural cavity is mandatory in order to exclude any pleural involvement.

1. Introduction

Herein, we reported a case of small cell lung cancer (SCLC) with a concomitant Solitary Fibrous Tumors Of The Pleura (SFTP). Both lesions were successfully resected. Follow-up at 20 months after procedure showed no recurrence.

1.1. Case presentations

A 56 year-old man was admitted to our unit for the presence of lung lesion within upper right lobe seen of CT scan. He was asymptomatic; his past medical history, and all laboratory exams including tumor markers were unremarkable. A CT-PET scan confirmed the presence of a small lung lesion (size 16 mm) that was FDG-avid (SUV 7.9). No lymph adenopathy or other distant lesion were found. Bronchoscopy resulted to be negative. The pathological results of FNAB showed the presence of atypical cells suggestive of malignancy but it was unconclusive for a diagnosis. In the light of the young age, the good clinical conditions and the early clinical stage (T1N0M0) of cancer, a resection of tumor was planned. A standard lateral muscle-sparing thoracotomy was performed. Surprisingly, during the exploration of pleural cavity an unexpected lesion (size. 3 cm) originating from parietal pleura and not radiologically seen was found. The pleural lesion was resected and send to pathologist for excluding a pleural involvement. An intraoperative diagnosis of SFTP of the pleura without signs of malignancy was made. Thus, an upper right lobectomy was achieved in a standard manner with complete lymphadenectomy. Histological findings of the lung tumor diagnosed to be a SCLC without lymph node involvement (p-stage: T1N0M0). immunohistochemical studies confirmed the pleura lesion to be a fibrous tumor without signs of atypia. An adjuvant treatment was started. At 20 months after the procedure, no recurrence was found.

2. Discussion

SFTP can also secrete insulin-like grow factor-II (ILGF-II) which causes refractory hypoglycemia [1–14]. To the best of our acknowledgement, the present was the first case of SCLC associated with a SFTP. Our patient was asymptomatic. The PET-CT scan did

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not see the SFTP that was found during thoracotomy. Because the intraoperative findings resulted to be negative for malignant pleural involvement but diagnosed a SFTP without any sign of malignancy, we decided to attend resection of SFTP. Then, an upper lobectomy was attended for curative intention. The pathological findings of lung tumor diagnosed to be a SCLC. Small cell lung carcinoma represents 15–20% of all lung cancer and it is basically characterized by rapid growth and early metastatic dissemination [15–31]. As a result, systemic chemotherapy, with or without radiotherapy, has been typically accepted as the cornerstone of therapy in SCLC. However, a growing body of literature suggests that early-stage SCLC may be more amenable to local control following resection, with surgery being an important component of multimodality therapy [31–46].

Our experience seems to confirm such idea. Following surgery our patient had an adjuvant therapy and he was free from recurrence 20 months after operation.

3. Conclusion

Finally, surgery as part of multimodality treatment may be indicated in the treatment of SCLC in the early stage (T1N0M0). However, before proceeding to attend tumor resection an exploration of pleural cavity is mandatory in order to exclude any pleural involvement.

Ethical approval

This is a retrospective study based only on the analyses of recorded data and then no Ethical Approval was necessary.

Author contribution

Vincenzo Di Crescenzo: Participated substantially in conception, design, and execution of the study and in the analysis and interpretation of data; also participated substantially in the drafting and editing of the manuscript.

Paolo Laperuta: Participated substantially in conception, design, and execution of the study and in the analysis and interpretation of data.

Alfredo Garzi: Participated substantially in conception, design, and execution of the study and in the analysis and interpretation of data; also participated substantially in the drafting and editing of the manuscript.

Filomena Napolitano: Participated substantially in conception, design, and execution of the study and in the analysis and interpretation of data; also participated substantially in the drafting and editing of the manuscript.

Annamaria Cascone: Participated substantially in conception, design, and execution of the study and in the analysis and interpretation of data.

Alessandro Vatrella: Participated substantially in conception, design, and execution of the study and in the analysis and interpretation of data; also participated substantially in the drafting and editing of the manuscript.

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Competing interest

The authors declare that they have no competing interests. All author have no financial source.

Consent form

Written informed consent was obtained from the patients for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

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