The Probable Relation Between Asbestos and Isolated Pleural Metastasis in Renal Cell Cancer

Asbestos ve İzole Plevral Renal Hücreli Kanser Metastazı Arasındaki Olası İlişki

Fatih KARATAŞ, Süleyman ŞAHİN, Aydın AYTEKİN, Bekir HACIOĞLU, Mustafa ALTINBAŞ

Dışkapı Yıldırım Beyazıt Education and Research Hospital, Medical Oncology, Ankara, Türkiye

Correspondence Address
Yazışma Adresi

Fatih KARATAŞ
Dışkapı Yıldırım Beyazıt Education and Research Hospital, Medical Oncology, Ankara, Turkey
E-mail: m_f_karatas@hotmail.com

Key Words: Asbestos, Mesothelioma, Pleural metastasis, Isolated, Renal cell carcinoma
Anahtar Sözcükler: Asbestozis, Mesotelyoma, Plevral metastaz, İzole, Böbrek hücreli kanser

Dear Editor;

The most common site for metastasis from renal cell carcinoma (RCC) is the lung parenchyma (50% of patients), followed by the skeleton (20% to 50% of patients). It is well known that RCC has a tendency to create atypical metastases (1, 2). Pleural lesions are infrequent and metastasis is usually associated with parenchymal lung lesions. Pleural metastasis without involvement of the lung parenchyma due to primary renal tumors is infrequent in the literature. If this happens, the main characteristics of metastasis in RCC are multiple lesions that are mostly in a nodular pattern and well demarcated (3). Whether or not the patients priorly diagnosed with RCC may represent with atypical metastasis in every stage of the disease. Asbestos is common in less developed countries and it can lead to increased risk and mortality of renal cell carcinoma (4, 5). Unfortunately along with the increased frequency of asbestos lead to causes late recognition of metastatic disease.

Herein we reported 40 year-old-non smoker female patient with a well-known medical history of asbestos exposure who presented to hospital with progressive dyspnea, weight loss, and back pain that had started in the last two months. Chest x-ray and thorax computed tomography (CT) showed a slight right pleural effusion and bilateral multiple pleural calcifications mimicking diffuse heavily asbestos or mesothelioma. In the laboratory, the serum LDH level was ten times normal. Thoracentesis was performed because of the high LDH levels, weight loss and pain. Histological examination of thoracentesis fluid was compatible with malignant epithelial tumor and a pleural biopsy revealed RCC metastasis. Abdominal CT identified a bulky mass in the left kidney and multiple lytic bone metastasis in the vertebrae. Pathological diagnosis was confirmed by total excision of kidney.

We have noticed that RCC is known in the literature as one of the most common malignant tumors that tends to cause atypical metastases. A large number of cases with atypical metastasis in RCC have been reported in the literature. J. Eckardt et al reported that pleural metastasis along with lung parenchymal involvement in patients with RCC appears with an incidence of 12% in autopsy series, especially in patients with asbestos; however, an isolated pleural metastasis was found to be exceptionally infrequent in that study (6). Pleural metastasis in RCC may exactly resemble severe involvement of asbestos with or without mesothelioma radiologically and clinically (7). If a patient with RCC clinically presents with pleural thickening and nodules or effusion, physicians should be aware that the current situation is

Received \ Geliş tarihi : 04.09.2015
Accepted \ Kabul tarihi : 28.09.2015

DOI: 10.17954/amj.2016.46

not a simple asbestos and could be primary mesothelioma as well as metastasis from RCC and they should perform the necessary tests such as pleural biopsy for the differential diagnosis. Although histological examination of pleural fluid example was compatible with RCC metastasis, a pleural biopsy can be required for the differential diagnosis of mesothelioma and other malignancies (8). The place of asbestos in the etiology of renal cell carcinoma is controversial but it is known that predispose to asbestos is a fact that RCC development and increased mortality in patients with renal cell carcinoma. Also, as seen in our case, the most important point that must be disclosed is the underlying cause of the metastases from RCC in pleura thought becomes a fibrotic negative microenvironment for metastasis due to intense accumulation of asbestos.

In conclusion, physicians should be aware of a metastasis in the pleura from another site of body when a patient comes with weight loss, increased dyspnea and atypical bone pain even so radiological scenes indicate to asbestos. In these cases with asbestos and pleural masses, we should remember that pleural metastasis of renal cell cancer is relatively frequent in patients with asbestos so except mesothelioma.

Acknowledgements: Nil

Conflict of interest: We have no actual or potential conflict of interest.

Ethics Committee Approval: N/A.

Informed Consent: Written informed consent was obtained from the patient who participated in this case report.

Financial source: We have no relevant financial or nonfinancial relationship to disclose.

REFERENCES

1. Han KR, Pantuck AJ, Bui MH, Shvarts O, Freitas DG, Zisman A, Leibovich BC, Dorey FJ, Gitlitz BJ, Figlin RA, Belldegrun AS: Number of metastatic sites rather than location dictates overall survival of patients with node-negative metastatic renal cell carcinoma. Urology 2003; 61: 314- 9.
2. Zekri J, Ahmed N, Coleman RE, Hancock BW. The skeletal metastatic complications of renal cell carcinoma. Int J Oncol 2001; 19:379-82.
3. Kutty Kesavan and Basil Varkey. Incidence and distribution of intrathoracic metastases from renal cell carcinoma. Arch Intern Med 1984;144:273-76.
4. I. J. Selikoff, E. C. Hammond, and H. Seidman. Mortality experience of insulation workers in the United States and Canada, 1943-1976. Ann N Y Acad of Sci 1979; 330:91-116.
5. P. E. Enterline, J. Hartley, and V. Henderson. Asbestos and cancer: A cohort followed up to death. Br J Ind Med 1987; 44:396-401.
6. Eckardt Jens, Lars Ladegaard and Peter Bjørn Licht. Isolated pleural metastases from renal cell carcinoma. Interact Cardiovasc Thorac Surg 2011; 12:301-02.
7. Taylor DR, Page W, Hughes D and Varghese G. Metastatic renal cell carcinoma mimicking pleural mesothelioma. Thorax 1987; 42: 901-02.
8. Attanoos RL, Goddard H, Thomas ND, Jasani B and Gibbs AR. A comparative immunohistochemical study of malignant mesothelioma and renal cell carcinoma: the diagnostic utility of Leu-M1, Ber EP4, Tamm-Horsfall protein and thrombomodulin. Histopathology 1995; 27: 361-66.