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Scalp Metastasis as an Initial Presentation of Lung Cancer: A Case Report

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ABSTRACT

Introduction: Lung can be affected by various tumors, including lung carcinoma. These tumors exhibit certain clinical signs. In rare cases, they may appear unusual and affect the diagnostic and therapeutic course. Considering the importance of this issue, in the present study, we report a case of lung lymphoma with subsequent lump masses. We report a diagnostic evaluation in a male case with the first manifestation as an unusual presentation of scalp metastasis due to underlying lung cancer.

Conclusion: Although lung cancer is typically presented in classical form, it is important to consider unusual manifestations of underlying lung cancer, along with the appearance of scalp lesions.

Introduction

Lungs can be affected by benign and malignant tumors. Lung carcinoma is one of the malignant tumors, which originates from the epithelial cells of the lung. In cases with untreated lung carcinoma, cell growth can also spread and affect other tissues or organs in a process called metastasis outside the lung. Most cancers that start in the lung, called primary lung cancers, are carcinomas originating from the lining tissue [1-5]. The major types of Small Cell Lung Cancers (SCLCs) are also called neoplastic cell cancer and Non-Small Cell Lung Cancer (NSCLC). Although the common symptoms are coughing up blood (accompanied by fever), weight loss and shortness of breath are also probable [4-9]. Chest x-

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ray is one of the first steps of examination that should be done when the patient reports a history of lung cancer. This can reveal a specific mass, drainage of the mediastinal region (possibly indicating drainage of the lymph nodes in the mediastinal region), atelectasis (lung collapse), pulmonary inflammation, or pleural effusion of lateral sides. Computed Tomography (CT) scan is typically helpful to provide information regarding the type and stage of disease.

Lung cancer often appears as an isolated lung mass on chest radiography. In rare cases of lung cancer, it may be detected in other sites at the same time or before the primary cancer. In 0.22-12% of patients with lung cancer, skin metastasis is a rare clinical report [8-12]. Although the patients with lung carcinoma may exhibit certain signs, some cases may have unusual presentations.

Case Presentation

A 41-year-old male patient presented with painful nodules on scalp from 10 days ago and dyspnea, pleural effusion and visual loss (finger-counting III and II) within 5 days after the appearance of such lesions. But the ocular movements were not tender or painful. In addition, he had impaired balance and blurred vision. He did not report a history of recent travel, high-risk behavior, smoking, or diabetes mellitus.

Auscultation of the right lung was revealed low breath sounds. In ophthalmology consultation, the exudative retinal detachment and retinal mass in left eye were reported. In pathology report, we found a metastatic carcinoma with signet ring features and also lymphvascular invasion (ICD-O COD: C44.0, 8070/6).

Abdomen was normal on examination with no organomegaly, but partial ptosis was observed in the left eyelid. Movements' evaluation was 5/5 and sensories were normal; however, the left inferior temporal visual filed was impaired. In bronchoscopy of vocal cords, trachea, carina, and narrative orifice, Rheumatoid Leptomeningitis (RLM) and inflammation and bleeding were reported in the right side.

His blood test results were as follows: Na: 137 mmol/L, K: 4.4 mmol/L, Cr: 0.9 mg/dL, lupus anticoagulation was negative, haemoglobin: 13.0 g/dL, total white cell count: $10500\times10^3/\mu L$ with neutrophilia, platelets were normal, ESR: 96 mm/h, LDH: 344 U/L, Ca: 9.2 mg/dL, P: 2.7,Mg: 2.3 mg/dL, CNCA, PNCA and ANA were negative, β2-GP1 antibodies (IgG and IgA) were negative, and anticardiolipin antibodies (IgG and IgA) were negative, too.

Discussion

Multidisciplinary approaches are necessary for any cutaneous metastasis. Skin changes in visceral malignancies are usual and they can have silent cutaneous dissemination. Therefore, brain, bone, liver and adrenal glands can be at the higher risk for metastasis than skin, and also skin is not the first site, in which metastasis is usually spread quickly (less than six months) [9-12].

A study revealed that skin metastases are observed in 2.8% of the 2130 patients with NSCLC and also, various visceral malignancies can be seen concurrently with 6.9% of cutaneous metastasis and some sings, such as vascularity, immobility, and warmness are more reported in these patients [13, 14].

Early diagnosis in these patients is helpful to reduce the widespread of silent lung cancer and appropriate therapy can be administered by hematology/oncology and also monitoring the response to chemotherapy for evaluation of the morphologic presentation may help us more. However, resection is possible and palliative therapy can be considered [15-20].

Although lung cancer is typically presented in classical form, it is important to consider unusual manifestations of underlying lung cancer, along with the appearance of scalp lesions.

Ethical Considerations

Compliance with ethical guidelines

All ethical principles were observed in this article.

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Conflict of interest

The authors declared no conflict of interest.

References

[1] Helm TN. Dermatologic manifestations of metastatic carcinomas [Internet]. 2014 [Updated 2019 February 14]. Available from: http://emedicine. medscape.com/article/1101058-overview

[2] Alcaraz I, Cerroni L, Rütten A, Kutzner H, Requena L. Cutaneous metastasis from internal malignancies: A clinicopathologic and immunohistochemical review. The American Journal of Dermatopathology. 2012; 34(4):347-93. [DOI:10.1097/DAD.0b013e31823069cf] [PMID]

[3] Lee JH, Ahn SJ, Kim HJ, Jang SE, Noh GY, Kim HR, et al. Cutaneous metastasis from lung cancer: A single-institution retrospective analysis. Tuberculosis and Respiratory Diseases. 2011; 70(2):139-42. [DOI:10.4046/trd.2011.70.2.139]

[4] Song Z, Lin B, Shao L, Zhang Y. Cutaneous metastasis as an initial presentation in advanced non-small cell lung cancer and its poor survival prognosis. Journal of Cancer Research and Clinical Oncology. 2012; 138(10):1613-7. [DOI:10.1007/s00432-012-1239-6] [PMID]

[5] Lookingbill DP, Spangler N, Mack Sexton F. Skin involvement as the presenting sign of internal carcinoma. A retrospective study of 7316 cancer patients. Journal of the American Academy of Dermatology. 1990; 22(1):19-26. [DOI:10.1016/0190-9622(90)70002-Y]

[6] Mollet TW, Garcia CA, Koester G. Skin metastases from lung cancer. Dermatology Online Journal. 2009; 15(5):1. [PMID]

[7] Molina Garrido MJ, Guillén Ponce C, Soto Martínez JL, Martínez y Sevila C, Carrato Mena A, Moreno Antón F. Cutaneous metastases of lung cancer. Clinical and Translational Oncology. 2006; 8(5):330-3. [DOI:10.1007/s12094-006-0178-6]

[8] Hidaka T, Ishii Y, Kitamura S. Clinical features of skin metastasis from lung cancer. Internal Medicine. 1996; 35(6):459-62. [DOI:10.2169/internalmedicine.35.459] [PMID]

[9] Kikuchi Y, Matsuyama A, Nomura K. Zosteriform metastatic skin cancer: Report of three cases and review of the literature. Dermatology. 2001; 202(4):336-8. [DOI:10.1159/000051670] [PMID]

[10] Marcoval J, Moreno A, Peyrí J. Cutaneous infiltration by cancer. Journal of the American Academy of Dermatology. 2007; 57(4):577-80. [DOI:10.1016/j.jaad.2007.01.034] [PMID]

[11] Perng DW, Chen CH, Lee YC, Perng RP. Cutaneous metastasis of lung cancer: An ominous prognostic sign. Zhonghua Yi Xue Za Zhi (Taipei). 1996; 57(5):343-7. [PMID]

[12] Ferrer-Bruker S. The cutaneous manifestations of metastatic lung cancer: Case report and review. Journal of the American Osteopathic College of Dermatology. 2015; 32:34-6.

[13] Fay T, Henry GC. Correlation of body segmental temperature and its relation to the location of carcinomatous metastasis: Clinical observations and response to methods of refrigeration. Surgery, Gynecology & Obstetrics. 1938; 66:512-24.

[14] Krathen RA, Orengo IF, Rosen T. Cutaneous metastasis: A meta-analysis of data. Southern Medical Journal. 2003; 96(2):164-7. [DOI:10.1097/01.SMJ.0000053676.73249.E5] [PMID]

[15] Kall SL, Koblinski JE. Genes that mediate metastasis organotropism. In: Landes Bioscience. Madame Curie Bioscience Database. Texas: Landes Bioscience; 2013.

[16] Dreizen S, Dhingra HM, Chiuten DF, Umsawasdi T, Valdivieso M. Cutaneous and subcutaneous metastases of lung cancer: Clinical characteristics. Postgraduate Medicine. 1986; 80(8):111-6. [DOI:10.1080/00325481.1986.11699635] [PMID]

[17] Browntein MH, Helwig EB. Metastatic tumors of the skin. Cancer. 1972; 29(5):1298-307. [DOI:10.1002/1097-0142(197205)29:5<1298::aid-cncr2820290526>3.0.co;2-6] [PMID]

[18] Chiu CS, Lin CY, Kuo TT, Kuan YZ, Chen MJ, Ho HC, et al. Malignant cutaneous tumors of the scalp: A study of demographic characteristics and histologic distributions of 398 Taiwanese patients. Journal of the American Academy of Dermatology. 2007; 56(3):448-52. [DOI:10.1016/j.jaad.2006.08.060] [PMID]

[19] Farley R, Manolidis S, Ratner D. Adenocarcinoma of the lung metastatic to the skull presenting as a scalp cyst. Journal of the American Academy of Dermatology. 2006; 54(5):916-7. [DOI:10.1016/j.jaad.2006.01.060] [PMID]

[20] Gupta V, Bhutani N, Marwah N, Sen R. Scalp metastasis as an initial presentation of lung adenocarcinoma: A case report and literature review. International Journal of Surgery Case Reports. 2017; 41:327-31. [DOI:10.1016/j.ijscr.2017.10.060] [PMID] [PMCID]