

Skin Tumors in Clinical Practice – Case Report and the Current State of Knowledge

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Abstract

We present a case of a 54- years old female patient with the diagnosis of lung adenocarcinoma and cutaneous metastases, which come a long way from the initial symptoms to definitive diagnosis. Adenocarcinoma is the predominant histological subtype of the non-small cell lung cancer. The case showed how important it is to remember that skin metastasises could be the first symptoms of the cancer. The physicians (general practice and dermatologists) should be aware of the phenomenon of the atypical skin lesions. Every case should be evaluated with biopsy for further possible research and supportive treatments. We would like emphasize the importance of a multidisciplinary approach and of its role in individualizing the diagnostic and treatment.

Keywords: adenocarcinoma, skin tumors, metastases

Introduction

Adenocarcinoma is the predominant histological subtype of the non-small cell lung cancer (NSCLC). Every year is more than 500,000 deaths [1]. The most recent date published by National Register of Cancer and Oncology Centre in Warsaw showed that in Poland in men on first position is lung cancer - 21 % and in woman 9%. In both gender the most common cause of death is lung cancer [1]. Cutaneous metastases from internal malignances are quite rarely, exception is breast carcinoma [2]. Generally they are misdiagnosed as a benign lesion because of the absence of pathognomonic symptoms [3].

Case description

A 53-years old non-smoker woman was admitted to the hospital with increasing weakness and loss of weight (8 kilograms) in 3 weeks, painful joints and night sweats. Patient without any associated disease. The first lesions appeared approximately 3 months earlier and were in the form of lumps. The patient was initially treated by a General Practitioner with a 5% hydrocortisone ointment. After around 2 weeks there was no improvement or regression of the lesions. The patient was then referred to Infectious Disease Department with suspected Lyme disease (this diagnosis was excluded after testing for the presense IgG and IgM antibodies towards Borrelis antigens, the lab results took 2 weeks to obtain). Subsequently, the patient was referred to Dermatology Department from where she was redirected to the Oncology Department of the nearest general hospital. The patient was referred from the emergency unit to Oncology Department for further diagnosis. The patient and her family had finally run out of patience and they asked a General Practitioner to refer her to the nearest hospital due to enlargement of the skin lesions and increasing weakness. The patient was admitted to the Department of Internal Diseases. Physical examination showed enlarged submandibular, cervical, supraclavicular and left axillary lymph nodes. Additionally presence multiple, immobile and painful lesions in the type of erythema nodosum located on the scalp, back, abdomen. They ranged in diameter approximately 2 centimeters. Staging revealed anaemia, with less hemoglobin. In laboratory tests the Carcinoembryonic antigen (CEA) was 405,9 ng/ml. It was more than 80 times over normal value. The norm for non-smoker was below 4,7 ng/ml. Interestingly X-ray, colonoscopy showed no abnormalities only in abdominal ultrasonography subcutaneously several centimeters from navel mixed echoic, round nodule with increased vascularity. Furthermore thyroid ultrasonography displayed multiple, filled with fluid, cystic nodules in both lobes, however thyroid hormones and thyroid-stimulating hormone were in normal range. Thorax computed tomography (CT) with contrast demonstrated bilateral hilar lymphadenopathy (BHL) lymph nodules enlarged to 33x22 millimeters, the biggest one near trachea. Some of them with features of necrosis. Several pathological lymph nodes presence also in chest wall and armpit. Biopsy of skin lesions was performed, the pathology stated a poorly differentiated (grade 3) metastases from lung adenocarcinoma. This examination completely confirmed recognition of lung cancer. Immunohistochemical staining of patologic cells was positive for cytokeratin 7 (CK7) and thyroid transcription factor 1 (TTF1), specific and sensitive markers of adenocarcinoma.

Patient was referred to oncology clinic for further treatment and underwent 2 cycles of chemotherapy with Paclitaxel and Carboplatin despite intensive care was very poor response of therapy, the next examination no revealed nodular regression. In the next few weeks patient presented with symptoms of respiratory failure, had increasing dyspnoea and problems with food intake. In follow up progressive disease and deterioration in health patient died in the next couple of days.

Discussion

Skin metastasis are present in 1-9% of cancer patients [4]. Lung cancer metastasises to almost every organ. Lung cancer metastasize to the adrenal glands (35% of cases), pancreas

(up to 18% of cases), the skin (up to 12% of cases), brain (up to 18% of cases) and the pleura (33% of cases) [5]. As well as frequent extrathoracic sites include liver, bones and kidney [6]. In lung cancer, skin metastasis is quite rare than metastasis to other organs [7]. Lung cancers, especially adenocarcinoma, they give late symptoms. They usually give rise to signs and symptoms caused by local tumor growth, obstruction of adjacent structures, growth in regional nodes through lymphatic spread and growth in distant metastatic sites after hematogenous dissemination or sometimes give paraneoplastic syndromes [5]. Dermatological manifestations of lung cancer as a part of the paraneoplastic syndrome are seen in less than 1% of cases [6]. Sometimes skin metastases were the first sign of extranodal disease in 7.6% of cancer patients [8]. Clinical manifestation of skin metastases usually associated with painfull, hot edematous and erytematous changes of the skin with no fever and negative microbio logical cultures.

The case showed how important it is to remember that skin metastasises could be the first symptoms of the cancer. The physicans (general practice and dermatologists) should be aware of the phenomenon of the atypical skin lesions. Every case should be evaluated with biopsy for further possible research and supportive treatments.

In this particular case of our patient, 4 months passed from the first signs and symptoms to the final and accurate diagnosis. During that time period, the patient was seen by many specialists who were trying to come up with their own diagnosis. Unfortunately, this contributed to the late start of the treatment of the patient. According to the current study regarding patients with lung cancer with metha in the skin present, out of 8 patients only one survived longer then 6 months [9]. The average lifespan from the moment of diagnosis of the patient was 3 months [9]. Therefore it is of big importance that during the annual check up with the general practitioner, the doctor pays attention to the skin and recognizes any cancer manifestation of it [9]. By an early recognition and quick specialist referral, the road to a successful diagnosis and correct treatment is the key to the right treatment.

Conclusions

Skin tumors as the first symptom of a neoplastic disease are present in clinical practice. It should be emphasized that *de novo* diagnosed skin tumors may indicate the presence of metastases, requiring systemic and palliative treatment, and not dermatological treatment. The awareness that tumor metastasis may be the first cancer symptom is important in diagnosis. The implementation of appropriate treatment in a short time can significantly improve the prognosis.

Abbreviations

- NSCLC - non-small cell lung cancer

Competing Interests: The authors declare that they have no conflict of interest.

References

1. Youlten DR, Cramb SM, Baade PD, The International Epidemiology of Lung Cancer: geographical distribution and secular trends, *J Thorac Oncol.* 2008; 3: 819-831.
2. Wollina U, Graefe T, Konrad H, Schönlebe J, Koch A, Hansel G, Haroske G, Köstler E. Cutaneous metastases of internal cancer. *Acta Dermatoven APA* 2004; 13: 79-84.
3. Mego M, Sycova-Mila Z, Martanovic P, Liskova S, Obertova J, Mardiak J. Inflammatory skin metastasis as a first sign of progression of lung cancer. A case report. *Klin Onkol* 2010; 23 (6): 449–451
4. Krathen RA, Orengo IF, Rosen T. Cutaneous metastasis: a meta-analysis of data. *South Med J* 2003; 96(2): 164–167.
5. Haghighatkah HR, Sanei Taheri M, Kharrazi SMH, Ghazanfari Amlashi D, Haddadi M, Pourabdollah M. An Unusual Case of Pulmonary Adenocarcinoma with Multiple and Extraordinary Metastases. *Iran J Radiol.* 2012;9(2):93-98.
6. Kamble R, Kumar L, Kochupillai V, Sharma A, Sandhoo MS, Mohanti BK. Cutaneous metastases of lung cancer, *Postgrad Med J* 1995; 71: 741-743
7. Park J-J, Choi YD, Lee J-B, Kim S-J, Lee S-C, Won YH, Yun SJ. Telangiectatic cutaneous metastasis from lung adenocarcinoma. *J Am Acad Dermatol* 2011; 64 (4): 798-799
8. Joshi A, Sah SP. Cutaneous metastatic adenocarcinoma. *Indian J Dermatol Venereol Leprol* 2001; 67 (4): 207-208.
9. Coslett L.M, Katlic M.R, Lung cancer with metastasis. *Chest* 1990; 97: 757-759.8):819-831