EJMHR ISSN 2786-8524
EUROPEAN JOURNAL OF MEDICAL AND HEALTH RESEARCH
OPEN ACCESS
PEER REVIEWED

Cutaneous Metastases as an Initial Presentation of Neo Infiltrative Process in the Lungs: Case Report and Literature Review

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Abstract

Cutaneous metastases are a rare clinical entity with a representation of about 0.8% as a secondary MS deposit originating from another tissue/organ. Most often, skin metastases are associated with a high degree of malignancy and a poor prognosis. Our case report is a 72-year-old male patient who was referred to CT because of a large soft-tissue cutaneous lesion of the upper right hemithorax, somewhere below the right shoulder joint. At the radio diagnostics department, an MDCT native series and series after i.v. contrast was performed, which allowed us to detect a neo infiltrative process of the lung and secondary deposits in the lung itself, liver, left adrenal gland and along the seventh rib on the left. It was recommended to perform bronchoscopy and biopsy of the lung tissue, for the purpose of further differentiation and further treatment. A pathohistological analysis of the skin change itself was carried out, with an answer for a finding that corresponds to a deposit of a malignant neoplasm with spinous differentiation.

More Information

How to cite this article: Serafimovska M, Nevcev I Gligorievski A. Cutaneous Metastases as an Initial Presentation of Neo Infiltrative Process in the Lungs: Case Report and Literature Review. Eur J Med Health Res, 2024;2(1):58-62.

DOI: 10.59324/ejmhr.2024.2(1).09

Keywords:

Cutaneous metastases,
MS deposit,
skin metastases
neo infiltrative process of the lung
CT.

Introduction

Lung cancer is the leading cause of death in both sexes. The statistical data are taken from the "Lung Association of America", according to which in 1987, lung cancer surpassed breast cancer in women. The histopathological division is into two major groups of non-microcellular NSCLC (Non-Small Cell Lung Cancer) and microcellular SCLC (Small Cell Lung Cancer).

The five-year survival of patients after diagnosis is about 15%. The prognosis in most cases is poor, especially because the diagnosis is usually made at a more advanced stage and spread of the disease. Lung cancer usually metastasizes to the brain, lymph nodes, adrenal glands, and bones but very rarely to the skin. [1,2]

Our case report is a rare clinical entity, skin metastasis as the first clinical manifestation of a neo-infiltrative lung process.

Cutaneous metastatic deposits are rare, with an incidence of less than 10% among cancer patients.

The term metastatic deposit refers to the invasion and proliferation of cancer cells in the skin originating from another tissue/organ. Dissemination in the skin is possible through one of the following routes: through the bloodstream, lymph, and the lymphatic system, per continuitatem and dispersion and dissemination during surgical intervention. They can manifest in a variety of ways, the diagnosis can be overlooked and they can imitate other dermatological diseases. [3]

Cutaneous metastases may appear much later in the course of the disease, years after the diagnosis of the primary disease, but conversely,they can be the first

clinical manifestation that should raise suspicion for further investigations. Such is our case.

Case Report

A 72-year-old male patient came to our clinic, who was sent to MDCT scan due to the presence of a larger soft-tissue skin change on the right hemithorax in the upper parts, somewhere below the right shoulder joint (Figure 1A and 1B).

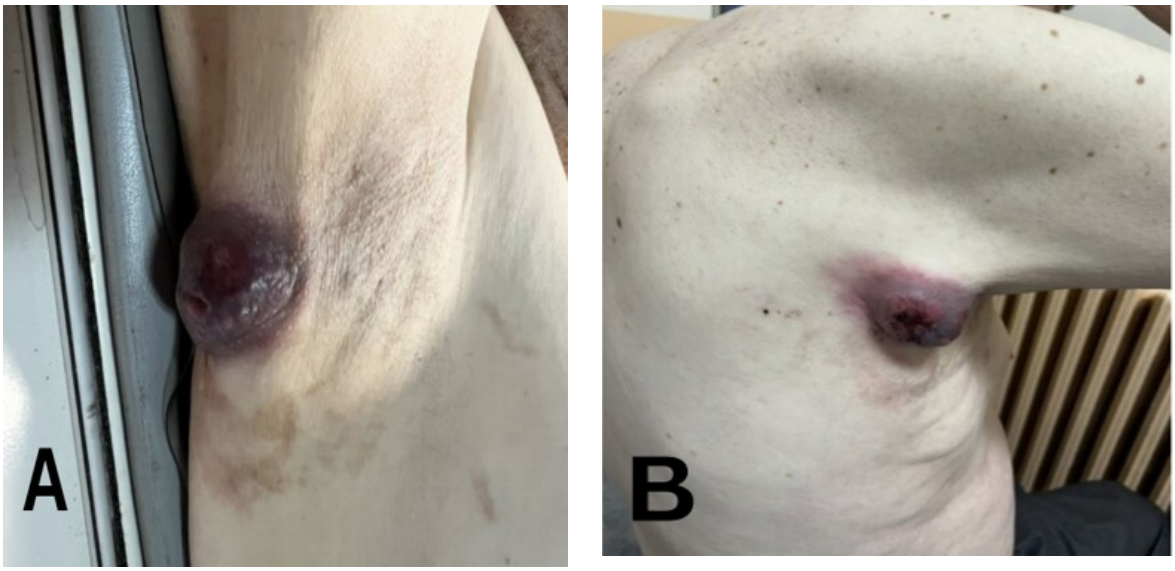

Figure 1A and 1B: A 72-Year Old Male Patient with the Presence of a Large Cutaneous Vascular Lesion with Dark red Discoloration, the Size of a Plum, which is Firmly Fixed to the Skin, Painless on Palpation

We performed non-enhanced and iv contrast-enhanced MDCT scans of the thorax and proximal parts of the abdomen. In the right lung, originating from the hilus and towards the upper parts and posteriorly paravertebrally, there is a large irregular and vaguely limited soft tissue mass that obstructs the bronchus for the upper lobe, including the blood vessels change which diff. Dg. would correspond to a primary neo-infiltrative process of the right lung of central type.

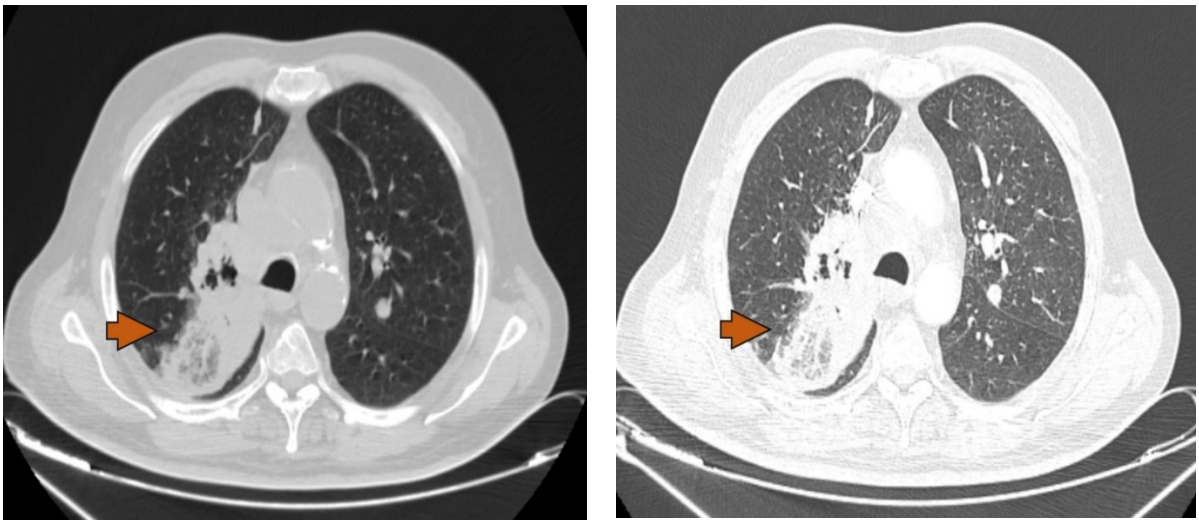

Figure 2 **Figure 3**

Figure 2 and Figure 3: Axial Refformated CT Images of the Lungs and Thorax. Axial Refformated Non Enchanced CT Image was Obtained (Figure 2) with Demarcation of a Large Irregular and Vaguely Limited Soft Tissue Mass (Orange Arrow). The Same Change was Obtained and on the Contrast Enhanced Axial Refformated CT Image (Figure 3).

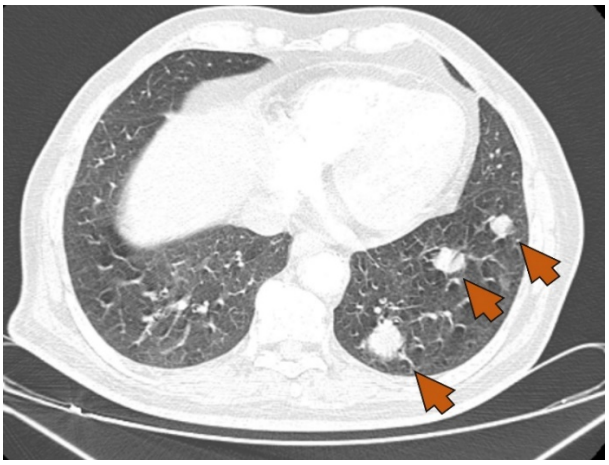

Figure 4: Axial Refformated CT Images of the Lungs and Thorax. Axial Refformated Contrast Enchanced CT Image was Obtained. Secondary Deposits are also Present in Both Lungs, with One in the Left Lung also Showing Necrosis (Orange Arrows)

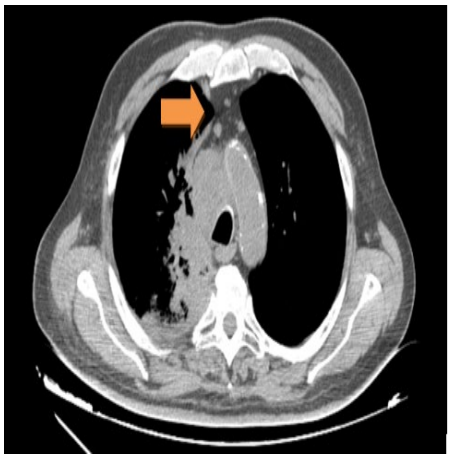

Figure 5: Axial Refformated Non-Enchanced CT Image was Obtained. In the Mediastinum, there are Conglomerates of Pathological Lymph Nodes (Orange Arrow) which are Necrotic Altered. Small Lymph Node and in the Projection of the Left Hillus

Figure 6: Coronal Refformated Non-Enchanced CT Image of Thorax. Due to this the Change Under the Right Shoulder Joint would be Suitable for Secondary Deposits

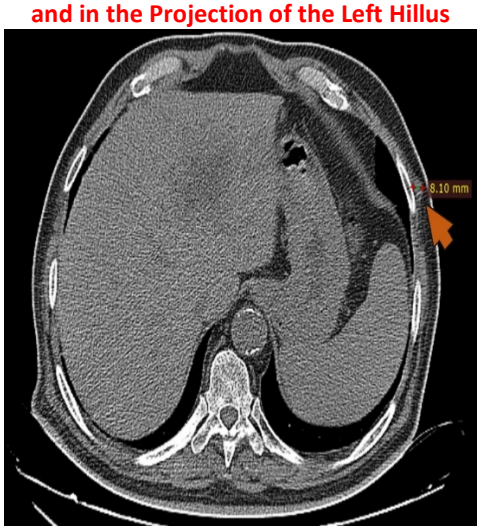

Figure 7: Axial Reformated Non-Enchanced CT Image of Thorax. A Small MS Deposit is Detected Next to the Seventh Rib on the Left Subcutaneously with a Diameter of 8mm

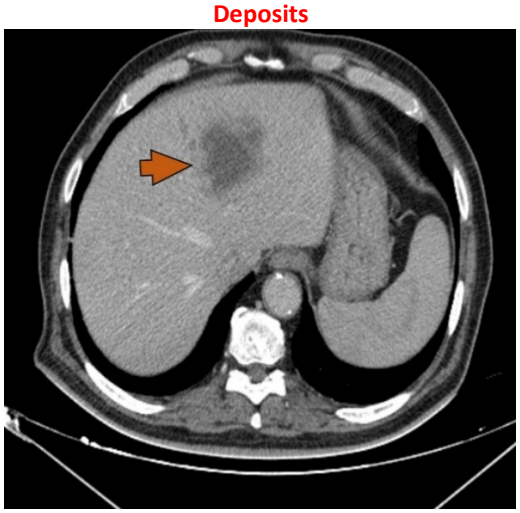

Figure 8 and 9: Axial Reforrmated Contrast Enhanced CT Image of Proximal Parts of Abdomen. (Figure 8-- Orange Arrow) MS Deposits are also Detected in the Covered Part of the Liver. Abdominal Ultrasound was Performed (Figure 9 - Orange Arrow) for Comparison, to Obtain a Comparative View of the Metastatic Liver Deposit

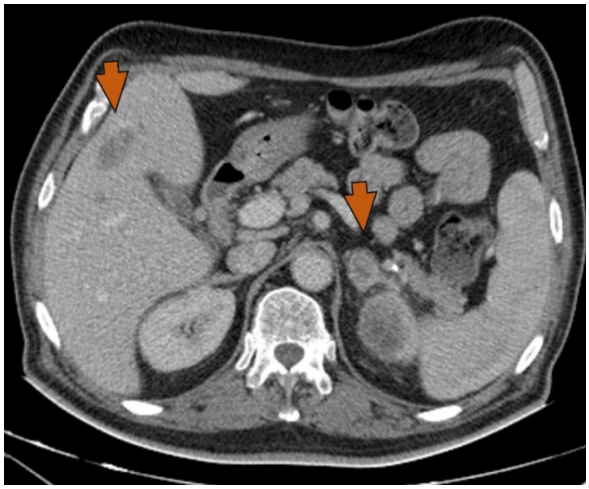

Figure 10: Axial Refformated CT Image Shows MS Deposits that are also Detected as Well as in the Left Adrenal Gland (Orange Arrow)

In addition, bronchoscopy and biopsy of the change are recommended for further differentiation of the change and treatment.A pathohistological analysis of the skin change was carried out, with an answer for a finding corresponding to a deposit of a malignant neoplasm with spinous differentiation.

Discussion

Cutaneous metastases are a rare clinical entity with a representation of about 0.8% as a secondary MS deposit originating from another tissue/organ. Most often, skin metastases are associated with a high degree of malignancy and poor prognosis. We would like to mention the importance of mimicking skin metastasis with other skin changes and pathology, which may lead to overlooking the underlying disease. [4,5]

The most common localization in clinical practice is on the chest, abdomen, head and neck. The most common manifestation is the nodular form, they are painless and firmly fixed to the skin, usually with a pinkish-red discoloration.

Our case can be described as a larger cutaneous vascular lesion with dark red discoloration, the size of a plum, which is firmly fixed to the skin, painless on palpation.

The remaining forms indicated in the literature are ulcerative, papillary, plaque-like, vascular, zoster-like, and erysipelas-like. [6]

Our patient did not have any respiratory complaints, which further indicates the importance of not overlooking such a skin change. In addition, bronchoscopy and biopsy are recommended to clarify the diagnosis and further treatment. It is necessary to perform immunohistochemical studies, the most important of which are the markers CK7, CK20, TTF-1 and CDX-2. The biochemical markers CEA, CYFRA 21-1, SCCA, ProGRP, NSE are not only sensitive for lung cancer, but their elevated values can also be an indicator for groups of non-microcellular NSCLC. (Non-Small Cell Lung Cancer) and microcellular SCLC (Small Cell Lung Cancer)

From additional investigations, PET-CT can be made, which detects the increased glycemic metabolism of the cancerous cell compared to the healthy cell. The high specificity and sensitivity of Pet-CT can be used in the staging and follow-up of patients with lung cancer, but also in the detection of secondary deposits. Further treatment depends on the clinical, anatomical and pathological characteristics of the neo infiltrative process. [7]

Conclusion

Although metastatic skin deposits are rare and less frequent in practice, they should be kept in mind during clinical practice in the daily work of the doctor. It can be noted and emphasized the importance of a multidisciplinary approach and cooperation of clinical branches with the radio diagnostics department, all to choose the best diagnostic modality for displaying pathological changes.

Conflict of Interests

The authors declare that there is no conflict of interest.

Funding

In this case report, there are no sponsors.

Consent for publication

Written informed consent is obtained from the patient for publication of this case report and accompanying images.

Ethical approval

Ethical approval was not necessary for this case report.

Confirmation

The author confirms that the manuscript has not been published or submitted for publication or is under consideration for publication with any other journal.

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