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Mini Case Study

Pulmonary Hamartochondromas in Cancer Patients: A Diagnostic Challenge

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Abstract

Pulmonary hamartochondromas are rare benign lesions that can be mistaken for pulmonary metastases in cancer patients. Such confusion can result in diagnostic errors and inappropriate treatment. In this article, we present a clinical case of pulmonary hamartochondromas in a breast cancer patient and discuss appropriate diagnostic and treatment methods for such lesions.

Keywords: *Pulmonary Hamartochondromas; Pulmonary Metastases; Breast Cancer; CT Scan*

Case Presentation

We present the case of a 55-year-old female patient with stage IIIB infiltrating breast cancer. The patient had undergone mastectomy and adjuvant treatment and was under surveillance with thoraco-abdomino-pelvic CT scans. During her latest surveillance CT scan, right pulmonary nodules were observed, raising concerns about possible pulmonary metastases. However, CT imaging in parenchymal window showed a dense pulmonary nodule under pleural and with clear contours, of the right Fowler (Figure 1), and it had an intralesional portion of fat (-45UH) measured in mediastinal window (Figure 2). these characteristics were eventually compatible with pulmonary hamartochondromas.

Figure 1: *(A): CT in axial section, (B): sagittal section with MIP reconstruction, in parenchymal window, showing a dense pulmonary nodule under pleural and with clear contours, of the right Fowler.*

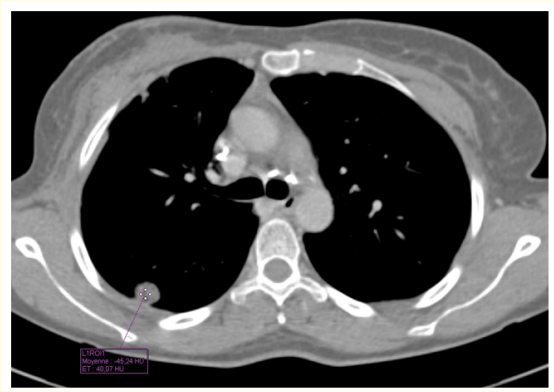

Figure 2: *CT in axial section in mediastinal window showing an intralesional portion of fat (- 45UH).*

Discussion

Pulmonary hamartochondromas are rare benign lesions that develop from the cartilaginous and bony tissues of the lung [1]. They can be mistaken for pulmonary metastases because of their similar appearance on radiological images. However, distinguishing between these two types of pulmonary lesions is crucial because pulmonary hamartochondromas generally do not require treatment, while pulmonary metastases require therapeutic intervention.

To avoid diagnostic errors, radiologists must carefully examine the characteristics of pulmonary lesions. Pulmonary hamartochondromas often have sharper contours and lower density than pulmonary metastases. They may also exhibit calcifications that are not typical of pulmonary metastases [2].

Moreover, CT scans are a valuable tool in distinguishing between pulmonary hamartochondromas and pulmonary metastases. Measuring the density of the nodule in the mediastinal window, can help to diagnose the presence of a fatty portion within the nodule (less than -30 HU) [3]. The CT scan can thus differentiate between these two types of pulmonary lesions.

Conclusion

In this clinical case, surveillance CT scans revealed pulmonary nodules compatible with pulmonary hamartochondromas, which avoided unnecessary therapeutic intervention for the patient. Radiologists must be aware of the possibility of mistaking pulmonary hamartochondromas for pulmonary metastases and use diagnostic tools such as CT scans to avoid diagnostic errors and treat patients appropriately.

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Conflict of Interest

All authors declare no conflict of interest relevant to this article.

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