

Detecting Calcified Liver Metastasis in Breast Cancer

Yassine Zerhari*, Mohammed Ennmer, Siham Oukassem, Hatim Essaber, Asaad El Bakkari, Soukaina Alloui, Hounayda Jerguigue, Youssef Omor and Rachida Latib

Radiology Department of National Institute of Oncology of Rabat, Morocco

*Corresponding Author: Yassine Zerhari, Radiology Department of National Institute of Oncology of Rabat, Morocco.

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Abstract

Calcified liver metastasis is a rare finding in breast cancer patients. This case report presents a 54-year-old female with a history of breast cancer who presented with abdominal pain. Imaging studies revealed multiple hypodense calcified lesions in the liver, indicating calcified liver metastasis. Differential diagnosis includes benign calcifications, cysts, and other types of liver metastases. Treatment options for calcified liver metastasis of breast cancer include surgery, radiation therapy, and systemic therapy. Imaging plays a crucial role in monitoring treatment response and disease progression.

Keywords: Calcified Liver Metastasis; Breast Cancer; CT Imaging; Differential Diagnosis

Introduction and Case Presentation

A 54-year-old female with a history of breast cancer presented to the hospital with abdominal pain. A computed tomography (CT) scan of the abdomen was ordered to investigate the cause of the pain. The CT imaging after administration of enhancement agent revealed multiple hypodense calcified lesions in the liver (Figure 1A-1C), indicating calcified liver metastasis in accordance with the patient's clinical history. The patient's past medical history was significant for right breast invasive ductal carcinoma diagnosed five years ago, treated with lumpectomy, axillary lymph node dissection, adjuvant chemotherapy, and radiation therapy. She had no history of liver disease or other malignancies.

Discussion

Calcified liver metastasis is a rare but significant finding in breast cancer patients. It is a manifestation of advanced disease and indicates a poor prognosis. Calcified liver metastasis appears as a well-defined mass with punctate or linear calcifications on imaging studies. It is essential to distinguish calcified liver metastasis from benign calcifications, cysts, and other types of liver metastases.

The differential diagnosis of calcified liver metastasis includes benign calcifications, cysts, and other types of liver metastases such as cholangiocarcinoma, hepatocellular carcinoma, and colorectal cancer. It is important to distinguish calcified liver metastasis from benign calcifications, which are usually smaller and scattered throughout the liver. Cysts are usually well-defined and do not have punctate or linear calcifications. Other types of liver metastases may present with different imaging features, such as rim enhancement, irregular borders, or necrosis [1,2].



Figure 1A-1C: A-C: CT imaging in axial section after administration of enhancement agent in portal time, showed multiple hypodense calcified lesions in the liver.

Treatment options for calcified liver metastasis of breast cancer include surgery, radiation therapy, and systemic therapy. The choice of treatment depends on the size, number, and location of the metastases, as well as the patient's overall health and treatment goals. Surgical resection is the preferred treatment for localized disease, but it is not always possible due to the size, location, or number of metastases. Radiation therapy can be used as a palliative treatment for patients with unresectable disease or as an adjuvant treatment after surgery. Systemic therapy, including chemotherapy, hormonal therapy, and targeted therapy, is used for metastatic disease or as adjuvant therapy after surgery. The goal of systemic therapy is to control the disease and prolong survival [2].

Conclusion

Calcified liver metastasis of breast cancer is a rare but significant finding that can be detected on imaging studies. Differential diagnosis is essential as treatment options for calcified liver metastasis of breast cancer include surgery, radiation therapy, and systemic therapy. Imaging studies play a crucial role in monitoring treatment response and disease progression. Early detection and accurate diagnosis of calcified liver metastasis can aid in the diagnosis and management of breast cancer and provide important prognostic information.

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Conflict of Interest

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

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