

Abstract

Title: Metaplastic Breast Carcinoma

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Introduction: Breast cancer is the most commonly diagnosed cancer among females in the United States, with invasive ductal carcinoma being the most common type [9]. Metaplastic breast carcinomas are a particularly rare type of breast cancer that carry an especially poor prognosis when compared to other breast cancers. They often have less lymph node metastasis and rather spread hematogenously to the liver, lungs, bone, and central nervous system (CNS) [1,2]. At the time of diagnosis, this cancer is usually already in an advanced stage. There is a paucity of literature describing the radiographic findings of this rare entity.

Case Presentation: We present the case of a 33 year old female who presented to the University of California-San Diego breast center with a palpable breast mass and was found to have five out of eleven positive lymph nodes on axillary node dissection. On immunohistochemistry, she was found to be human epidermal growth factor 2 (HER-2) negative, estrogen receptor (ER) negative, progesterone receptor (PR) negative. Of note, she was also found to be breast cancer gene 1 (BRCA-1) positive.

Imaging Findings: On mammography metaplastic breast carcinomas often present as large, round or irregular masses that tend to be dense and are partially circumscribed. On ultrasound, they have heterogeneous internal echogenicity, and may have posterior shadowing. On magnetic resonance imaging (MRI), they are large, round or irregular mass with rapid enhancement often with central necrosis.

Discussion: This case highlights the characteristic findings associated with metaplastic breast carcinoma on mammography, MRI and ultrasound which can help differentiate it from other more common breast cancers. There is a paucity of data on patients with metaplastic breast cancer and it is an important diagnostic consideration given its high mortality. Currently, there is no standardized treatment regimen which necessitates further investigation into other specific chemotherapeutic agents and treatments that may be more effective.