Multicentric Castleman Disease: An Unusual Breast Lump

An 80-year-old male presented with a painless lump in the left breast, presenting over 2 months. On examination, he had a mobile mass in the superolateral quadrant approximately 10 mm in diameter with associated axillary lymphadenopathy. He had no other systemic symptoms or abnormal clinical findings, specifically neither peripheral adenopathy nor hepatosplenomegaly. His past medical history included hypertension, hyperlipidemia, hepatitis B, and a previous right cervical lymph node dissection for tonsillar cancer. Ultrasound scan showed mild bilateral gynaecomastia with an hypoechoic mass (8 × 5 mm) in the left superolateral breast (Fig 1A) and confirmed the ipsilateral lymphadenopathy. The mass had an unclear lymph-like morphology, with an irregular vascular pattern by color Doppler. Mammography revealed a nodular area (8 × 6 mm) with irregular margins without microcalcifications. Ultrasound-guided fine-needle aspiration cytology was not helpful. Laboratory investigations were normal apart from an elevated gammaglutamyltranspeptidase of 108 U/L (normal range, 8 to 78 U/L) and nonconjugated bilirubin of 1.0 mg/dL (normal range, 0.1 to 0.9 mg/dL). There was neither lymphocytosis (51.9% lymphocytes) nor serological positivity for active hepatitis C virus, HIV, and human herpes virus-8 (HHV8). Tumor markers (ie, carcinoembryonic antigen, alpha-fetoprotein, CA15-3, CA19-9, CA125) were all normal. The patient underwent a superolateral quadrantectomy. Frozen section evaluation showed an intramammary lymph node, with lymphoid proliferation associated with germinal center hyalinisation. Axillary dissection was performed and all lymph nodes were formalin-fixed (10%; pH, 7.0) and routinely processed: 5 μm thick slices were cut and hematoxylin and eosin (H&E) stained. Histopathological examination of the single breast and sixteen harvested axillary lymph nodes demonstrated germinal center hyalinisation with marked vascular proliferation. Many dysplastic dendritic cells were readily identifiable in hyaline centers. There was a tight concentric layering of lymphocytes at the follicular periphery resulting in an onion-skin appearance (Fig 1B, H&E stain, ×180) and the interfollicular stroma was replete with multiple hyperplastic vessels (Fig 1C, H&E stain, ×400). No other mammary cytarchitectural alterations were found. According to these histological findings, B-cell lymphoma was excluded, and the diagnosis of hyaline-vascular type was made. The patient’s postoperative course was uneventful, and he was discharged after 4 days. In consideration of both his advanced age and the absence of malignancy, no complementary treatment was administered. At 18 months follow-up, the patient was well and free of local or distant lymphadenopathy.

Castleman disease (CD), or angiofollicular lymphoid hyperplasia, is a rare lymphoproliferative disorder firstly described in 1956. It is an unusual condition in which the primary etiology and pathogenesis, which may be either reactive or neoplastic, remain incompletely elucidated. Clinically, CD may be unicentric if confined to a single lymph node or multicentric when there are numerous involved nodes associated with concomitant systemic symptoms. CD is equally distributed between the sexes, and unicentric disease, corresponding to the disorder originally described, accounts for approximately 90% of CD cases. While unicentric CD typically follows a benign course and is simply treated by surgical excision, multicentric disease is generally associated with a poorer clinical outcome, and adjuvant therapies are generally required. This type tends to be associated with AIDS- and human herpesvirus 8–related infections, and the most common symptoms include fever, weight loss, hemolytic anemia, night sweats, and the POEMS (polyneuropathy, organomegaly, endocrinopathy, monoclonal proteinaemia and skin changes) syndrome. Keller et al classified three histological subtypes of CD: hyaline-vascular, plasma-cell, and mixed. Histologically, the hyaline-vascular type, usually found in unicentric CD, is characterized by small hyaline-vascular follicles and interfollicular stroma with capillary proliferation. Plasma-cell type, typical of multicentric CD, present large follicles with intervening sheets of plasma cells. Additionally, a mixed variety has been described. Lymph node
involvement may be ubiquitous, more frequent in the abdomen, superficially and the mediastinum. Complementary treatments, polychemotherapy (eg, the protocol of cyclophosphamide, doxorubicine, vincristin, and prednisone) and radiation therapy, may be administered as adjuvant therapy with antiviral drugs (rituximab and ganciclovir, respectively, for HIV and HHV8) as required. In this case we report the highly unusual presentation of CD of an intramammary lymph node with associated axillary involvement. This multicentric CD was even more atypical because of its hyaline-vascular histological subtype, benign clinical presentation with no systemic symptoms, and negative virology.

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**AUTHORS’ DISCLOSURES OF POTENTIAL CONFLICTS OF INTEREST**  
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**REFERENCES**


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