# Castleman disease presenting as a longstanding axillary and chest wall mass: A case report

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Title: Castleman disease presenting as a longstanding axillary and chest wall mass: A case report

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Abstract: Castleman disease is a rare lymphoproliferative disorder that can present with various clinical features. We present a case of a 30-year-old female with a progressively enlarging mass in the left axilla and chest wall for ten years. After diagnostic workup, including ultrasonography, MRI, and core needle biopsy, the patient underwent surgical excision of the mass. The diagnosis of Castleman disease was confirmed through pathological and immunohistochemical examinations. The patient recovered well postoperatively with a good prognosis.

Keyword: Castleman disease, axillary, chest wall

Introduction: Castleman disease, first described in 1956 by Dr. Benjamin Castleman, is a rare lymphoproliferative disorder. This disease can affect any lymphoid tissue in the body and present with localized or systemic symptoms. The diagnosis is based on pathological examination, and the disease has a varied clinical course and response to treatment[1].

Case report: The patient was a 30-year-old female with a ten-year history of a progressively enlarging mass in the left axilla and chest wall (Figure 1). The mass was initially small and asymptomatic but had gradually increased in size over the years. The patient had no significant medical history or family history of lymphoproliferative disorders.

Diagnostic workup, including ultrasonography(Figure 2) and MRI[Figure 3A,3B], revealed a well-circumscribed, heterogeneously enhancing mass measuring 10 x 6 x 3 cm . A core needle biopsy was performed, and pathological and immunohistochemical examinations revealed clonal lymphoid proliferation within fibrotic stroma (Figure 4A,4B). The histopathological features were consistent with the hyaline vascular variant of Castleman disease [2].

After appropriate preoperative preparation, the patient underwent surgical excision of the mass. Intraoperative findings revealed a well-encapsulated mass that was adherent to the chest wall muscles. The mass was completely excised with negative margins. Postoperative recovery was uneventful, and the patient was discharged on postoperative day 5.

Histopathological examination of the excised mass confirmed the diagnosis of Castleman disease. The immunohistochemical profile was consistent with the hyaline vascular variant, which is characterized by clonal proliferation of B-cells with follicular dendritic cell expansion.

Discussion: Castleman disease is a rare lymphoproliferative disorder that can present with varied clinical features[3]. The disease has two major histological subtypes: hyaline vascular and plasma cell. The more common hyaline vascular subtype presents with localized lymphadenopathy, while the less common plasma cell subtype is associated with systemic symptoms and multiorgan involvement[4].

Diagnosis of Castleman disease requires a combination of clinical, radiological, and pathological findings. Treatment options include surgery, radiation therapy, and chemotherapy, depending on the subtype, stage, and extent of the disease[5]. The localized hyaline vascular subtype generally has a good prognosis, while the systemic plasma cell subtype has a more variable clinical course[6].

Conclusion: Castleman disease should be considered as a differential diagnosis for longstanding masses in lymphoid tissue. Appropriate diagnostic workup, including imaging and pathological examinations, is crucial for accurate diagnosis and optimal management. Surgical excision can offer a curative treatment with a good prognosis for the localized hyaline vascular subtype [7].

Acknowledgments

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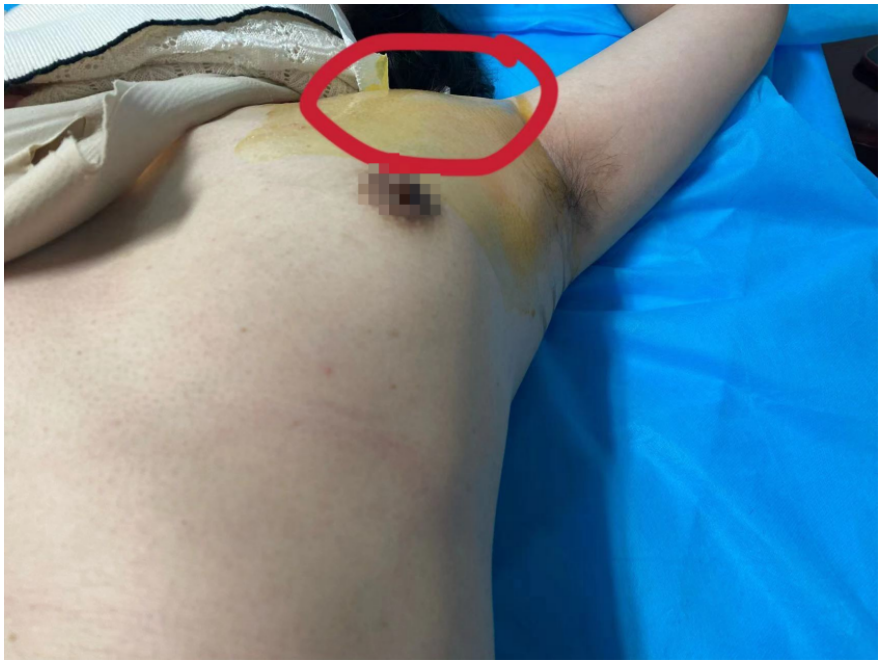

Figure 1: The location of the mass is significantly deeper than the skin and visible to the naked eye.

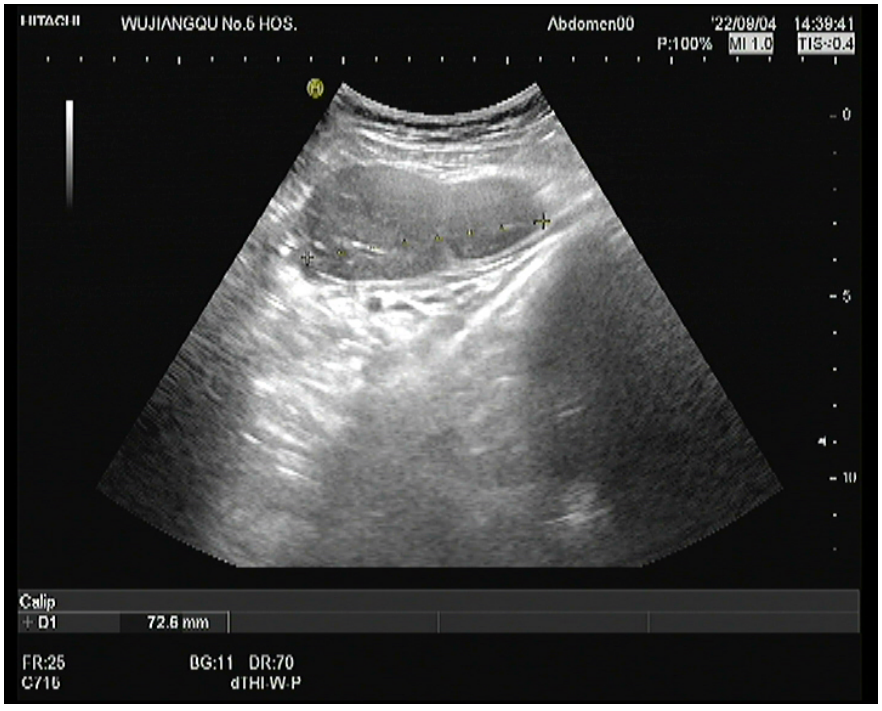


Figure 2: The ultrasound examination revealed an intact tumor capsule, presenting as an irregular hypoechoic mass.

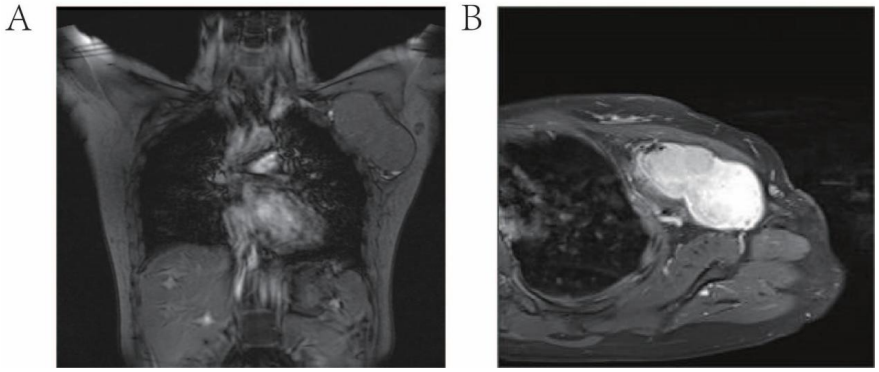


Figure 3: The magnetic resonance imaging (MRI) exhibited well-defined lesion borders with a larger cross-sectional size of approximately 99mm * 53mm. The T1-weighted images demonstrated isointense signal, while the T2-weighted images showed slightly hyperintense signal. The presence of flow voids consistent with blood vessels was observed within the lesion. Following contrast administration, there was significant and homogeneous enhancement.

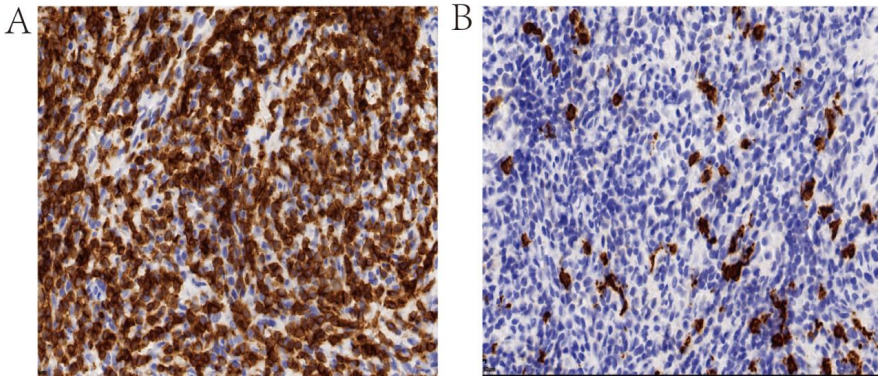


Figure 4: Upon histopathological examination and immunohistochemistry, the microscopic findings revealed a prominent infiltration of lymphocytes accompanied by spindle-shaped fibroblast proliferation, fibrosis, and neovascularization. The presence of germinal centers and occasional vascular implantation were also observed. These findings are consistent with Castleman's disease.