CD10 and BCL-2 Positive Primary Cutaneous Follicle Center Lymphoma of the Thigh in a 62-year-old Female Patient

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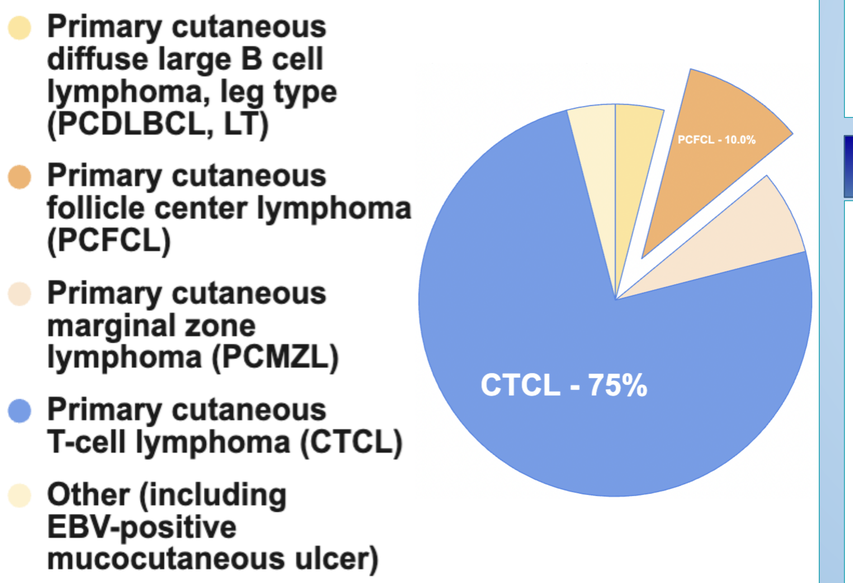
Introduction

Primary cutaneous B cell lymphoma, a rare subgroup accounting for 25% of all cutaneous lymphomas, originates in the skin without evidence of extracutaneous disease. Three main subtypes include: large B cell-leg type, **follicle center (PCFCL)**, and marginal zone.

Figure 1: Classification of primary cutaneous lymphomas



PCFCL, the most common subtype, often presents with **solitary or multiple firm erythematous tumors, papules, or plaques that favor the head, neck, and trunk**; only about 5% of patients have leg lesions.

Diagnosis is made with a skin biopsy and evaluation for morphology, growth pattern, and immunohistochemical studies.

Initial Presentation

We present a case of a **62-year-old female** patient with a left subcutaneous thigh mass, which had progressively increased in size over 6 months. The lesion initially presented as **flush-colored, firm and non-tender, and progressed to dark purple at the center, irritated and warm to touch.**

Review of systems: Non-contributory. Patient denied any fever, chills, weight loss, or night sweats.

Physical Exam: No lymphadenopathy.

Clinical Work-Up

Patient underwent ultrasound of left lower extremity, which showed **irregularly shaped hypoechoic subcutaneous mass with hypervascularity** measuring **3.8 cm x 2.2 cm x 3.6 cm**, concerning for soft tissue malignancy.

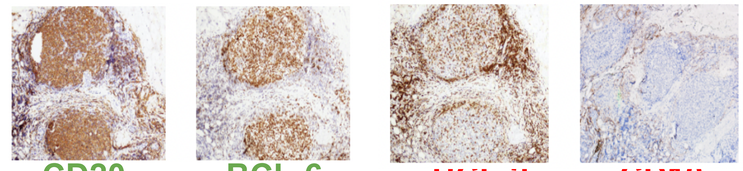
MRI with contrast evaluation showed nonspecific **irregular enhancing mass** localized within the superficial fat. Soft tissue sampling was recommended and punch biopsy sample was sent to pathology.

Immunohistochemistry reported CD-10 positive B-cell non-Hodgkin lymphoma of follicle center origin with **strong expression of CD10 and BCL-2.**

Excisional biopsy of malignant subcutaneous mass was completed without complications. **No PET evidence of other hypermetabolic lesion or node** was seen to suggest additional lymphoma or systemic involvement.

Histopathology

PCFCL stains positively for B-cell markers **CD19, CD20**, and the follicle center markers **CD10** (positive in <25% of cases) and **BCL-6**. Most cases do not express **BCL-2**.



Coexpression of BCL-2 and CD10 should prompt exclusion of primary nodal follicular lymphoma with secondary skin involvement.

Discussion

PCFCL, although rare, has an **excellent prognosis**; however, proper work-up is important to differentiate from more aggressive forms. This is a case of a PCFCL of **unusual location, rare immunophenotypic co-expression of CD10 and BCL-2, without systemic involvement.** However, the BCL-2 positivity and its associated poorer prognosis warrants close follow-up for evidence of recurrence or systemic spread.

References

Please see the adjacent QR code to view the references.