



Pleomorphic Dermal Sarcoma: A Rare Diagnosis

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Case Report

A 74-year-old man presented to the family medicine clinic with a 3-month history of lesion on his forehead. This has been getting larger but not bleeding or crusting. The patient has had no history of skin lesions before. The patient enjoys being outdoors, gardening, and working around his home. On physical examination there was a 1.5 x 1.0 cm nodular lesion present on the forehead above the brow and dark and red in color (Figure 1 A, B). There was no cervical lymphadenopathy. Clinical suspicion was squamous cell carcinoma or basal cell carcinoma, with this patient's history. A 1.7 x 1.0 cm was submitted tagged on top. Further results of initial biopsy revealed dermal sarcoma. Histological analysis of

the scalp lesion revealed spindle cell neoplasm comprised of hyperchromatic and vesicular nuclei with prominent nucleoli, and brisk mitotic activity. The lesion infiltrated into the subcutaneous tissue and shows perineural invasion. The neoplastic cells positive for CD10 and negative for AE1/AE3, P40, S100, SOX10, ERG, CD31, CD34, SMA, and Desmin (Figure 2). The lesion was confirmed to be pleomorphic dermal sarcoma (PDS). The patient was followed within clinic and the results were discussed. The patient was counseled on the importance of wearing sunscreen and hats when outside working. Another surgical biopsy with larger margins were taken and sent for pathology. Patient is clear of dermal sarcoma and is following up with oncology.



Figure 1(A,B): Close up of skin lesion on scalp.



Figure 2: Sutured lesion post-excisional biopsy.

PDS is an uncommon and few documented cases are seen in literature and practice. It is related to atypical fibroxanthomas (AFX), having similar clinical, histological, and immunophenotypical features. On general presentation, both AFX and PDS affect elderly individuals on sun-damaged skin, with a strong predilection for males and lesion of the head and neck. They generally have rapid growth and ulcerate or bleed. Histology of PDS display features of infiltrative growth, invasion of the subcutaneous layer, and tumor necrosis. They also have lymphovascular invasion, suggesting that these may be more aggressive than other lesions. Although a rare skin cancer and their metastatic potential estimated at less than 5%. PDS is rare, and it is important not to miss the diagnosis due to their potential metastatic risk.

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