

The role of immunohistochemical markers in diagnosing undifferentiated pleomorphic sarcoma: A case study from Syria



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Undifferentiated pleomorphic sarcomas (UPS) are high-grade malignant mesenchymal tumors with pleomorphic cells showing no line of differentiation. Although UPS represent the largest category of adult sarcomas, however, the diagnosis is still a dilemma due to the need of ancillary techniques, including immunohistochemistry (IHC). The aim of this study was to highlight the importance of using immunohistochemical markers in diagnosing one of the most controversial soft tissue tumors. The study presents a case of 65-year-old female who was admitted to Tishreen University Hospital, Syria due to a painful palpable mass in the right axilla. Ultrasonography revealed a large well-defined hypoechoic mass. The patient underwent surgery with complete resection of the lesion in addition to right axillary lymph nodes dissection. Gross examination of the specimen revealed a fleshy grey mass measuring 10 cm in diameter with multiple zones of necrosis. Microscopically, lesions included anaplastic spindled to polygonal cells with hyperchromatic irregular nuclei (Figure 1). Immunohistochemical staining showed high positivity for vimentin (Figure 2), which is a non-specific marker for soft tissue tumors, whereas IHC for CK, Desmin, S100, LCA, CD34 and EMA were negative (Figures 3, 4, 5 and 6). The results alongside with the histological features led to the diagnosis of undifferentiated pleomorphic sarcoma demonstrating no line of differentiation. This diagnosis revealed the importance of using available biomarkers in spite of the lack of material in Syria to diagnose one of the most controversial aggressive malignancies that threatens lives of patients.

Biography

Sawsan Ismail is pursuing her Master's degree in Pathology from Tishreen University in Syria. She has graduated from Faculty of Medicine last year and now she's specializing in Pathology and Molecular Biology. She believes in the importance of volunteering to spread knowledge. She was named the Leader of the Syrian team in IMSRA International Medical Students Research Association, which is a non-profit organization aims to help medical students in the Arab world to work on researches and publish their papers in peer-reviewed journals. She also volunteered at Coursera Organization to translate medical courses into Arabic.

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FIGURES

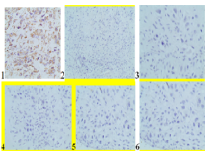


Figure 1: Anaplastic pleomorphic cells with irregular nuclei

Figure 2: positive reaction for Vimentin

Figure 3: Negative reaction for CK excluding Epithelial cell tumors

Figure 4: Negative reaction for S100 Excluding Melanoma

Figure 5: Negative reaction for Desmin Excluding Leiomyosarcoma Rhabdomyosarcoma

Figure 6: Negative reaction for CD11 and excluding angiosarcoma

Notes: