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Dedifferentiated liposarcoma of the retroperitoneum presenting as an ossified lesion

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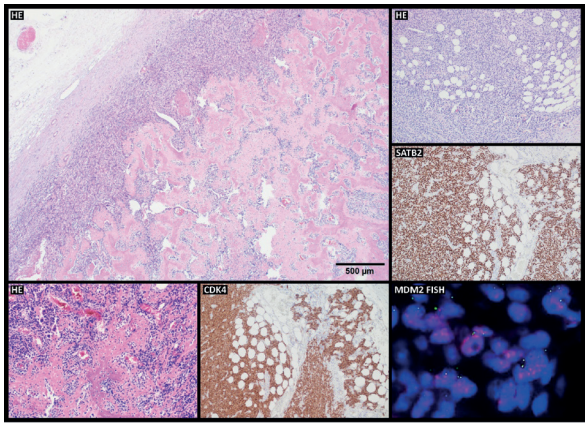

HE – hematoxylin & eosin

Figure. 1. DDLS with osteosarcomatous differentiation

Dedifferentiated liposarcoma (DDLS) develops in patients with atypical lipomatous tumors / well-differentiated liposarcomas. It may be present in the first resection but more often develops when well-differentiated liposarcoma recurs. The most frequent localization is retroperitoneum. In advanced disease, a well-differentiated component may be obscured and difficult to find. The dedifferentiated part most frequently consists of high-grade sarcoma of no special type [1]. Occasionally malignant heterogeneous elements with chondroid, osteoid, or rhabdoid differentiation may be present.

Here we report a rare case of a 72-year-old male patient who presented with an abdominal mass. He underwent a right hemicolectomy and right nephrectomy. On gross examination, the tumor measuring 21 x 17 x 10 cm demonstrated a lipomatous component and an abundant non-lipomatous component with extensive osseous areas, requiring decalcification. Microscopically, a well-differentiated liposarcoma with an abrupt transition to a high-grade sarcoma was present. Within the osseous component, osteosarcomatous areas with obvious osteoid and atypical lamellar bone formation were found (fig. 1). The MDM2 and CDK4 expression by immunohistochemistry and fluorescence *in situ* hybridization (FISH) are supporting tools used in pathological differential diagnosis; a positive reaction with SATB2 is characteristic of osteosarcomatous differentiation. DDLS represent an aggressive variant of liposarcomas. The sarcomatous component dictates the outcome and biological behavior. DDLS recurs locally and shows distant metastases in 40–83% and 15–30% of all cases. The findings of atypical heterogenous components is crucial as it drives the prognosis.

In conclusion, the "osteosarcoma" – resembling DDLS is a rare phenomenon [2]. The radiological image may be confusing, so we emphasize that careful sampling of the whole lesion accompanied by pathological and molecular examination is needed for correct diagnosis.

References

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