عنوان مقاله:

Differentiating and Categorizing of Liposarcoma and Synovial Sarcoma Neoplasms by Fluorescence in Situ Hybridization

محل انتشار:

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خلاصه مقاله:

Background & Objective: Soft tissue sarcomas (STS) constitute an uncommon and heterogeneous group of tumors of mesenchymal origin and various cytogenetic abnormalities ranging from distinct genomic rearrangements, such as chromosomal translocations and amplifications, to more intricate rearrangements involving multiple chromosomes. Fluorescence in situ hybridization (FISH) can be used to identify these chromosomal translocations and amplifications, and sub classify STS precisely. The current study aimed at investigating the usefulness of FISH, as a diagnostic ancillary aid, to detect cytogenetic abnormalities such as MDM2 (murine double minute 2) amplification and CHOP(C/EBP homologous protein) rearrangement in liposarcoma, as well as SYT (synaptotagmin) rearrangement in synovial sarcoma. Methods: The FISH technique was used to analyze 17 specimens of liposarcoma for MDM2 amplification and CHOP rearrangement, and 10 specimens of synovial sarcoma for SYT rearrangement. The subtypes of liposarcoma and synovial sarcomas were reclassified according to the FISH results and compared with those of the respective histological findings. Results: According to the FISH results in 17 liposarcoma cases, well-differentiated liposarcoma(WDLPS), dedifferentiated liposarcoma (DDLPS), and myxoidliposarcoma (MLPS)subtypes were 41%, 53%, and 6%, respectively. In different subtypes of liposarcoma, a total of 30% mismatches were observed between pathologic and cytogenetic results. According to the histological findings from FISH analysis, SYT rearrangement was found only in three out of 10 (30%) synovial sarcomas. Conclusion: The detection of cytogenetic abnormalities in patients with liposarcoma and synovial sarcoma by FISH technique provides an important objective tool to confirm sarcoma diagnosis and sub classification of specific sarcoma subtypes in such patients.

کلمات کلیدی:

Liposarcoma, Synovial Sarcoma, Fish, CHOP, SYT, MDM2