A-10-1432-1

The expression of miR-181b ،CYLD ،CBX-7 ،BCL2 and p53 in osteosarcoma patients and correlation with clinicopathological factors

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Introduction: Osteosarcoma is a prevalent human cancer with a high fatality rate worldwide. Understanding the role of microRNAs (miRNAs/miRs) in the etiology of osteosarcoma has been the focus of recent research. Hence, the current study aimed to measure the expression of miR-181a, cylindromatosis (CYLD), chromo box homolog 7 (CBX7), B-cell lymphoma 2 (Bcl2), and p53 in cancerous tissue and adjacent normal tissues in patients with osteosarcoma and its relationship with clinicopathological factors.
Methods: Using quantitative real-time polymerase chain reaction (qRT-PCR), the expression levels of miR-181a, CYLD, CBX7, BCL2, and p53 were evaluated in the tumor tissues and adjacent normal tissues of 60 patients with breast cancer. Finally, the two statistical tissues of tumor and healthy were compared regarding the link between this gene's levels and clinicopathological variables.
Results: Our findings revealed that the expression levels of miR-181a, BCL2, and p53 in breast tumor tissue were considerably more significant than in normal tissues (P< 0.05). CYLD and CBX7, on the other hand, were downregulated in osteosarcoma tumor tissues relative to healthy tissues (P< 0.05). Furthermore, miR-181a expression in tumor tissues was substantially linked with patients' age, tumor size, clinical stage, cancer grade, and lymph node metastasis (P< 0.05).
Conclusion: Our results from the present study highlighted new insights into understanding the role of miR-181a in the pathogenesis of osteosarcoma. However, further research is needed to elucidate miRNA as therapeutic targets for osteosarcoma.

Keywords: miRNAs, miR-181a, osteosarcoma, tumor tissue.