Pediatric Osteosarcoma of Extremities: a 15-year Experience from a Tertiary Care Cancer Center in Upper Egypt


Abstract:

Aim: To assess the outcome and determine predictors of survival in pediatric patients with osteosarcoma of the extremities treated with a unified chemotherapy protocol at a single institution over a fifteen-year period. Methods: We performed a retrospective analysis of medical records of 48 pediatric patients with histologically-verified osteosarcoma of the extremities diagnosed at South Egypt Cancer Institute and received treatment between January 2001 and December 2015. Results: With a median follow-up of 61 months for the entire cohort, estimates of Overall Survival (OS) for 3 and 5-year were 50.9% & 42.1%, respectively. While the estimates of OS for 3 and 5-year in the non-metastatic group were 79% & 65.2%, respectively. In the multivariable analysis, both metastatic disease at diagnosis and poor response to chemotherapy retained their statistical significance as independent predictors for Event Free Survival (EFS). Whereas for OS, a metastatic disease at diagnosis remained as the lone predictor of a dismal outcome, whilst a poor response to chemotherapy became marginally associated with an inferior outcome. Conclusion: In Upper Egypt, whereas slightly less than two-thirds of children with localized osteosarcoma of extremities survives their disease, metastasis at presentation remains the key predictor of dismal survival outcomes.

Keywords:

Extremity Osteosarcoma, Childhood Cancer, Pediatric Oncology, Survival Outcomes, Prognostic Factors

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