Adjuvant radiotherapy in leiomyosarcomas and liposarcomas – Experience of a center
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Introduction: Soft tissue sarcomas are rare tumors, accounting for 1% of adult tumor. A multidisciplinary approach is recommended for diagnostic, treatment and follow up. Radical surgery remains the basis for curative treatment. Although controversial, adjuvant radiotherapy is offered in high-risk patients to improve overall survival and reduce local recurrence.

The objective was to evaluate the impact of adjuvant radiotherapy on time to recurrence and overall survival in high-risk leiomyosarcomas and liposarcomas patients in our center.

Methods: All leiomyosarcoma and liposarcoma cases treated and followed in the Centro Hospitalar Lisboa Norte from January of 2007 and December of 2013 were evaluated in a retrospective study. Definition of high-risk was at least 1 factor (size>5cm, R1, grade ≥2). Adjuvant antracicline-based chemotherapy and surveil lance were employed according to clinical judgment. Time to recurrence and overall survival were analyzed (univariated analysis).

Results: Seventy two patients were identified (50% leiomyosarcomas – n=36; 50% liposarcomas – n=36), median age was 60 years and there was female predominance (51,39% – n =37). Only 38,89% patients (n=28) were submitted to adjuvant radiotherapy (39,29% leiomyosarcomas – n=11; 60,71% liposarcomas – n=17). Adjuvant chemotherapy were used in 12 patients (16,67%) in which 8 patients (28,57%) had also combined with radiotherapy. The median total dose was 60 Gy (range: 50-66) and median of 30 fractions (range: 25-33). Forty one patients had only surveillance after surgery. Median follow up was 37 months.

Eight patients who underwent radiation had relapse (5 systemic; 3 both systemic and local). Four of these patients had adjuvant chemotherapy. Relapse was seen in 13 patients in the non-radiation group (10 patients had only surveillance).

A trend for superior time to recurrence (61 vs. 51 months; p = 0.595) and overall survival (67 vs. 65 months; p = 0.621) was seen in the adjuvant radiotherapy group.

Conclusion: In this study adjuvant radiotherapy demonstrated a trend for prolonged time to recurrence and overall survival in high-risk patients with leiomyosarcomas and liposarcomas. Small sample, short follow up, disease and treatment heterogeneity features are possible causes for these results. Further studies are needed.