

Number & Title: 11331 : Radiofrequency Ablation for chondroblastomas – The Emergence of a new modality of treatment

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Background: - Chondroblastoma are treated by curettage and bone grafting with risk of injury to articular surface or growth plate. Minimally invasive technique like percutaneous radiofrequency ablation (RFA) has been attempted as an alternative to surgical interventions.

Purposes: Present study was done to demonstrate the safety and efficacy of RFA as an novel alternative to surgery in chondroblastomas. We also evaluated the functional and Oncological outcomes.

Materials and Methods: - Between January 2010 and January 2014, we treated 8 cases of chondroblastomas with RFA. All were males with a mean age of 17.5 years (range 13-21 years). All cases were primary with involvement of proximal femur in 3 cases, proximal tibia in 3 and proximal humerus & distal femur in 1 case each. The procedure was done with computed tomography guidance. Lesion was biopsied, confirmed on frozen and then treated with RFA in the same setting. The Clinical symptoms, range of movements, radiographs and MSTS score were assessed before, 24 hours, 6 weeks and then every 3 months after the procedure.

Results: - Significant relief of symptoms was noted on the immediate post procedure day in all patients after a single session of RFA. No patient required a repeat procedure or surgical curettage. All the patients had complete relief of symptoms with no need of any medical assistance at first follow up (6 weeks). All patients are available for final evaluation with a median follow up of 32 months (range, 6 to 50 months). There was no recurrence, one patient had femoral head collapse after 3months of follow up . All patients returned to the pre disease activity level with average Musculo skeletal tumor society Score of 27 at last follow-up.

Conclusion: - Percutaneous RFA is safe, effective, less morbid and minimally invasive alternative to surgery for the management of epiphyseal chondroblastoma of the extremity. Though longer follow up is mandated, Early results are promising and show a new direction in the management of these locally aggressive lesions in juxta articular regions.