

**Number & Title: 11297 : Vascular Resections in Extremity Sarcomas: Retrospective Audit Of Survival And Morbidity**

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**Background:** Limb salvage and maintenance of functionality without compromise of oncologic safety is the prime goal of orthopedic oncology. However at times to achieve negative surgical margins, vascular resection with reconstruction may be required. Multiple studies have established the oncological safety of vascular resections but opinions differ with regard to the necessity for venous reconstruction.

**Purposes:** The aim of this study was to study the oncological morbidity and functional outcomes of limb salvage in case of extremity sarcomas treated with wide excision with vascular resection and reconstruction.

**Methods:** Retrospective audit was done for surgical records between January 2004 – December 2013. 31 patients were identified who had undergone vascular resections. 5 patients were excluded due to incomplete surgical data. 26 patients were studied and the clinical results, complications, and postoperative function were analysed. Long term follow up was not available for 2 patients, hence survival was calculated for 24 patients. Complications were divided into immediate, early and late and functionality assessed objectively by MSTs score and subjectively by patients perception of his own limb.

**Results:** Incidence of vascular resections was documented to be 3.19%. Amputation were 4 with a limb salvage rate was 83%. Median overall survival was found to be 13 months with 2 year survival being 46.2%. Disease free survival was found to be 7 months with 2 year DFS being 6.3%. Overall complication rate was 66.6% with more complications in the arterial only group (86 % vs 64.7%). Incidence of limb edema was significantly more in arterial only group. Limb salvage overall was 87% with similar amputation rates in both the group (16.6 % vs 17.6%). Subjectively, 33% patients in arterial only arm achieved normal function as compared to 52% in arteriovenous group. Preoperative and postoperative treatment did not find any effect on survival or increase in complication rates.

**Conclusion:** Soft tissue sarcomas that require vascular resections and reconstruction are of a more aggressive biology and have a poorer prognosis than those without vascular resection. Vascular reconstruction allows greater limb salvage with oncologic safety with satisfactory limb function. Preoperative and adjuvant treatment (like radiotherapy) do not contribute to the morbidity of vascular reconstructions. In case of simultaneous arterial and venous resection, venous reconstruction gives no added advantage if done along with arterial reconstruction