Comparison of medium-period outcomes of allografts and autografts used in repair of bone defects in patients who were treated in our department due to skeletal system tumors

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Grafting in orthopaedic surgery is used generally for treating bone defects which develop during reconstructive procedures following musculoskeletal system tumor surgery, as well as for trauma, bone infections, congenital abnormalities and revision arthroplastic surgery. After the approval of ethics committee number 2017/1-6 from Inonu University, Committee on Scientific Research and Publication Ethics was obtained for this study. 45 (25 male, 20 female, median age: 34.50; min-max: 9-60) who were operated in our department due to oncological reasons between the years 2005-2015 were examined. For defects of the patients, reconstruction by using autogenous or allogenous bone graft was performed. Allograft was used for 24 of the patients and autograft was used for 21 of the patients. Lesions of the patients (median age: 34.1; min-max 9-60) for whom allograft was used were in various anatomical localizations from humerus to phalanges, and all were benign cavitary lesions. All of the allografts used in the surgery were first frozen and then dried. All were first kept within Ringer Lactate solution under room temperature and then applied. Iliac wing and metaphysic of radial distal edge were used as graft resources in 21 (median age: 34.76; min-max 18-60) for whom autograft was applied. Types of lesions were benign cavitary lesions, with simple bone cysts being the most common. 24 allografts and 21 autografts which were applied for 45 patients (25 male, 20 female; median age 34.50; min-max: 9-60) for which the follow-up duration was determined to be atleast twelve months were evaluated. All of the defects were cavitary. Information concerning age, gender, pathological diagnosis, anatomical localization and complications was obtained by examination of files and graphs of the patients. Mean follow-up duration was 21 months (18.2 months in allograft group, 22.3 months in autograft group). Obtained data were evaluated in SPSS 15.0 program by using Mann-Whitney U-test and chi-square test. During follow ups of the patients, union was radiologically observed in an average of 6.1 months in 43 (91%) patients (5.8 months in 21 autografts, 6.5 months in 22 allografts). Nonunion occurred in 2 (9%) patients. No statistically significant difference was determined between both groups for which allografts and autografts were applied (P>0.05). For these two patients which had persistent cavitary lesion until 1st year after application of allograft, allograft was re-applied in the second surgery and union was obtained. Infections did not occur in any of the patients as a complication.

Biography
Resit Sevimli has his experience in orthopedic oncology and arthroplasty of knee and hip at Inonu University.

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