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언어구분	KOR	논문구분	원저/구연	논문분야	종양
논문제목	소아 골육종 환자에서의 사지구제술 후에 발생하는 피질골의 골질 저하에 대한 연구				
영문제목	<b>Cortical Atrophy Related With Tumor Prosthesis in Skeletally Immature Osteosarcoma Patients</b>				
발표자	송상헌	책임저자	김한수		
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**서론** : Periprosthetic cortical atrophy was introduced as a mechanism of stress-shielding in which an implant with higher elastic modulus than bone, mostly in the cases of hip arthroplasty. The aim of this study is to evaluate the incidence and patterns of cortical atrophy and correlation with stem survival related with tumor prosthesis in skeletally immature osteosarcoma patients.

**재료 및 방법** : Periprosthetic cortical atrophy was introduced as a mechanism of stress-shielding in which an implant with higher elastic modulus than bone, mostly in the cases of hip arthroplasty. The aim of this study is to evaluate the incidence and patterns of cortical atrophy and correlation with stem survival related with tumor prosthesis in skeletally immature osteosarcoma patients.

**결과** : There was a statistically significant correlation between serial measurements of CAI and PVR. The mean PVR was significantly decreased from the mean 62 months after the operation and went to less than 0.2 from the mean 84 months after the operation. The CAI and PVR were significantly less in cementless stem than in cemented stem and less in high BMI patients than less BMI patients. Kaplan-Meier survivorship analysis at 8 years revealed significantly lower survival rates in group I than group II.

**결론** : This study demonstrated that cortical atrophy can be seen in tumor prosthesis and can be clinically relevant for the stem failure in skeletally immature patients. Cortical density is better preserved around the cemented stem in tumor prosthesis compared with the cementless stem and BMI and initial cortical thickness was significant predisposing factors for the cortical atrophy.

**acknowledgment :**

cortical atrophy, tumor prosthesis, osteosarcoma, stress shieling

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