

**FC-156****Limb salvage surgery for primary malignant bone tumors in children younger than 5 years****M. Rychłowska-Pruszyńska**, A. Szafranski, B. Pachuta, M. Karwacki, A. Raciborska*Institute of Mother and Child, Warsaw, Poland*

The **aim** of the study was to present a result of limb salvage surgery performed in children with primary malignant bone tumors (PMBT) under five years old.

Between 2000 and 2014, fourteen children with PMBT (5 boys and 9 girls) aged from 23 to 60 months (the average: 26 months) were treated in the National Research Institute of Mother and Child, Warsaw. Seven of these children suffered from Ewing sarcoma, and the other half – from osteosarcoma. In 11 of them localized disease was confirmed at diagnosis. The localizations of the primary tumor were as followed: 6 in femur, 2 within pelvis, two in tibia and four in humerus. Prior to limb sparing surgery all of them received neo-adjuvant chemotherapy. In 12 children with tumors localized in extremities, "expendable" endoprosthesis were implanted in order to reconstruct the bone affected by the tumor. In case of two children, one with tumor localized in femur and other with tumor localized in tibia, total resection of involved bone was performed due to massive bone involvement. In another 2 patients with pelvic involvement, we performed internal hemipelvectomy: in one with allografting of damaged bones stabilized by AO plate and in the other with stabilization of the femur achieved with Trevira tube.

**Result:** All children survived till now. One out of 14 children is still being treated with chemotherapy, whereas remaining 13 successfully completed the treatment. In two patients complications included local recurrence and deep wound infection which led to amputation. Deep wound infection occurred in 3 cases, which needed to be treated surgically, followed by amputation in one case. Local metastasis was found in one patient, and amputation was performed. All treated children underwent physiotherapy with various results. All of the patients required endoprosthesis elongation, and some of them eventually exchange due to body growth.

**Conclusions:**

- 1) Limb-sparing surgeries carried out in patients less than 5 years create a challenge for surgeons.
- 2) Primary surgical endoprosthesis reconstructions represent the first step in longstanding process of limb's sparing process, as patient require additional interventions concerning the age of operated children and their further growth.
- 3) The functional results of limb sparing surgery are satisfactory, even though concerns regarding troublesome rehabilitation process in such a young children as well as the need of completion of post-surgical chemotherapy.