



P6:112

## Transosseous osteosynthesis in the complex treatment tumours of the hand bones

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**Introduction:** Limb salvage treatment of the patients with oncological pathology is considered to be difficult due to the necessity to restore not only anatomical integrity but also hand function.

**Materials and Methods:** The material for the analysis were 204 medical records of the patients who underwent treatment between 1992 and 2012 in the center of hand surgery with application of the apparatuses of external fixation for hand bones tumours. Primary reconstruction procedures considerably reduce the treatment period. The fixator for transosseous osteosynthesis was applied after bone resection due to tumour. That aimed preservation of the operated ray anatomical length. In cases of small bone defects the grafts were placed into the defect area followed by mild compression in the fixator to accelerate the reparative process. In extensive defects, graft was mandatory fixed through additional wires to the fixator. Application of the apparatuses enables stable fixation and the possibility to train motion to restore the functioning of tendons and joints.

**Results:** Long-term follow-ups were studied in 174 patients in the period from 1 to 20 years. Tumour recurrence observed in 22 cases (15 of them were malignant tumours). All these patients were reoperated after thorough examination.

**Conclusion:** The use of external fixators in the treatment of short tubular bones tumours of the hand is a new perspective trend in hand surgery and oncology.

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