metastases to and from the lung

**SURGICAL TREATMENT OF SYNCHRONOUS LUNG METASTASIS IN PATIENT WITH OSTEOSARCOMAS AND SOFT TISSUE SARCOMAS**

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**Aim:** Patients with sarcomas and simultaneously having synchronous lung metastases survive for shorter duration and show poor quality of life. Chemotherapy is considered a standard treatment for these patients and the benefit of surgical resection of residual lung metastases is controversial. We analyzed our experience on surgical treatment of such patients.

**Methods:** We performed a single center retrospective study of 15 patients, medium age 38.5 years (range 19-72), 9 males, with synchronous lung metastases, hospitalized between 2001 and 2014. Nine patients had primary diagnosis of osteosarcoma and six patients had diagnosis of soft tissue sarcoma. 13 patients received preoperative treatment to the primary tumor (radiation therapy in 8 patients, chemotherapy in 5 patients). 13 patients had bilateral nodes in the lungs. All patients underwent surgical resection of lung metastases (from 1 to 103, mean – 16.4), bilateral thoracotomy with surgical resection of metastases was performed in 7 patients.

**Results:** In 3 patients metastatic process in lungs was not confirmed (tuberculosis, local fibrosis and multiple hamartomas). In 2 patients a postoperative pneumothorax was observed; 1 case required drainage. Other complications include anemia and shortness of breath, subcutaneous emphysema and pleuropneumonia were cured with medication. There was no treatment related mortality at 30 days. In all cases intraoperative palpation revealed more metastases than visualized by CT before surgery. The median overall survival was 9 months with 30% (10%) of patients alive at 1 (2) years.

**Conclusions:** Distant metastases is associated with extremely poor survival of patients with sarcomas. Aggressive surgery for the primary and metastatic sites is one of the options for such patients. Surgical interventions in patients with non-confirmed lung metastatic process might change the treatment strategy. Further studies are needed to assess the impact of surgical treatment on survival rate and quality of life.

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