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Title: Robot-assisted operations in the diagnosis and treatment of intrathoracic tumors

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Body: Aim: improvement of diagnostics and treatment of intrathoracic tumors by means of a surgical robot. Materials and methods: 56 patients (34F/22M) were operated with the use of robot «da Vinci». The indications for these operations were: single round (23) and disseminated (5) nodes of the lungs, mediastinum neoplasms (9), pleura neoplasms (6); ambiguous exudative pleurisy (13). Results: Early activation of the patients was 1 day, the recovery period was from 3 to 5 days without any intraoperative complications. It was founded out that the rounded nodes were the peripheral lung cancer (8), metastases (5), hamartochondroma (9), tuberculoma (1). Disseminations were bronchoalveolar cancer (1), sarcoidosis (2), fibrosing alveolitis (2), mediastinum neoplasms were pericardial cysts (3), nevrinoma (1), malignant thymoma (1), malignant lymphoma (3), sarcoidosis (1). Pleura neoplasms were fibrous mesothelioma (2) and malignant mesothelioma(4). Patients with single metastasis (3), hamartochondromas, tuberculoma, pericardial cysts, nevrinoma, fibrous mesotheliomas were radically operated endoscopically. The causes of exudative pleurisy were lung cancer (5), diffuse malignant mesothelioma of pleura (2), carcinomatosis (6). These patients underwent a combined pleurodesis. Conclusion. We concluded there were the advantages and disadvantages of robotic operations. The advantages: a large possibility of freedom manipulations, perfectly accurate communication of the surgeon movement on the instruments, the absence of a tremor, three-dimensional image. Shortcomings: lack of tactile sensitivity, limitation of the field for manipulation only one anatomic area, the consumption of time for adapting systems to the patient.