

VIDEO-ASSISTED RESECTIONS FOR PULMONARY TUBERCULOSIS WITH THE PRESENCE OF PLEURAL CAVITY OBLITERATION

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Abstract

Pulmonary tuberculosis surgery is characterized by a number of aspects associated with adhesions in the pleural cavity, fibrosis of the lung root, destruction of the parenchyma, which contribute to the development of intra- and postoperative complications such as residual pleural cavity and reactivation of tuberculosis in operated lung due to compensatory tissue distortion.

Aim: to improve video-assisted lung resection (VATS) in tuberculosis patients with the presence of pleural cavity obliteration.

Materials and methods. The developed method of VATS for tuberculosis patients with pleural cavity obliteration is based on separate intubation of right and left main bronchi for mechanical ventilation of one lung, placement of thoracic port, performing revision of pleural cavity using video-assisted thoracoscopy, performing mini-thoracotomy and resection of lung with separate treatment of anatomical structures in required volume by means of disposable stapler or regular open thoracotomy instruments, pleural cavity draining and layered wound closure. Computed tomography of chest is performed during the operation in order to assess the extent and severity of pleural adhesions and to locate safe position of thoracic ports. Hydraulic needle preparation of parietal pleura is performed in severe adhesions area. Hemorrhage is treated using hemostatic plate Surgicel Fibrillar made of restored cellulose. Phrenicotomy, pleural cavity drainage and, finally, artificial pneumoperitoneum are performed.

The proposed method of video-assisted lung resection was used in 41 patients, 25 patients underwent video-assisted resection according to the prototype method.

Results. The proposed method reduced duration of the surgical intervention by 52.7 minutes; the frequency of intraoperative complications by 14.4%; the incidence of postoperative complications by 14.2; the duration of patient's stay at the hospital by 5.8 days and increased of overall treatment efficiency by 14.5%.

The proposed method of VATS for patients with pulmonary tuberculosis and pleural cavity obliteration is safe, effective, simple to implement and can be performed at thoracic surgery departments of various pulmonary hospitals of city and regional level.

Key words: pulmonary tuberculosis, pleural cavity obliteration, video-assisted surgery.

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