

## THORACIC SURGICAL TREATMENT IN PATIENTS WITH CORONAVIRUS INFECTION

**M. S. Opanasenko, B. M. Konik, S. M. Belokon, O. V. Tereshkovich,  
S. M. Shalagai, L. I. Levanda, M. I. Kalinichenko, V. I. Lysenko,  
M. U. Shamrai, A. M. Stepanyuk, O. D. Shestakova**

### *Abstract*

**Aim.** To familiarize physicians of different specialties with thoracic pathology in patients with coronavirus infection (COVID-19).

**Materials and methods.** Since the beginning of the COVID-19 pandemic 63 patients were treated at the department of surgical treatment of tuberculosis and NLD, complicated by purulent-septic infections: 47 (74.6%) — with various complications of coronavirus infection, and 16 (25.4%) — COVID-19 and conditions, requiring thoracic surgery, not associated with COVID-19.

**Results.** Pleural empyema was the most common bacterial complication — 18 (28.5%) cases. Only 6 (9.5%) patients were diagnosed with broncho-pleural fistula, while 12 (19.6%) patients already had a functioning broncho-pleural fistula at the stage of hospitalization. In 15 (23.8%) patients, the destructive cavities remained on admission, and only 3 (4.7%) had isolated pleural empyema without destruction of pulmonary parenchyma (complete scarring of abscesses). 17 (26.9%) patients with empyema underwent videothoracoscopic (VATS) drainage of the pleural cavity with polydrainage and the use of long-term active aspiration in the post-operative period. In 1 (1.5%) case, due to the extremely severe condition of the patient, only drainage of both pleural cavities was performed. 1 (1.5%) patient with bilateral pleural empyema died of progressive respiratory and cardiovascular failure. Nonspecific exudative pleurisy was diagnosed in 8 (12.6%) patients after coronavirus infection. Spontaneous pneumothorax without development of pleural empyema was diagnosed in 7 (11.1%) patients and in 3 (4.7%) cases pneumohemothorax occurred. In 2 (3.1%) cases there was a need for parietal pleurectomy (there was a significant area of detachment of the visceral pleura and the impossibility of imposing intracorporeal sutures). All patients were discharged from the hospital with recovery. 6 (9.5 %) patients with necrotizing pneumonia comprised a challenging group of patients with large, treatment-resistant cavities. In 4 (6.3%) cases antibacterial therapy was ineffective, so transthoracic cavity drainage was performed. All 6 patients underwent radical resection interventions following long pre-operative period: 3 (4.7%) cases - pleurolobectomy, 2 (3.1%) — sublobar resection and 1 (1.5%) - resection of the 6th segment of right lung).

**Conclusions.** Pulmonary purulent-destructive COVID-19 complications may occur much more rarely if timely treatment was used. Videothoracoscopic intervention is a preferred option of treatment of these conditions.

**Key words:** COVID-19, thoracic pathology pneumohemothorax, pleurodesis.

**Ukr. Pulmonol. J. 2021;29(3):31–35:**

*Mykola S. Opanasenko  
National institute of phthisiology and pulmonology  
named after F. G. Yanovsky NAMS of Ukraine  
Head of thoracic surgery  
and invasive methods of diagnostics department  
Doctor of medicine, professor  
10, M. Amosova str., 03038, Kyiv  
Tel.: 380672718511, opanasenko@ifp.kiev.ua*