

EFFECTIVENESS OF X-RAY-GUIDED ENDOVASCULAR EMBOLIZATION OF BRONCHIAL ARTERIES FOR MANAGEMENT OF PULMONARY HEMORRHAGE CAUSED BY DIFFERENT CONDITIONS

M. Yu. Khuda

Abstract

The aim of the study was to compare the effectiveness of minimally invasive methods of pulmonary hemorrhage management – X-ray-guided endovascular embolization of bronchial arteries and bronchial obturation – in patients with bronchiectasis and combat trauma.

Materials and methods. A total of 49 patients aged 18-85 years (32 men and 17 women) were examined. In 38 patients the pulmonary hemorrhage was caused by bronchiectasis (24 men and 14 women) and in 11 by combat trauma (8 men and 3 women). Before choosing a method to stop bleeding, all patients underwent standard general clinical and X-ray examinations, including a coagulogram.

Results. In patients with pulmonary hemorrhage caused by bronchiectasis, in the majority of cases, X-ray-guided endovascular embolization of bronchial arteries and bronchial obturation resulted in stable hemostasis right after the first procedure. In the case of relapses, a thoracotomy was performed, which was 100 % effective. In patients with pulmonary hemorrhage caused by a combat injury, both X-ray-guided endovascular embolization of bronchial arteries and bronchoalveolar obturation helped to control the bleeding. In the majority of cases, the bleeding was controlled after the first procedure. A small number of patients had relapses, which required further thoracotomy to achieve stable hemostasis. X-ray-guided endovascular embolization of bronchial arteries is a preferred method. If it is not usable, then bronchoobturation should be performed.

Conclusions. The use of X-ray-guided endovascular embolization of bronchial arteries and bronchial obturation demonstrated high effectiveness in management of pulmonary hemorrhage caused by bronchiectasis and combat lung injury. In massive hemorrhage these methods did not always lead to stable hemostasis after the first procedure. Such cases required a thoracotomy to control bleeding. Since in most of the patients X-ray-guided endovascular embolization of bronchial arteries achieved stable hemostasis, this procedure is considered as the method of choice. Exceptions to the use of X-ray-guided endovascular embolization of bronchial arteries are cases in patients with contraindications for this procedure.

Key words: pulmonary hemorrhage, X-ray-guided endovascular embolization of bronchial arteries, bronchoobturation, bronchiectasis, combat injury.

Ukr. Pulmonol. J. 2022;31(3):39–42.

Marta Khuda

National Military Medical Clinical Center

«Main Military Clinical Hospital»

Resident of the thoracic surgery clinic

Major of the medical service

Hospitalna St., 16, Kyiv, 01133

Phone: +38 (097) 063 25 04, e-mail: marta_khuda@ukr.net