

European Respiratory Society Annual Congress 2013

Abstract Number: 3539

Publication Number: P4961

Abstract Group: 8.1. Thoracic Surgery

Keyword 1: Physiology **Keyword 2:** Lung mechanics **Keyword 3:** Mechanical ventilation

Title: Physiological characteristics of high-frequency one-lung ventilation in thoracic surgery

Mr. Mikhail 21547 Kontorovich kombo58@mail.ru MD ¹, Mr. Serghey 21548 Skornyakov sns@nm.ru MD ¹, Mr. Igor 21549 Medvinsky medvinsky-id@mail.ru MD ¹, Mr. Dmytry 21550 Ereemeev eremeev-du@mail.ru ¹ and Mr. Dmytry 21551 Ereemeev eremeev-du@mail.ru ¹. ¹ ICU, Urals Research Institute for Phthisiopulmonology, Yekaterinburg, Russian Federation and ² ICU, Surgical Clinic of Province Tuberculosis Dispanser, Yekaterinburg, Russian Federation .

Body: INTRODUCTION. We believe no alternative use during operations in the light of high-frequency jet ventilation. HFJV provides excellent oxygenation of arterial blood in the lungs supports expanded position without the use of recruitment-maneuver, increases venous return and cardiac output, reducing intrapulmonary shunting. MATERIALS AND METHODS. The two groups are comparable (in terms of volume of surgery, comorbidities, age) of 50 patients compared the parameters of gas exchange and hemodynamics in patients undergoing surgery for lung during one-lung convective (OCMV) and one-lung high-frequency (OHFJV) ventilation. RESULTS. Results of the study demonstrated a reduction in OHFJV versus OCMV: PIP - to 26,5%; Pes - by 81.6%, PVR - by 41.7%; Qs/Qt - by 45.5% and the increase in PaO₂ – 66. 1%, MI - by 91.0%; VA - by 47.8%, CVP - by 28.3% while maintaining the normal pH of 7.42 and PaCO₂ = 34.5 mm Hg. CONCLUSIONS. Under conditions of OHFJV, even a complete atelectasis of one lung does not go along with a considerable disorder of gas exchange in contrast to OCMV. This enabled a wider application of this kind of ventilation for lung surgeries on patients with distinct gas exchange and hemodynamics disorders.