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Title: MDCT with perfusion, virtual bronchoscopy and pulmonary angiography of lung injuries from terrorist attacks

Dr. Aleksandar 10591 Ivkovic aleksandarvkv@hotmail.com MD ¹, Dr. Tamara 10592 Milosavljevic tamaradr2010@hotmail.com MD ², Prof. Dr Zoran 10593 Radovanovic sasadr2009@gmail.com MD ¹ and Mr. Stevan 10594 Ivkovic s.iv@aol.com ³. ¹ Center of Radiology, KC Nis, Nis, Serbia, 18105 ; ² Radiology, Special Hospital Niroshi, Nis, Serbia, 18105 and ³ Medical, Medical Faculty Nis, Nis, Serbia, 18105 .

Body: Purpose: Purpose is to show effects of terrorist attacks on the lung and to show radiological signs of lung injuries. Methods: we examined 423 patients with mechanical injuries of the lung, 221 patients with fire and hot inhalation injuries, 23 with cold inhalation injuries, 17 with infectious bio-material inhalation and 2 after radiation incident. All patients were examined on MDCT. Male patients were 401, female 285. The youngest patient was 4 years old; the oldest was 84 years old. We perform standard MDCT examination followed by virtual bronchoscopy. Results: we separated results according to type of attack on bomb attacks, chemical attacks, bio attacks and radiation attacks. We separate radiological findings in 5 groups according to the main cause of injury. In most incidents it is impossible to have only one cause of injury. First group were patients with mechanical trauma of the lung. In this major group we made few minor groups according to MDCT findings. Second group were patients with fire as main cause of trauma. Third group were patients with inhalation of chemical agents. Fourth group were patients with inhalation of infectious bio-material. Fifth group were patients injured from radiation material. In all groups we try to measure percent of healthy lung tissue and to predict death level, level with major complications, level with minor complications and level of patients without any lung problems after treatment. Also we separate results according to time after incident to first examination. Conclusion: terrorist attacks bring a lot of serious lung injuries. CT is powerful diagnostic tool for detection. Early diagnosis can save patients from serious diseases.