

European Respiratory Society Annual Congress 2012

Abstract Number: 2444

Publication Number: P2641

Abstract Group: 10.2. Tuberculosis

Keyword 1: Epidemiology **Keyword 2:** Tuberculosis - diagnosis **Keyword 3:** Tuberculosis - management

Title: Survival of mycobacterium tuberculosis (MBT) on model surfaces

Mrs. Natalya 17818 Eremeeva eremeevani@yandex.ru , Mrs. Diana 17819 Vakhrusheva vakhrusheva@nexcom.ru , Prof. Dr Sergey 17820 Scorniyakov sns@nm.ru MD and Ms. Xenya 17821 Bobrovskaya urniif66@mail.ru . ¹ Bacteriology Lab, Urals Research Institute for Phthiziopulmonology, Ekaterinburg, Russian Federation, 620039 .

Body: Goal is determine the presence of viable MBT in same days after contamination of glass and metal surfaces. Material and methods. Use has been made of 3 MBT suspensions the concentration of which was 1×10^9 colony-forming units (CFU) in 1 ml. Two strains taken from the patients: drug susceptibility strain and multi-drug resistance (MDR). H37Rv was also studied. 12 glass and 12 metal plates were covered with suspension of each strain. Then in 1, 7, 14 and 21 days after contamination 0.85% NaCl was poured on the surface. The rest of the washout was inoculated of solid and liquid mediums. Besides, the rest of the washout obtained on the 14 and 21 days was used to infect guinea pigs and PCR was studied. Results. The growth of all strain MBT in cultural media has been found, after inoculated washout obtained (from glass surfaces) on 1 and 7 days and on 14 days, on the 21 day there growth in liquid medium was found only MDR strain. As for metal surfaces obtained on 1 and 7 days the growths of each MBT strain in cultural medium. In washouts after 14 and 21 days MBT growth was not found. DNA of MBT in all tests were found. Histologic research of visceral organs guinea pigs infected by washout made on the 14 day from model surfaces made it possible to reveal lung and liver TB, and guinea pigs infected by washout made on the 14 day did not have any signs of TB. Conclusion: 1)MDR strain can save survival in 21 day after contamination on glass surfaces and can cause guinea pigs to get TB infected after staying on glass and metal surfaces during 14 days. 2)The most sensitive methods for reveling MBT on the surfaces were PCR technique and inoculation method. It has revealed MBT after staying on glass and metal surfaces during 21 days.