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Title: Obesity as the most considerable risk factor for death due to influenza A/H1N1-09 viral infection

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Body: The aim of this study was to assess the complications of A/H1N1-09 viral infection in died patients in dependence of body mass. Methods. We reviewed medical records and postmortem examination reports of 33 pts who died in 2009 in Zabaikalsky region of RF. A/H1N1-09 viral infection was confirmed by transcription-polymerase chain reaction method. Results. 14 men and 19 women (average age $39,8 \pm 12,5$ years) were included. All patients were divided into 2 groups: 22 patients with BMI $32,2 \pm 1,08$ (the 1st group) and 11 patients with BMI < 25 (the 2nd group). There was no difference between the groups in age and gender structure. Causes of death were pneumonia and progressive respiratory failure. Pneumonia developed more rapidly in the 1st group ($5,3 \pm 1,75$ vs $4,09 \pm 1,13$ days, $p=0,049$). The rate of acute respiratory distress syndrome was similar in both groups. Thrombosis of various locations was seen more often in obese patients (31,7% vs 0%, $p=0,037$). A tendency was found to a higher rate of rhabdomyolysis, acute canalicular necrosis and intravascular blood coagulation syndrome in obese patients. Additional risk factors were determined in 77,3% pts of the 1st group (diabetes mellitus, pancreatitis and arterial hypertension). We suppose that possible reasons of severe course of influenza A/H1N1-09 viral infection in obese people were alveolar hypoventilation, production of proinflammatory cytokines by the fat tissue resulting in poor immune response. Conclusions. Thus, obesity was the most considerable risk factor for death during influenza A/H1N1-09 viral outbreak in Zabaikalsky region due to aggravation of underlying metabolic disorders by specific effects of A/H1N1-09 virus strain.