OHSS is a major complication impairing functioning of vital organs and systems. Destruction of alveoles in the central lung areas and their «hepatization» (hemorrhagic pneumonia) was found in the lung parenchyma of mice on the 4th day after gonadotropic hormones administration. In intrapulmonary bronchi of various sizes and in bronchials, additionally revealed were epithelial desquamation, thinning walls of bronchial arteries and veins, blood vessel stasis. Monocyte-lymphocytic infiltration was present in the lung parenchyma—a mass of nuclears, among which segmentated cells occurred.

A microscopic presentation of the acute damage of parenchyma was found in the mouse liver. An acute disorder of the liver hemodynamics—the ubiquitous thrombosis of blood vessels came under notice. The size of the malpighian tufts is sharply reduced due to the fact that their capillaries collapsed, and the Shumlyansky's-Bowman's capsule cavity space was almost absent. The tubular space was also barely seen, which, together with the microscopic view of the malpighian tufts indicated antidiuresis. At that, a sharp desquamation of the tubular epithelium took place. The kidneys were highly edematous, congestion and blood stasis were noted in capillaries in interstitium.

In myocardium, there were microscopic symptoms of blood redistribution, resulting in development of an acute heart failure. Also, there were congestion and vessel stasis with diapedetic haemorrhages. The extensive areas with the dead muscle tissue were found, where cardiomyocytes differed in dark color and had no nuclei. The nuclei of endotheliocytes of coronary capillaries were pyknotic.)