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Acute respiratory injury model in rats

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Aim: Acute respiratory distress syndrome (ARDS) can develop as a result of many diseases and It causes a high rate of death. Research on treatment is still continuing. Thats why, we aimed to create an acute respiratory tract injury model with low mortality risk in rats. **Material and method:** Three 160 gr Winstar Hannover male rats were used in the prestudy. One of the rats was left as a control and was sacrificed. The other two were intubated and intratracheal lipopolysaccharide (LPS) administered. One of the rats which LPS was applied was sacrificed 6 hours and the other 12 hours later, and the lungs, brain, heart, kidney, liver and intestines were examined histopathologically. **Results:** In both of the rats treated with LPS, inflammation was observed in the peribronchial areas, which decreased more intensely towards the periphery of the lung. However, it was noted that inflammation was more intense in the lung of the rat, which was sacrificed after 12 hours. No pathological findings were detected in other organs. **Conclusion:** In the LPS-induced acute respiratory tract injury model, the lung periphery remains intact, allows a controlled, local inflammation, and doesn't affect other organs, significantly reducing the mortality risk of the subjects. This model's feature is important for the sustainability of research.

Keywords: ards, lipopolysaccharide, mortality, research, model