

Establishment of chronic obstructive pulmonary disease model using intratracheal mist spray

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When chronic obstructive pulmonary disease (COPD) develops, it is difficult to completely recover. The number of patients dying of COPD is increasing year by year. Researches on degenerative medicines of pulmonary diseases, including evaluation with animal models, are being advanced. A spray, which had been used for intratracheal administration, is currently unavailable. Therefore, we aimed to establish a COPD mouse model using a new intratracheal spray.

Using KN-34700 Natsume Aerosol Sprayers, elastase was administered intratracheally to male C57BL/6J mice at 10 weeks of age. LPS was administered intratracheally 3 weeks after the elastase administration. Bronchoalveolar lavage fluid was collected 3 days after the LPS administration. Respiratory function was measured 3, 6, and 12 weeks after the elastase administration. The lungs were isolated 3, 6, and 12 weeks after the elastase administration and examined histopathologically.

Pulmonary emphysema was confirmed to have developed 3 weeks after the elastase administration. BALF and respiratory function are being analyzed.