1. No.

   2021Y011

2. Title

   Effects of nicotine on membranous and endochondral ossification

3. Period

   2021-2023

4. Summary

   The purpose of this study is to clarify the influence of stimulus of smoking such as passive smoking on the growth and development of skeleton by examining the effect on smoking on endochondral ossification. Wild-type mice were exposed to mainstream smoke (3 months, 5 days/week, 1 hr once a week) using SG-300. Starting at birth, the mice were exposed for 12 weeks until 12 weeks of age, and analyses were performed.

   In an experiment on exposure to smoking after birth, the exposed group showed a tendency to have a lower body weight than the unexposed group from the age of 2 weeks, and this tendency continued until the age of 12 weeks. Similarly, in the measurement of naso-tail length and naso-tail length, the exposed group showed a trend towards a decrease in naso-tail length and naso-tail length from 2 weeks of age compared to the unexposed group, and this trend continued until the age of 12 weeks.

   The results suggest that exposure to smoking may have an inhibitory effect on growth in the long bones.