P32

Inhalation toxicity study of H menthol (Nicotine free-tob acco free) herbal cigarettes

Ji-Won Jung, Sung-Dae Cho, Jong-Ho Cho, Kyung-Bae Kim, Ji-Hae Lee, Nam-Shik Ahn, Se-Ran Yang, Joon-Suk Park, Yong-Soon Lee, and Kyung-Sun Kang

Department of Veterinary Public Health, College of Veterinary Medicine, Seoul National University, 103 Seodun-Dong, Kwonsun-Ku, Suwon 441-744, Korea

Introduction

Generally, tobacco smoking has noxious effects such as DNA damage, lung cancer induction, coronary artery disease. Nowadays, as concerns on health and longevity increases, a huge variety of products that aim to assist to quit smoking or reduce addictive symptoms such as nicotine patches are developed and manufactured with safety evaluation, but the safety of the most recent products of interest which do not contain tobacco and nicotine, and shape cigarettes is not evaluated and guaranteed relatively.

In this study, we used H-menthol(nicotine free-tobacco free) which are widely consumed through the world to evaluate the single and repeated dose inhalation toxicity and genotoxicity of H menthol (Nicotine free-tobacco free) herbal cigarettes provided by Cigastop Ltd. in ICR mice.

Materials and methods

In this study, doses which we determined to expose to mice were 40 cigarettes for 6 hours a day to mice in single dose and 20 (high dose), 10 (middle dose) and 5 cigarettes (low dose) a day for 28 days in repeated dose inhalation toxicity, in vivo chromosome aberration test and micronucleus test. To generate smoke from H-menthol herbal cigarette and to expose to mice, we used whole body inhalation chamber equipped with cigarette smoke generator that mimics the way man smokes. The particulate substances from H menthol herbal cigarettes also were gathered by using air sampler and used in the Salmonella typhimurium/microsome assay.

Results and discussion

We could find neither significant changes between control and treatment groups nor dose-response effects of test material at all except serum Ca level of female middle dose treatment group in repeated dose inhalation toxicity test.

In conclusion, H menthol herbal cigarettes, when applied clinically intended dose we used, might not show any toxic and/or mutagenic effect.