The stereological study of age-related effects in rat thyroids after γ-ray irradiation

Zhang Xuefeng, 
Institute of Radiation Medicine, 27 Tai Ping Road, Beijing 100850 P.R. China

Guo Lisheng, 
Institute of Radiation Medicine, 27 Tai Ping Road, Beijing 100850 P.R. China

Tu Kaichen, 
Institute of Radiation Medicine, 27 Tai Ping Road, Beijing 100850 P.R. China

Ma Liufang, 
Institute of Radiation Medicine, 27 Tai Ping Road, Beijing 100850 P.R. China

Ye Changqin, 
Institute of Radiation Medicine, 27 Tai Ping Road, Beijing 100850 P.R. China

Abstract

The infant (0.5 month) and adult rats (2.5, 6 and 15 months, respectively) were exposed to single γ-ray neck irradiation (0Gy, as control, 0.5Gy, 2Gy, 4Gy, 8Gy, 16Gy). Some morphometric parameters of thyroid gland were measured under light microscope at 6 weeks after exposure. The results showed that the infant rat thyroids changed significantly after 0.5Gy, whereas the adult thyroids expressed the similar response after more than 2Gy. Analysis of these data suggested that the infant thyroids were more radiosensitive than the adult ones.

Keywords: radiation effect, thyroid, γ-ray, age-related

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