

Summary

Examination of Occupational Exposure to Medical Staff (Primarily Nurses) during ^{131}I Medical Treatments

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Recently, a new amendment to protect against radiation damage to humans has been enacted based on a 1990 recommendation by the ICRP. Consequently, the dose limits of occupational exposure to medical staff were cut down sharply compared with conventional readjustments. This amended bill, however, may be triggering a reduction in the number of applicants, which hope to engage in radiotherapy.

This being the case, we measured the dose levels of the occupational exposure to medical staff (doctor's group, nuclear medicine technologist's group, nurse's group and pharmacist's group) from 1999 to 2002. Moreover, we investigated what the main factor is in nurse's occupational exposure to ^{131}I . The highest doses of occupational exposure were 3.640 mSv to doctors, 7.060 mSv to nuclear medicine technologists,

1.486 mSv to nurses and 0.552 mSv to pharmacists. According to our results, it was clear that the highest doses in each group were far below the legally mandated upper limits of exposure doses. Although we investigated the correlations between the factors of nurse's occupational exposure to ^{131}I with the number of inpatients, the amount of ^{131}I and the number of servicing times for patients, there were no correlations found. Furthermore, to analyzing the factors in detail, it became clear that the main factor in the nurse's occupational exposure was due to the existence of patients who needed many more servicing times for their care than ordinary patients.

Key words: Occupational exposure, ^{131}I , Radionuclide therapy, Radiation safety, Dosimetry.