

AbstractID: 10878 Title: Evaluation of dose rate of occupational exposure in nuclear medicine service.

Purpose: Characterize the value of dose rate received by the nuclear medicine professionals during the examination procedure and handling of radiopharmaceuticals, permitting the realization of more specific practices of radioprotection in nuclear medicine.

Method and Materials: For this work was monitoring two professional in two separate nuclear medicine services, totaling four professionals monitoring during two months. Their routine was not modified. The measuring of the rate dose was made with an ionization chamber model Babyline 81 at a distance of 1.0 m from the source. The measurements were made during the elution of radioisotope, preparation the radiopharmaceuticals, in the administration and during the exam realization. The value of the rate dose was associated the procedure realized, for this way to characterize the level of exposure that the professional it was submitted during your daily work. **Results:** It was observed for the test of renal scintigraphy with DTPA an average of 2.55 $\mu\text{Gy/h}$ and an average value of 1.20 $\mu\text{Gy/h}$ to DMSA. For examinations of bone scintigraphy with MDP was observed an average of 2.63 $\mu\text{Gy/h}$ for the protocol of time and 3.09 $\mu\text{Gy/h}$ for the protocol of counting, the difference in protocol is due to different interpretation medical. The bone flow scintigraphy the average rate dose was 5.17 $\mu\text{Gy/h}$. The values of the background radiation measured over the handling of radiopharmaceuticals shows a maximum increase of up to six times the background radiation before manipulation and this value influence the measurements performed by measuring activity. **Conclusion:** The evaluation of the values of dose rate may help in taking action directed to optimizing the radioprotection and minimize the sum of errors during a correct administered radiopharmaceutical to the patient, minimizing the dose in the patient and in the professional.