LOUISIANA STATE UNIVERSITY HEALTH SCIENCES CENTER - SHREVEPORT

RADIATION SAFETY DURING IODINE THERAPY OVER 30 MILLCURIES

Purpose:

To reduce worker and public exposure during radiopharmaceutical therapy.

Policy:

1. Patient’s room will be as far away from the nursing station and heavy traffic hallways as possible, while ensuring appropriate level of care is maintained. Patients will only be admitted to private rooms with private sanitary facilities.

2. Nuclear Medicine will notify Environmental Services to pick up the supplies from the Safety Office in order to prepare the room for the procedure as follows:

   a. Use leak-proof absorbent paper to cover large surfaces (bed, pillow, chairs, night stand, bedside table, and entire floor of the room and restroom) that are likely to be contaminated. Small items (telephone, door knobs, bed remote control, television control, and nurse call cord) may be covered with absorbent paper or plastic bags. Plastic protector sheets will be placed under the absorbent paper beside the bed and around the toilet in the bathroom.

   b. Prepare (2) separate yellow plastic bags. One to be used for disposable contaminated items and the other to be used for non-disposable contaminated items.

   c. Stock additional gloves, shoe covers, absorbent paper, and radioactive waste labels in the room for use as necessary by nursing, nuclear medicine, and radiation safety personnel. Gloves and shoe covers are used when entering the room.

3. Nursing will order disposable table service for the duration of the patient’s stay. Inform Environmental Services that their personnel should stay out of the room until otherwise notified.

4. Safety Office will supply nursing personnel with film badges.


6. A written copy of the radiation safety precautions will be left at the nurse’s station. Training Director for Radiation Safety will ensure training is current for nursing personnel. Document training on Form I-131-no.3 (18.8.1.14) and retain.
7. Administering personnel will educate the patient on radiation safety procedures for the dosage administration, visitor control, radioactive waste, and other items as applicable.

8. Only those persons needed for medical, safety, or training purposes should be present during the administration.

9. Following administration of the dosage, Nuclear Medicine staff will measure and record the exposure rate in millirem per hour at bedside, at 1 meter from the patient and in adjacent rooms. Establish a safe distance line at 2 mrem/hour and mark with yellow tape on the floor. Post the bed with Form: I-131 Rx3 (18.8.1.33); post the door to the room with Form I-131 Rx9 (18.8.1.36); and post the chart with Form: I-131 Rx4 (18.8.1.34) and Form: I-131 Rx5 (18.8.1.35).

10. The physicist will calculate nursing time at bedside and record this and exposure rates on Form: I-131-no.1 (18.8.1.15), “Room Survey Instructions for Patients Treated with Iodine and P-32”. Post Form: I-131-no.1 (18.8.1.15) on door to patient’s room.

11. Thyroid burden of all nuclear medicine technologists is calculated monthly. Records of bio-assays are kept on file in nuclear medicine.

12. As the therapy proceeds, the Safety Office will pick up waste daily for transfer to a decay-in-storage area.

13. Patients undergoing radiopharmaceutical therapy shall not be transported to other areas of the hospital for treatment or testing without the approval of the medical director of Nuclear Medicine or their designee.

14. The patient will not be released until either the exposure rate from the patient is less than -7 (seven) millirem per hour at 1 meter or the retained radioactivity is less than 30 millicuries. If the exposure rate standard is used as the release criterion, then measure at a distance of 1 meter from the umbilicus while the patient is standing or, if the patient is not ambulatory, 1 meter from the bedside with the patient supine.

15. Before using the room for general occupancy, it must be decontaminated and released. Complete the steps outlined below:

a. Nuclear Medicine staff will remove all absorbent paper, place it in the appropriate container; the Safety Officer will transfer all containers to a decay-in-storage or decontamination area.

b. Nuclear Medicine Staff will use a radiation detection survey meter to check for room contamination. Clean contaminated areas until removable contamination is less than 200 dpm/100 cm². When decontamination process is complete, the Nuclear Medicine staff will notify the hospital physicist that the room is ready for release. Should decontamination be unsuccessful, Nuclear Medicine will notify the Safety Office and Hospital Administration.

c. Nuclear Medicine staff and the Safety Officer will certify the room for release when decontamination is completed (removable contamination below 200dpm); complete Form: I-131 Rx6 (18.8.1.16), signed and dated to release the room for general occupancy and notify Nursing that the room has been released.
d. Nursing will remove radioactive labels and notify Environmental Services to clean the room.

Administrator

7/17/13
Date

Approved by Clinical Board: 1/12/01, 2/17/04, 3/20/07, 5/18/10, 7/16/13
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