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INDIANA UNIVERSITY MEDICAL CENTER

RADIATION SAFETY OFFICE Lett 13.02752-0 Clinical Building 920 1100 West Michigan Street Indianapolis, Indiana 46223 (317) 264-4797

October 10, 1984

Office of Inspection and Enforcement USNRC - Region III 799 Roosevelt Road Glen Ellyn, IL 60137

Gentlemen:

Enclosed please find 2 reports of diagnostic misadministrations as required by 10 CFR 35.43 for the third quarter of 1984. If you have any questions regarding this matter, please do not hesitate to contact this office.

Sincerely,

Mack L. Richard, M.S.

Radiation Safety Officer

Enclosures: 2

cc: Robert M. Witt, Chairman Radionuclide Radiation Safety Committee

> Henry N. Wellman, M.D., Director Division of Nuclear Medicine

H. M. Park, M.D., Chief Wishard Nuclear Medicine



OCT 1 2 1984

A 320

MISADMINISTRATION REPORT

- 1. Licensee Name: Indiana University Indianapolis (#13-02752-03)
- 2. Referring Physician: Dr. I. Grimm
- 3. Description of Event: A patient received ^{99m}TcO₄ instead of the prescribed Tc-MDP. A Nuclear Medicine Technology student was explaining the method of calculating the proper dose and inadvertantly selected the wrong container. The student had performed these procedures before and was not being closely scrutinized by the staff technologist.
- Effect on the Patient: No observable effect was noted or expected due to the misadministration.
- Action Taken to Prevent Recurrence: All technologists were reminded to read the label on every container prior to drawing up and injecting a patient dose.

MISADMINISTRATION REPORT

- 1. Licensee Name: Indiana University Indianapolis (#13-02752-03)
- 2. Referring Physician: Dr. L. Akard
- 3. Bescription of Event: A staff techgologist inadvertantly drew up and injected TcO4 rather than the prescribed Tc-MDP.
- . Effect on the Patient: No observable effect was noted or expected due to the misadministration.
- 5. Action Taken to Prevent Recurrence: In the past the radioactive concentrations of the two different radiopharmaceuticals have been very close. To allow for discovering an error prior to Batient injection, the TC-MDP will be made at ½ the concentration of the TCO2. In this way the technologist will be alerted to a possible error when the drawn dose is measured in the dose calibrator.

UNITED STATES NUCLEAR REGULATORY COMMISSION

REGION 111

MATTER TO BE REVIEVED DURING INSPECTION Licensee Andiana Upic. And Canter Location malianapric On License No.13-02752-0; TYPE OF MATTER TO BE LOOKED INTO: () It red ggsite quested Det ned gg a TC of metal of 2) Sgm to-MDP Instructions:

DO NOT REMOVE UNTIL INCIDENT CARD COMPLETED BY INVESTIGATOR. THIS WILL BE FILED ON TOP OF INSPECTION FINDINGS (417, 591 OR 592)

Griginator 10/27/84

13-02752-03

Reviewer

Date

Date

Investigator

Inspector

Date ...



TRAINING

The Radionuclide Radiation Safety Committee (RRSC) reviews the training and experience of each Principal Investigator using or supervising the use of byproduct material in accordance with criteria set forth in our broad scope license application and supporting documentation. For the use of the gamma irradiator, the RRSC will review the training and experience of those individuals responsible to assure that said individuals are adequately trained to operate the gamma irradiator and maintain radiation exposures ALARA. The responsible individual(s) will be required to meet the same criteria as all Principal Investigators at this institution. In addition, those individuals will be required to review the gamma irradiator operation manual and the emergency procedures with appropriate documentation that they have done so. Members of the Radiation Safety Staff will verify that only properly trained personnel operate the gamma irradiator.

RADIATION SAFETY COURSE

For individuals who do not meet the minimum training requirements, attendance of the Radiation Safety Course offered by the Radiation Safety Staff is required. The course currently is 10 hours in length and covers the following topics:

- a. Atomic Structure/Nature of Radiation
- b. Interaction of Radiation with Matter
- c. Radiation Quantities and Units
- d. Sources of Radiation Exposure
- e. Biological Effects of Radiation
- f. Permissible Dose Equivalent Limits
- g. External Radiation Protection
- h. Internal Radiation Protection
- i. Radiation Detection Instrumentation
- j. Regulations/Overview

For the aforementioned individuals to become fully authorized users (i.e. to demonstrate competency), they must attend at least 80% (i.e. 8 out of 10) of the lectures. Attendance records are maintained for all formal lectures of this type. Any change in the format or duration of the Radiation Safety Course will be specifically reviewed and approved by the RRSC.

ON-THE-JOB TRAINING

Even though the operation of the blood irradiation device is very simple (basically it involves setting a timer and turning on a switch), a minimum of two hours of "hands on" training will be required for any new authorized user of the device. This training will be carried out by either a member of the Radiation Safety Staff or another fully authorized user.

Item 8 5/2/85

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