Precautions in Handling of Radiopharmaceuticals for Injection

Key points for safe use

(Case) Technetium-99m (99mTc) was supposed to be injected for bone scintigraphy. However, medical staff mistakenly injected iodine-123 (123I) which was placed beside 99mTc for cerebral blood flow measurement in another patient.

1 Precaution on mix-ups of radiopharmaceuticals for injection

- Caution should be exercised so that mix-ups do not occur when handling multiple radiopharmaceuticals for injection.

Radiopharmaceuticals for injection look very similar, as they are covered by a syringe shield made of lead, etc. Measures to avoid mix-ups should be taken.
Preparation of radiopharmaceuticals for injection

**Vial type**
- Container shield
- Radiopharmaceutical for injection

Assemble a syringe shield and a disposable syringe and draw the drug into the syringe.

**Prefilled syringe type**
- Container shield
- Radiopharmaceutical for injection
- Syringe shield
- Plunger

Connect a plunger to a syringe in a container shield to pull out the syringe.
2 Measure to avoid mix-up

- Make sure to use identification labels indicating notes such as the patient's name when preparing radiopharmaceuticals for injection.

Identification labels to affix to the syringe can be provided by the manufacturers. Make sure to use them to avoid mix-ups!!

Example of identification labels

- Patient identification label
- Drug identification label
- Bone identification label
- Disposable syringe
- Syringe shield

About this information

* PMDA Medical Safety Information is issued by the Pharmaceuticals and Medical Devices Agency for the purpose of providing healthcare providers with clearer information from the perspective of promoting the safe use of pharmaceuticals and medical devices. The information presented here has been compiled, with the assistance of expert advice, from cases collected as Medical Accident Information Reports by the Japan Council for Quality Health Care, and collected as Adverse Drug Reaction and Malfunction Reports in accordance with the Pharmaceutical Affairs Law.

* We have tried to ensure the accuracy of this information at the time of its compilation but do not guarantee its accuracy in the future.

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